PTC®

PTC® Creo® Elements/Direct® Drafting

A Complete 2D CAD System Built on an Innovative Part and Assembly Structure

PTC Creo Elements/Direct Drafting offers comprehensive 2D CAD capabilities for optimizing your mechanical design processes.

The "part and assembly" concept in PTC Creo Elements/Direct Drafting simplifies the design and modification of assemblies with a clear parts, assembly, and sub-assembly structure. PTC Creo Elements/Direct Drafting supports sharing, so you can use several instances of the same part or assembly throughout a drawing. The Parts Browser helps you visualize and manage even the most complex assembly structures and all design activities, such as defining sub-assemblies, creating instances, and renaming, can be done directly in the browser. Designers can even define multiple drawing scales to handle assemblies that contain both exceptionally large and small parts.

The design capabilities in PTC Creo Elements/Direct Drafting provide a powerful and interactive way to adapt existing drawings and create families of parts or drawings. You can drive the most complex design modifications by simply changing a dimension. You can also parameterize drawings and specify design rules at any stage in the design process.
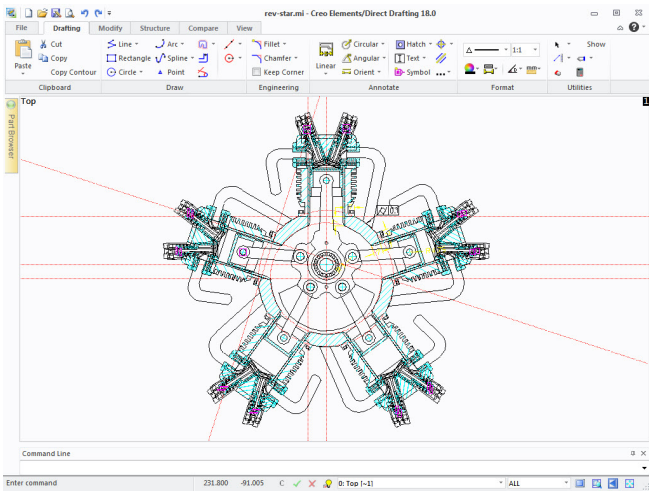
Key benefits

- Satisfies the 2D needs of designers and mechanical engineers in product development

- Uses an innovative part and assembly structure that matches how engineers design and manufacture products – making 2D product development fast and easy

- Automates development processes – and since it is customizable and programmable, it can be tailored to fit your company-specific needs

- Provides an easy migration path to PTC Creo Elements/Direct Modeling – the industry's leading direct 3D modeling software

Capabilities and specifications

Design and drafting

- CoPilot-driven geometry: Accomplish most drawing tasks without using menus

- Advanced modification methods: Includes unlimited undo and redo

- Advanced selection techniques: Use 'and', 'or', 'equal', or all entities to choose drawing elements

- Multiple drawing handling: Merge parts of several drawings into one large-assembly drawing

- "Parts and assembly" concept: Keep track of design and modification of assemblies using a clear parts, assembly, and sub-assembly structure. Includes unlimited undo and redo

- Sharing: Create several instances of the same part or assembly for use throughout the drawing

- Parts Browser: View and manage complex assembly structures. Define sub-assemblies, create instances, and rename directly in the Parts Browser

- Global language support based on Unicode standard: Use multiple languages to annotate drawings – even Chinese and Japanese can coexist on the same page

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PTC Creo Elements/Direct Drafting is a complete 2D CAD system tuned to the specialized needs of mechanical engineers and designers.

Dimensioning

- Preset dimension styles: Automatically create dimensions according to international standards such as ISO, DIN, JIS, and ANSI

- Group dimensions: Intelligently create, modify, and reposition groups of dimensions. Includes unlimited undo and redo

- Automatic interference recognition: The system automatically repositions when dimensions interfere with other objects

- Adaptable styles: Create dimensions based on your preferences

- Frequently used features: Store features, such as screws, with dimension patterns

- Automatic recognition of topology matches: Automatically dimension stored features and dimensions

Manage 2D drawings

- Revision Checker: Automatically highlight design changes and note differences between drawings from one revision to the next

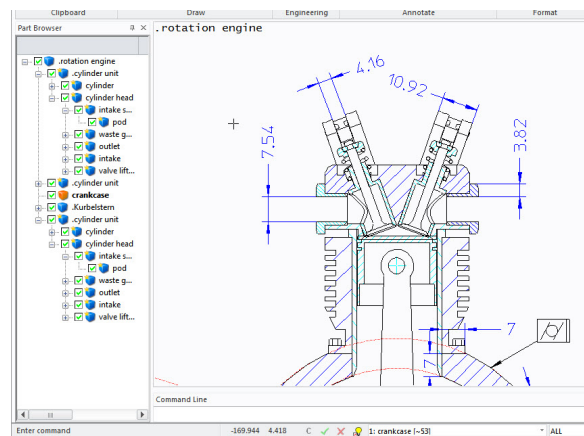- File Browser: Easily view thumbnails and file history

Data exchange

- Standard data interface for DXF (version 2013 and earlier), DWG (version 2013 and earlier) and IGES 2D (version 5.1 and earlier)

- Batch-mode or single-mode translation

- Pixel image import on drawings

- OLE import onto drawings (Windows UI version)

- HPGL, HPGL II (and RTL extensions), PDF or Postscript export

- High-resolution output as TIFF, JPG, PNG, or BMP file

Customization

- Complete command macro language: Customize to meet your specific needs. Includes structured programming, online editing and debugging, user interface customization, and attribute handling

Additional modules

- PTC Creo Elements/Direct Drawing Manager: Organize, track, and manage design data

- PTC Creo Elements/Direct 2D Access: For non-designers who work with 2D drawings

- PTC Creo Elements/Direct BOM Editor

- PTC Windchill® Workgroup Manager for PTC Creo Elements/Direct Drafting: Combines the power of PTC Windchill collaboration and control with PTC Creo Elements/Direct Drafting

PTC Creo Elements/Direct Drafting is a complete solution, fully supporting the 2D product development process and providing easy connections and migration into 3D product development.

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Platform support and system requirements

Visit the **PTC support page** for the most up-to-date platform support and system requirements.

For more information, visit
PTC.com/product/creo-elements-direct/drafting

PTC Creo Elements/Direct Drafting is an integral part of the PTC Product Development System. Seamlessly manage your 2D design data in PTC Windchill solutions for enterprise-wide collaborative product design, project management and execution, and content and process management.

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