

```
40 POKE BASE, BYTE  
50 BASE = BASE + 1  
60 GOTO 20  
999 IF BASE = (50 + 32768) THEN SYS(32768 + 32) : END  
1000 DATA 120  
1010 DATA 169, 128  
1020 DATA 141, 21, 3  
1030 DATA 169, 45  
1040 DATA 11, 21, 3  
1050 DATA 88  
1060 DATA 96  
1070 DATA 16, 32, 88  
1080 DATA 19  
1100 DATA
```

# CAPABILITY COMPARISON CREO 2.0 – 7.0



**Creo is a 3D CAD solution** that helps you build better products faster by accelerating product innovation, reusing the best of your design, and replacing assumptions with facts. Go from the earliest phases of product design to a smart, connected product with Creo. And with cloud-based augmented reality in each seat of Creo, you can collaborate with anyone, instantly at any step in the product development process. In the fast-changing world of the Industrial IoT, no other company can get you to substantial value as quickly and effectively as PTC.



**These tables highlight the primary product capabilities delivered in Creo 7.0 compared with Creo 6.0, 5.0, 4.0, 3.0, and 2.0.**

Creo Versions	2.0	3.0	4.0	5.0	6.0	7.0
<b>User Experience</b>						
Simplified installation, setup, and customization for acquisition of license and updates	•	•	•	•	•	•
Improved measure tool focused on single summary command, improved usability, and cleaner results display	•	•	•	•	•	•
Help content indexed on Google® and searchable via web		•	•	•	•	•
Automatic window activation		•	•	•	•	•
User configured RMB commands supporting individual setups		•	•	•	•	•
Geometry-based selection providing intelligent context-sensitive mini vtoolbar, reducing mouse travel and increasing productivity			•	•	•	•
Box selection pervasive throughout the product			•	•	•	•
Fully customizable Mini-toolbar & Right Mouse Button			•	•	•	•
Ability to customize shortcut commands			•	•	•	•
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						•





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Creo Versions	2.0	3.0	4.0	5.0	6.0	7.0
<b>User Experience - GRAPHICS</b>						
Faster graphics performance taking greater advantage of the available graphics card	.	.	.	.	.	.
Order-independent transparency to improve performance and display quality	.	.	.	.	.	.
Smoother display of edges and more realistic display leveraging anti-aliasing	.	.	.	.	.	.
Enhanced graphic performance and realistic materials out-of-the box		.	.	.	.	.
Easily switch to a full screen graphics mode, reducing clutter			.	.	.	.
Appearance state definition to control different color combinations for the models			.	.	.	.
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						.

Creo Versions	2.0	3.0	4.0	5.0	6.0	7.0
<b>User Experience - ASSEMBLY</b>						
Enhances performance and user experience in "Chooser" tool		.	.	.	.	.
Simplified regeneration status		.	.	.	.	.
Notification center improvements			.	.	.	.
Intelligent assembly mirror to simplify part reuse			.	.	.	.
Ability to store multiple color variations of a design using appearance states			.	.	.	.
Ability to create solid weld geometry			.	.	.	.
Ability to publish models to view as an Augmented Reality experience			.	.	.	.
Mechanism - Detailed diagnostics and resolution suggestions during Mechanism failures				.	.	.
Multibody support for data sharing features, component operations and analysis tools						.



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Creo Versions	2.0	3.0	4.0	5.0	6.0	7.0
<b>User Experience - PART MODELING</b>						
Simplified and streamlined workflows for creating parallel and rotational blends	.	.	.	.	.	.
New collapse command to consolidate Direct editing operations	.	.	.	.	.	.
Dynamics creation and editing of cross sections	.	.	.	.	.	.
Dynamically view cross section in separate 2D windows	.	.	.	.	.	.
Streamlined workflows for cross hatching placement	.	.	.	.	.	.
New Freestyle design capability leveraging subdivisional surface modeling for rapid freeform surface creation	.	.	.	.	.	.
Knot analysis tool to more easily understand surface and curve flow	.	.	.	.	.	.
Ability to drive freeform geometry parametrically in Freestyle by aligning edges of Freestyle geometry with external geometry including: positional, tangent, or normal constraints	.	.	.	.	.	.
Chordal round option	.	.	.	.	.	.
Define round transitions using circular, conic, and C2 continuous cross sections	.	.	.	.	.	.
Ability to un-trim a surface or quilt	.	.	.	.	.	.
Connection analysis tool to analyze position, tangency, and curvature continuity of curve and surface connections	.	.	.	.	.	.
3D thickness check tool to analyze mold geometry	.	.	.	.	.	.
Draft analysis enhancements to make results easier to interpret	.	.	.	.	.	.
Redesigned reroute functionality	.	.	.	.	.	.
Easily position holes at any specified angle	.	.	.	.	.	.
Import/export Freestyle control mesh	.	.	.	.	.	.
Support for multiple objects and enhanced splitting of the control mesh in Freestyle	.	.	.	.	.	.
Enhanced capabilities and functionality for Sketch based feature	.	.	.	.	.	.
Ability to create a midplane	.	.	.	.	.	.
Maintain analytic geometry for warp features	.	.	.	.	.	.
Ability to create solid weld geometry	.	.	.	.	.	.
Simplified material assignment and out-of-the box standard materials	.	.	.	.	.	.
3D Printing – direct connection to Stratasys & 3D Systems 3D Printers as well as iMaterialize online print Bureau	.	.	.	.	.	.
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	.	.	.	.	.	.



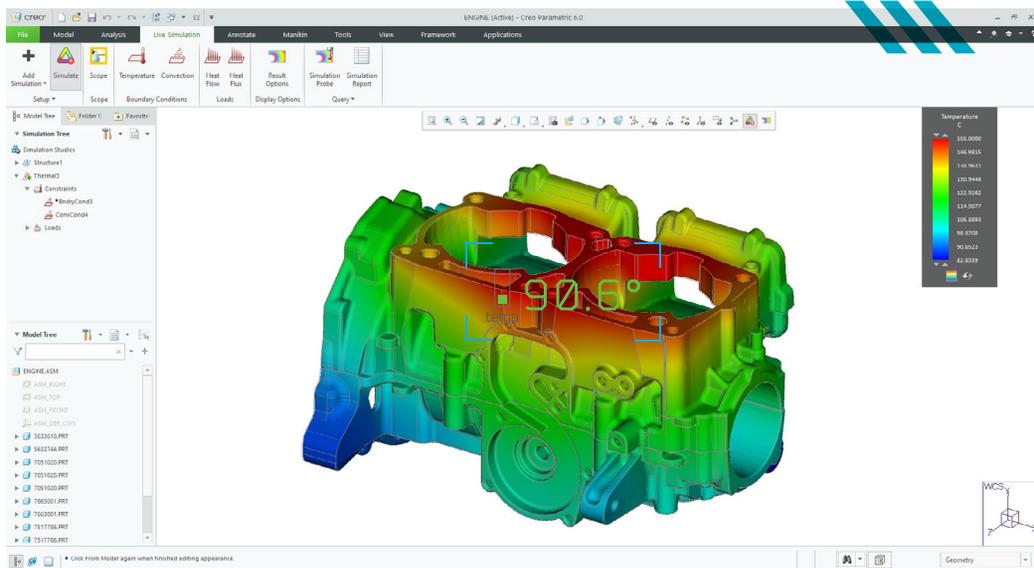
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**Creo Versions**

2.0 3.0 4.0 5.0 6.0 7.0

**User Experience - PART MODELING (continued)**

Freestyle – Utilize reference snapping when using Add Edge in Freestyle				•	•	•
Freestyle – Use the Align command to align edges to external curves or edges with G0, G1, G2 connections				•	•	•
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						•





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Creo Versions	2.0	3.0	4.0	5.0	6.0	7.0
<b>User Experience - SKETCHER</b>						
Dimension draggers for isolating and changing individual dimensions within sketching when previewing features		•	•	•	•	•
Snap to existing geometry			•	•	•	•
Clearer display of dimensions/constraints			•	•	•	•
Clip geometry by sketch plane for improved visibility			•	•	•	•
Ability to programmatically drive sketched font			•	•	•	•
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						•

Creo Versions	2.0	3.0	4.0	5.0	6.0	7.0
<b>User Experience - SHEETMETAL</b>						
Ability to add a bend when joining two walls	•	•	•	•	•	•
Create sketch-based form features and partial piercings	•	•	•	•	•	•
Highlight overlapping geometry in the flat pattern preview window	•	•	•	•	•	•
Single click creation of flat pattern family table instance	•	•	•	•	•	•
Ability to add offset when creating a flat wall feature	•	•	•	•	•	•
Consistent corner relief placement options	•	•	•	•	•	•
User interface and workflow for Die form	•	•	•	•	•	•
Flatten geometry attached to forms	•	•	•	•	•	•
Bend tool enhancements including the ability to bend multiple planes, bend line relief placements, and create multiple bend reliefs		•	•	•	•	•
Enhanced workflows and interface for twist wall creation			•	•	•	•
New capabilities for edge bend and edge treatment options			•	•	•	•
Ability to perform direct modeling-based operations to sheetmetal parts, whether native Creo designs or imported geometry			•	•	•	•
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)					•	•



These tables highlight the primary product capabilities delivered in Creo 7.0 compared with Creo 6.0, 5.0, 4.0, 3.0, and 2.0.

Creo Versions	2.0	3.0	4.0	5.0	6.0	7.0
<b>User Experience - DETAILING</b>						
Dynamic dimension placement and movement	.	.	.	.	.	.
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 including snapping, free placement, and locking dimension lines		.	.	.	.	.
New note and dimension creation user interface and format tab		.	.	.	.	.
New comprehensive text symbol palette and True-Type text fonts to support ASME and ISO standards			.	.	.	.
New Geometric Tolerance (GTOL) creation interface and workflow including syntax checking to ensure compliance with GD&T standards			.	.	.	.
New Datum Feature Symbol creation interface and workflow including syntax checking of to ensure compliance with GD&T standards			.	.	.	.
New Datum Target creation interface and workflow including syntax checking to ensure compliance with GD&T standards			.	.	.	.
Intelligent built-in standard target areas for Datum Targets (point, circle, rectangle)			.	.	.	.
Enhanced dimension creation and editing user interface and workflow			.	.	.	.
Quickly and easily add raster images into drawing without using Microsoft Windows OLE			.	.	.	.
Replace the model of a drawing view with a related model (family table, simplified rep, inheritance/merge) while preserving view settings and annotations			.	.	.	.
Support for non-linear cross hatching patterns using industry standard pattern file format (*.pat)			.	.	.	.
Mini Toolbars for 2D Drawings				.	.	.
Improved Undo and Redo Support in Detailed Drawings				.	.	.
Improved Large Assembly Performance in Detailed Drawings through HLR multi-threading				.	.	.



These tables highlight the primary product capabilities delivered in Creo 7.0 compared with Creo 6.0, 5.0, 4.0, 3.0, and 2.0.

Creo Versions	2.0	3.0	4.0	5.0	6.0	7.0
<b>User Experience - 3D ANNOTATIONS</b>						
Dynamic dimension placement and movement	.	.	.	.	.	.
Edges that are perpendicular to the annotation plane can be selected as dimension references	.	.	.	.	.	.
Endpoints of edges can be selected as dimension references	.	.	.	.	.	.
Symbols in 3D notes support model based definition		.	.	.	.	.
Print and Print Preview User Interface		.	.	.	.	.
New comprehensive text symbol palette and True-Type text fonts to support ASME and ISO standards			.	.	.	.
New Geometric Tolerance (GTOL) creation interface and workflow including syntax checking and semantic references to ensure compliance with GD&T standards			.	.	.	.
Datum reference frame object integrated into GTOL allows specification of datum reference frame coordinate system to ensure compliance with GD&T standards			.	.	.	.
New Datum Feature Symbol creation interface and workflow including syntax checking and semantic references to ensure compliance with GD&T standards			.	.	.	.
New Datum Target creation interface and workflow including syntax checking and semantic references to ensure compliance with GD&T standards			.	.	.	.
Intelligent built-in standard target areas for Datum Targets (point, circle, rectangle)			.	.	.	.
Support for movable Datum Target symbol to ensure compliance with GD&T standards			.	.	.	.
Enhanced dimension creation and editing user interface and workflow including support for semantic references of dimensions to ensure compliance with GD&T standards			.	.	.	.
Enhanced selection and dynamic movement of all annotations			.	.	.	.
Support for multiple appearances (color and texture) in the model that can be associated with combination states			.	.	.	.
Control visibility of annotations and supplemental geometry either by direct assignment to combination state or by using layers			.	.	.	.
Options to control publishing of combination states to Creo View and set the default combination state to be opened in Creo View			.	.	.	.
Print models with multiple combination states as a multi-page output – each combination state on a separate page			.	.	.	.
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						.



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Creo Versions	2.0	3.0	4.0	5.0	6.0	7.0
<b>User Experience - DATA EXCHANGE (included with Creo)</b>						
SOLIDWORKS license no longer needed for import	.	.	.	.	.	.
Support reading and writing of NX 7 data	.	.	.	.	.	.
Improved support for reading JT XT-Brep data	.	.	.	.	.	.
Transfer non geometric information from Creo Elements/Direct	.	.	.	.	.	.
Open CATIA®, NX™, and SOLIDWORKS files (maintain data natively)	.	.	.	.	.	.
Import CATIA, NX, SOLIDWORKS Autodesk Inventor, and Solid Edge files	.	.	.	.	.	.
Update and Export CATIA, NX, and SOLIDWORKS files	.	.	.	.	.	.
Support for current STEP AP242 including defined Product Manufacturing Information (PMI)	.	.	.	.	.	.
JT support for cross-sections, exploded states, and additional annotation types	.	.	.	.	.	.
Opening native Creo Elements/Direct models in Creo	.	.	.	.	.	.
Unified import/export profiles for non-Creo formats	.	.	.	.	.	.
Validation tool to compare key characteristics of native and converted data	.	.	.	.	.	.
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	.	.	.	.	.	.

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

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