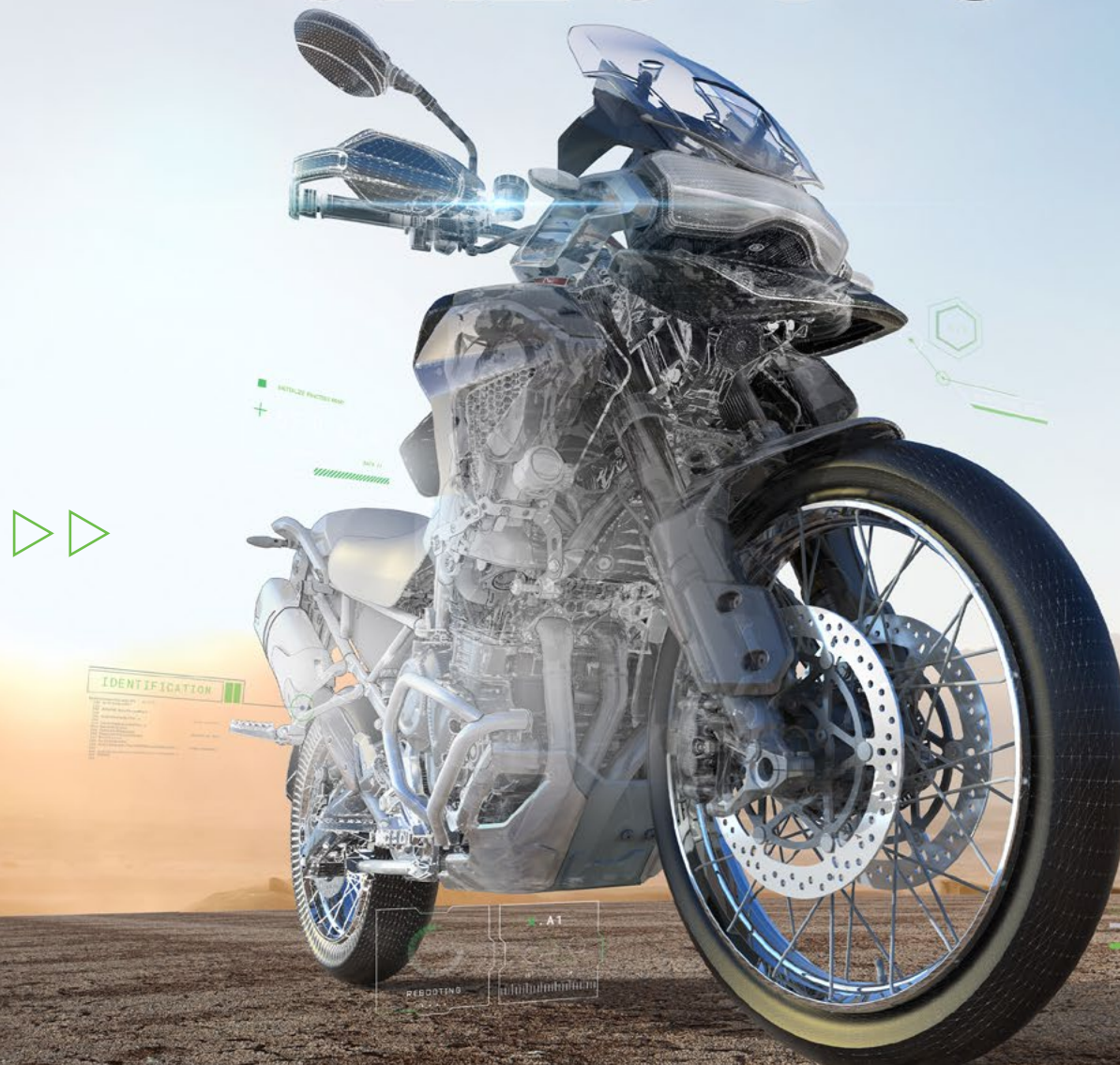


CAPABILITY COMPARISON

# CREO 4-9



**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 9.0 compared with Creo 8.0, 7.0, 6.0, and 5.0.

Creo Versions	5.0	6.0	7.0	8.0	9.0
<b>User Experience</b>					
Additional Commands for Showing and Hiding; Show only & Show all except	.	.	.	.	.
Modernized interaction handles	.	.	.	.	.
Modernized, intuitive, flexible model tree search in part & assembly modes	.	.	.	.	.
Automatic display of common filters in the Model Tree by default	.	.	.	.	.
Enhanced simple search in the model tree to dynamically list objects as typing a name	.	.	.	.	.
Automatic saving of model tree setting		.	.	.	.
Enhanced model tree visibility		.	.	.	.
Mini-toolbar & Right Mouse Button within feature definition		.	.	.	.
Modernized feature dashboard with integrated help pages		.	.	.	.
Modernized charting tools		.	.	.	.
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					.





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<b>User Experience - GRAPHICS</b>					
Design in perspective	.	.	.	.	.
Modernized ModelCHECK report making it easier for user to identify issues in the data and resolve them	.	.	.	.	.
Utilize Render Studio when outputting Mechanism and animation movies (requires Render Studio)		.	.	.	.
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	5.0	6.0	7.0	8.0	9.0
<b>User Experience - ASSEMBLY</b>					
Mechanism - Detailed diagnostics and resolution suggestions during Mechanism failures	.	.	.	.	.
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					.



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Creo Versions	5.0	6.0	7.0	8.0	9.0
<b>User Experience - PART MODELING</b>					
Volume Helical Sweep capability to create accurate geometry for grinding wheel and screw conveyor use cases	.	.	.	.	.
Faster redefinition of Feature Mirror	.	.	.	.	.
Sketch Region support allows re-use of sketches for several features	.	.	.	.	.
Easily apply drafts to design models containing rounds and chamfers	.	.	.	.	.
Freestyle – Slice Freestyle shape by designated datum plane	.	.	.	.	.
Freestyle – Preview the objects before importing them into Freestyle.	.	.	.	.	.
Freestyle – Toggle between standard and box modes to rapidly design your Freestyle surfaces	.	.	.	.	.
New Project option for datum point creation	.	.	.	.	.
Created helical trajectory curve within Volume Helical Sweep	.	.	.	.	.
Enhanced Mini-Toolbar support in Freestyle	.	.	.	.	.
Ability to suppress Freestyle shapes within Freestyle tree	.	.	.	.	.
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	.	.	.	.	.



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<b>User Experience - SKETCHER</b>					
Dimension preview while dragging and dimension glyphs (indicating the dimension type)	.	.	.	.	.
Improved graphical display of constraint icons in situations when they overlap sketched geometry		.	.	.	.
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	5.0	6.0	7.0	8.0	9.0
<b>User Experience - SHEETMETAL</b>					
New Types of Corner Reliefs, Normal and Square, added	.	.	.	.	.
Additional control to Corner Relief orientation added	.	.	.	.	.
Improved flatten representation of sheet metal parts	.	.	.	.	.
Conversion is improved, by additional control to get unified sheet metal thickness	.	.	.	.	.
Flat and flange wall enhancements	.	.	.	.	.
Enhanced workflows and interface for Merge Walls		.	.	.	.
Design Sheetmetal geometry in context of regular geometry (multibody)			.	.	.
Create multiple flat walls in one feature				.	.



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Creo Versions	5.0	6.0	7.0	8.0	9.0
<b>User Experience - DETAILING</b>					
Mini Toolbars for 2D Drawings	.	.	.	.	.
Improved Undo and Redo Support in Detailed Drawings	.	.	.	.	.
Improved Large Assembly Performance in Detailed Drawings through HLR multi-threading	.	.	.	.	.
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	5.0	6.0	7.0	8.0	9.0
<b>User Experience - 3D ANNOTATIONS</b>					
Mini Toolbars for 3D Annotations	.	.	.	.	.
Improved Undo and Redo Support in Model-Based Definition	.	.	.	.	.
Improved Failure Notifications for 3D Annotations	.	.	.	.	.
Modernization of Notes workflow and interface for Notes		.	.	.	.
Enhanced parent/child behavior for annotations		.	.	.	.
Propagate all annotations during data sharing feature creation		.	.	.	.
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					.



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<b>User Experience - DATA EXCHANGE (included with Creo)</b>					
Transferring Configurations from Creo Elements/Direct to Explode States	•	•	•	•	•
Improved associative drawing Import from Creo Elements/Direct to support views containing Configuration information	•	•	•	•	•
3MF export	•	•	•	•	•
Open Inventor files (maintain data natively)	•	•	•	•	•
Easily select and define new import profiles for all required formats	•	•	•	•	•
Updated profile settings for Creo View Export to control model display settings	•	•	•	•	•
Updated Import Validation Tool improvements making it easier to identify and resolve issues	•	•	•	•	•
Support offset cross-sections in STEP format	•	•	•	•	•
3MF export to include appearances			•	•	•
Import and Export multibody parts			•	•	•
Solid weld geometry exported to STEP, JT or Neutral as separate bodies				•	•

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