PTC®

the product development company

Creo™ Elements / Pro™ Advanced SE

CREATE INNOVATIVE DESIGNS FASTER AND MORE EFFICIENTLY

Formerly Pro/ENGINEER®

The Creo Elements/Pro Advanced SE (Standard Edition) Package adds powerful data management capabilities to your essential 3D CAD solution, giving you exactly what you need to deliver high quality products more efficiently.

The Creo Elements/Pro Advanced SE Package provides your product development team with all the essential design engineering, production-ready vaulting, and document management to accelerate your product development processes. This powerful solution helps manufacturers speed development cycles to meet deadlines, respond faster to changing requirements, improve communication to keep teams aligned, and lower costs. The solution is tailored specifically to meet the needs of design teams that require easy adoption, affordable pricing, and an immediate return on investment.
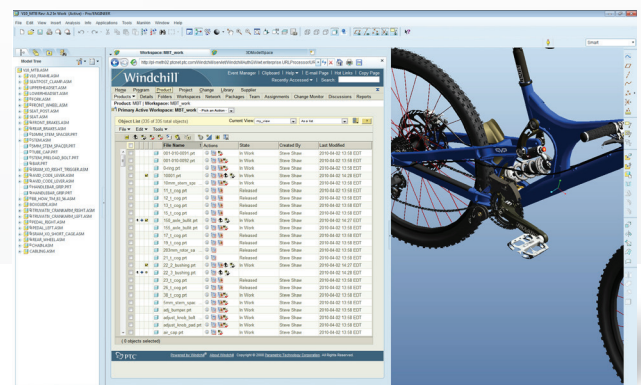
Leverage the Most Powerful 3D CAD Solution

Create high fidelity, digital product models using the powerful 3D CAD capabilities of Creo Elements/Pro. With the Creo Elements/Pro Advanced SE package, you can design parts, build assemblies, sketch sections, produce drawings, construct surfaces, create sheet metal parts, exchange data, ensure design quality, and connect applications and teams. Creo Elements/Pro's industry leading associativity ensures that all changes made to your 3D model are automatically updated in all downstream deliverables. With the ability to perform so many varied design tasks from within a single, fully integrated application, you now have the ultimate solution for product design.

Add Powerful Data Management Capabilities

Enable your organization to access and control Creo Elements/Pro data and other product information from a variety of sources anytime, anywhere. This package offers a flexible choice of data management options to meet your needs. You can choose from:

- Windchill® PDMLink® for comprehensive Creo Elements/ Pro data management and heterogeneous MCAD/ECAD/Software Source Code/text data management and process control capabilities.

- Windchill ProductPoint® for managing your Creo Elements/Pro design data in a SharePoint® environment.

- Pro/INTRALINK® for workgroup-level Creo Elements/Pro data management.

Easily access Windchill PDMLink product data management capabilities from the Creo Elements/Pro user interface.

Key Benefits

- Quickly create the highest quality and most innovative products

- Increase model quality, promote part reuse, and reduce model errors

- Lower your costs by reducing new part number proliferation

- Handle complex surfacing requirements with ease

- Create great looking products with innovative shapes that are unattainable with other mid-range 3D CAD tools

- Instantly connect to information and resources on the Internet – for a highly efficient product development process

- Share and manage design data more efficiently throughout the product lifecycle using a single, secure, web-based data repository

- Improve product development productivity with Creo Elements/Pro data management and broader content and process management capabilities

Features and Specifications

Solid Modeling

- Create precise geometry, regardless of model complexity

- Automatically dimension sketches for fast, easy reuse

- Build robust engineering features such as rounds

- Create part variants using family tables

- Modify parts faster with powerful Auto Round™ and Dynamic Editing capabilities

Detailed Documentation, Including 2D and 3D Drawings

- Create 2D drawings according to international standards, including ASME, ISO, and JIS

- Create an associative BOM and associated balloon notes automatically

- Automate the creation of drawings with templates

- Create 3D drawings according to ASME and ISO standards

Technical Surfacing

- Develop complex surface geometry using sweeps, blends, extends, offsets, and a variety of other specialized features

- Trim/extend surfaces using tools like extrude, revolve, blend, and sweep

- Perform surface operations such as copy, merge, extend, and transform

- Define complex surface geometry explicitly

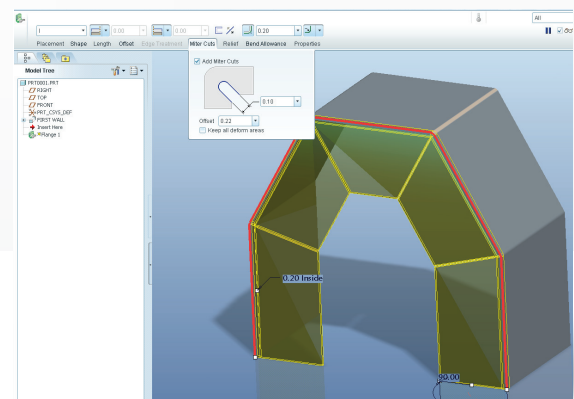### Revolutionary Warp™ Technology

- Make global deformations of selected geometry in 3D

- Dynamically scale, stretch, bend, and twist models

- Apply Warp to geometry imported from other CAD tools

Sheet Metal Modeling

- Create walls, bends, punches, notches, forms, and reliefs using the streamlined user interface

- Automatically generate flat patterns from 3D geometry

- Use a variety of bend allowance calculations to create flat patterns of the designs
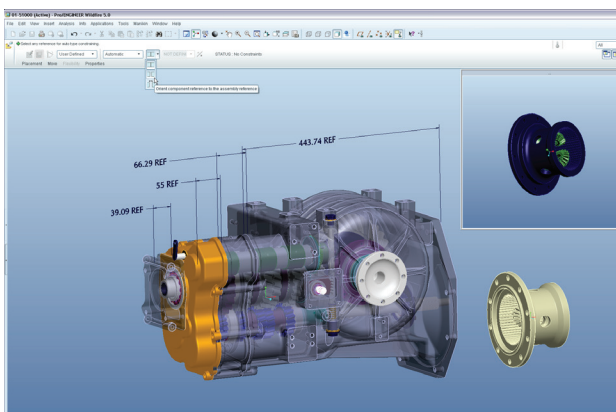
Weld Modeling and Documentation

- Define joining requirements

- Extract valuable information from the model, such as mass properties, clearances, interferences, and cost data

- Easily produce complete 2D weld documentation

The fully customizable palette significantly shortens feature creation by providing quick and easy access to frequently used sketched sections.

Assembly Modeling

- Enjoy robust, fast assembly modeling performance

- Create simplified representations 'on-the-fly'

- Share lightweight, yet fully accurate model representations using the unique Shrinkwrap™ tool

- Use AssemblySense™ to embed fit, form, and function knowledge to create assemblies quickly and correctly

The intuitive user interface streamlines the process of working with components.

AutobuildZ® Turn 2D Drawings into 3D Models

- Create parametric, full-feature 3D designs from 2D drawings using the AutobuildZ conversion wizard

- Automatically create associative, detailed drawings of the 3D design

- Control drawing entities with 2D drawing import wizards

Analysis Features

- Measure and calculate valuable information from your model, including distance, length, angle, mass properties, and volume

- Easily perform static structural simulations

- Interoperability with Mathcad®, PTC's engineering calculation software, lets you integrate Mathcad worksheets with your design to predict behavior and drive critical parameters and dimensions (Mathcad optionally available)

- Use Microsoft® Excel® files to drive your design
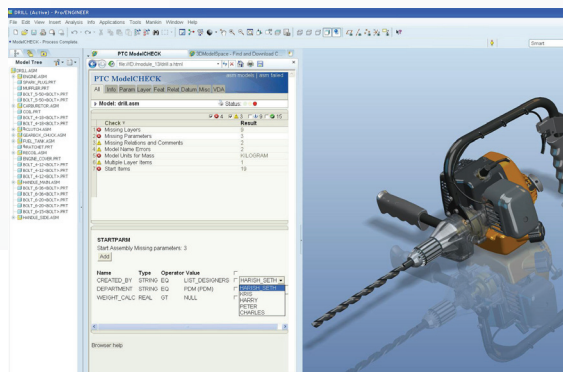
Data Interoperability

- Kernel support for ACIS™, Parasolid™, and GRANITE®

- Associative Topology Bus™-based cross-release interoperability support, allowing you to work with models created in newer releases of Creo Elements/Pro

- Direct translators for Autodesk® Inventor®, SolidWorks®, CADDS® and AutoCAD® DWG

- Industry-standard translators: AutoCAD DXF, IGES, STEP, SET, VDA, ECAD, CGM, COSMOS/M, PATRAN®, and SUPERTAB™ geometry files, SLA, JPEG, TIFF, RENDER, VRML

Imported Data Repair

- Dramatically reduce the time and effort required to clean up imported or legacy design data

- Collapse imported geometry, for better surface management, using the constraint manager

ModelCHECK™ – Design Validation

- Automatically identify and fix potentially expensive manufacturing problems early in the design stage

- Ensure compliance with company/industry standards

- Enforce best-practice modeling techniques

The Creo™ Elements/Pro™ design validation capabilities in ModelCHECK enable you to address your quality challenges and deploy company standards and best practices.
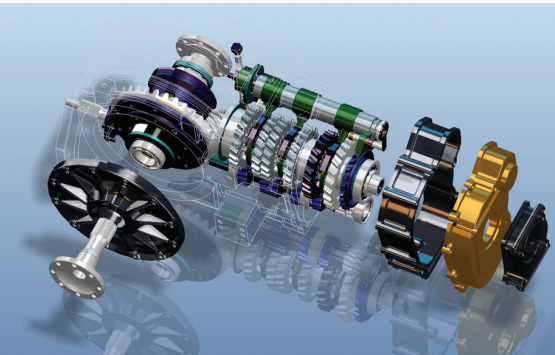
Mechanism Design

- Assemble parts and sub-assemblies using true mechanical connections (pin joints, ball joints, sliders) to create a realistic moving assembly

- Drag the mechanism through its motion envelope, preventing interference and detecting clashes

Design Animation

- Create assembly/disassembly animations directly from the modeling environment

- Reuse models easily, with the option to include mechanism simulation

Real-Time Photorendering

- Create accurate, photorealistic images of products quickly, while rendering even the largest assemblies

- Make dynamic geometry changes while maintaining photorealistic effects such as shadows, reflections, textures, and transparency

Save time and money by creating photorealistic images of your product in its actual environment early in the design process, rather than waiting until you build a physical prototype.
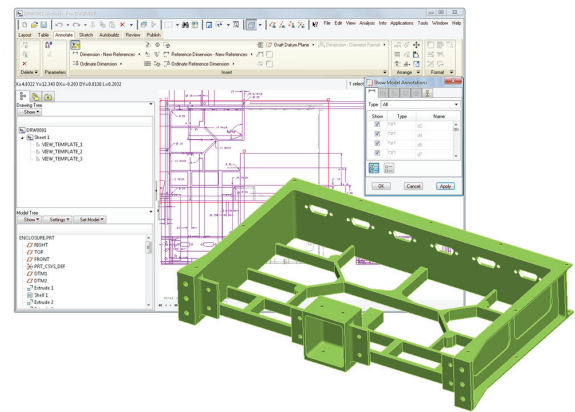
Web Capabilities

- Enjoy Internet/Intranet support, for fast access to email, FTP, and Web — all from within Creo Elements/Pro

- Query models with interactive XML reports

- Seamlessly connect with PTC's Windchill solutions, enabling the industry's first truly integral Product Development System

Complete Library of Parts, Features, Tools, and More

- Download predefined parts and symbols

J-Link Programmatic Interface

- Customize the Creo Elements/Pro user interface to serve your specific needs

The streamlined, task-based, intuitive user interface helps you create 2D drawings even faster in Creo Elements/Pro.

Data Management Options

The Creo Elements/Pro Advanced SE Package lets you choose a data management solution that's right for you. You can select one of the following options—Windchill PDMLink, Windchill ProductPoint or Pro/INTRALINK—to securely manage your data and help optimize your product development process.
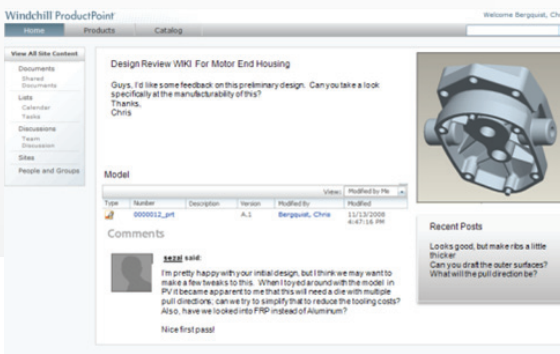
Windchill PDMLink

- Create a single, secure, web-based source for Creo Elements/Pro data and other product information for the entire enterprise, with vaulting, version control, configuration management, search, and lifecycle management

- Embedded visualization for viewing and marking up Creo Elements/Pro parts and assemblies as well as other CAD formats and PDFs

- Robust data management for Creo Elements/Pro data and Arbortext® authored content, as well as other engineering documents

- Optional data management capabilities for multiple mechanical and electrical CAD tools and software source code and documents

- Out-of-the-box change management support for both full-track and fast-track changes

- Configuration management of product information over the life of the product

- Robust integration with ERP and other business systems, with optional Windchill Enterprise Systems Integration (ESI) module

Windchill ProductPoint

- CAD vaulting, sharing, visualization and mark-up capabilities for small and medium-sized businesses

- Version management and basic configuration management features

- Support for multiple CAD systems and Mathcad

- Fast, easy deployment on top of an existing or new Microsoft SharePoint server

Windchill ProductPoint gives small and medium-sized businesses fast, easy product data management capabilities.

The Right Solution – Without Compromise

Creo Elements/Pro is simple to learn and use, and is available in a variety of packages designed to meet your company's specific needs. Whether you need a cost-effective 3D CAD system that contains all the basic design capabilities, or a comprehensive Product Development System that seamlessly connects your extended supply chain, you'll find exactly what you need in a single, fully scalable solution. Choose the package that fits your needs today. As your needs change and grow, you can easily upgrade to the package that is right for you tomorrow, which leverages the same powerful platform–this means no data translation and a consistent user experience.

The Creo Elements/Pro Advantage

The Creo Elements/Pro family of integrated 3D CAD/CAM/CAE solutions delivers a distinct advantage for engineers and designers because Creo Elements/Pro is fully associative. That means any change made to the design is automatically reflected in all downstream deliverables – without any translation of model information. By eliminating data translation, you not only save time, but you also avoid the possibility of translation errors in your design. Creo Elements/Pro packages are the first choice of engineers and designers because no other 3D CAD package offers more power and speed in one scalable platform.

Platform Support and System Requirements

For more information and system requirements, visit:

http://www.ptc.com/partners/hardware/current/support.htm