PTC®

the product development company

Creo™ Elements/Pro™ Enterprise SE

WHAT YOU NEED TO DELIVER WINNING PRODUCTS

Formerly Pro/ENGINEER®

The Creo Elements/Pro Enterprise SE (Standard Edition) Package is a complete product development solution, designed to solve the complex needs of today's globally dispersed development teams.

Creo Elements/Pro Enterprise SE provides your team with the power to: Create, using the industry's top-rated Creo Elements/Pro 3D CAD tools; Collaborate, using Web-based project management; and Control, and Configure products over their life, with complete product data management tools.

Collectively, this unmatched solution set gives your team a single, integral, affordable Product Development System, 100% backed by PTC.

Design Product Models with Creo Elements/Pro

Create high fidelity, geometrically complete digital product models using the advanced 3D capabilities of Creo Elements/Pro. Build any size assembly, in a team environment, using simple top-down design techniques. Optimize your product by performing hundreds of design iterations—unattainable using manual methods. Impress your customers by creating stylish, aesthetically pleasing designs that feature complex shapes—all designed with ease.
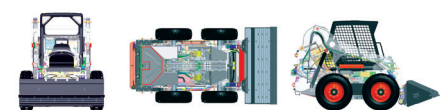
Collaborate with Windchill® ProjectLink™

Collaborate with your product development stakeholders across the entire value chain using PTC's Windchill ProjectLink. Share ideas online with internal and external cross-functional teams as you optimize designs—in real-time. Efficiently manage and execute product development projects that involve large, globally dispersed virtual teams. Share common information like assigned tasks, schedules, and budgets, while precisely tracking key milestones and delivery status.

Key Benefits

The Creo Elements/Pro Enterprise SE Package simplifies today's complex product development environment, with intuitive, easy-to-use tools that work together seamlessly to get the job done.

- Enable teams to work concurrently on the same product designs

- Promote greater levels of design re-use while improving quality standards

- Enjoy an automated, standard engineering change process that:

  - Collects related changes

  - Enables easy and accurate analysis on all impacted parts

  - Provides rollout and notification of changes to product teams

Automatically optimize cable routing through even the most complex designs, and be confident the cable will reroute automatically as you iterate your design.

Features and Specifications

Creo Elements/Pro 3D CAD Capabilities

Quickly create the highest quality products with a broad range of core modeling, 2D and 3D drawing, sheetmetal, weld, surface modeling, and more

- 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 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

Creo Elements/Pro gives you the power to add shadows and reflections to your photorealistic images, so you can make your product designs come to life.
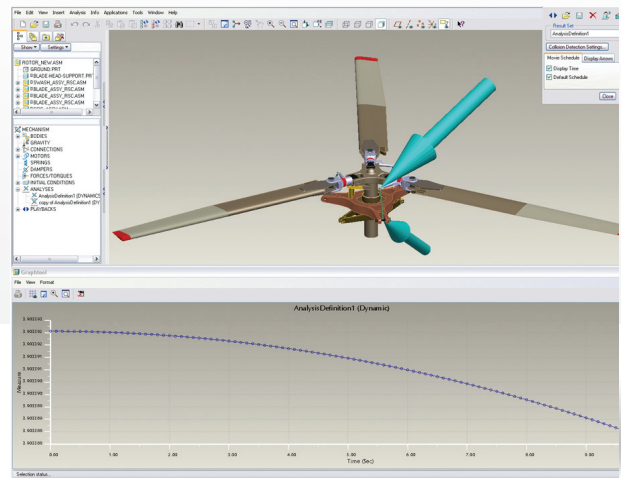
Creo Elements/Pro Interactive Surface Design

- Use 2D concept sketches as a "rough" visual reference in the creation of a 3D model. Start conceptually by developing geometry either from scratch, from a sketch, scan sets or other reference data, then gradually develop the concept into a production model

- Work with a unique, four-quadrant modeling window that supports the direct creation, manipulation, and control of curves, surfaces, and connections

- Build, then modify complex surfaces by simply dragging curve control points, while maintaining G2 continuity

Creo Elements/Pro Mechanism Dynamics

- Obtain accurate data of dynamic spring, cam, damping, or impact analysis by incorporating the actual inertial masses of components and the forces acting on and between them

- Animate mechanisms in action and see how dynamic forces, acceleration, and velocity affect the digital product model usingcolor-coded vector arrows

- Perform various types of analyses including: static/steady state, tofind final resting place; dynamic, to compute force vs. time; and force balance, to find the force required to maintain a desired mechanism configuration

Creo Elements/Pro Mechanism Dynamics helps you analyze your design.

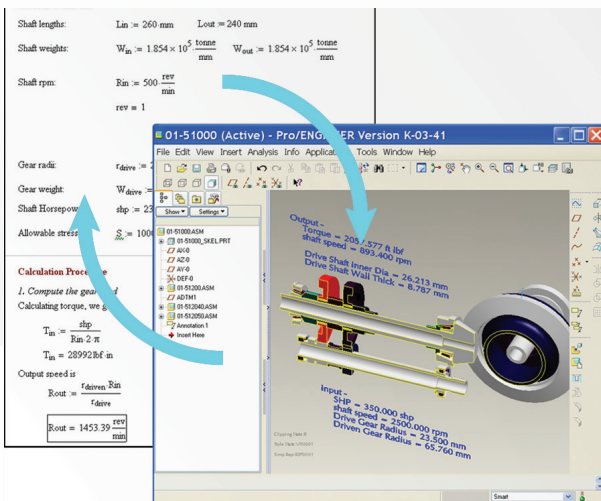### Creo Elements/Pro Piping and Cabling

- Produce all cabling and piping 2D and 3D diagramming in a single solution

- Calculate mass properties, and automatically generate customizable BOMs, wire lists, and flattened harnesses

- Evaluate pipelines for manufacturability and interference

Creo Elements/Pro Behavioral Modeling

- Assess model sensitivity to understand the effects of change on design objectives

- Automatically generate a set of feasible solutions for multi-objective design problems

- Integrate your results with Creo Elements/Pro simulation software or other external applications
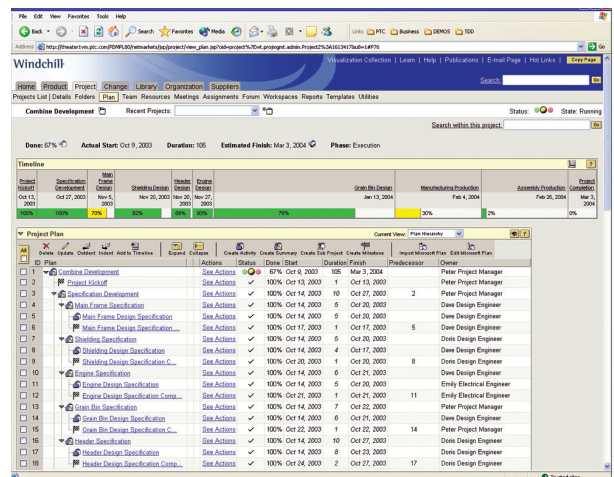
Data Interoperability

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

- Associative Topology Bus™ cross-interoperability for Creo Elements/Pro

- Direct translators for 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

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

Optimize your design by using Mathcad to predict performance and drive your design.

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

Windchill ProjectLink showing project schedule

Windchill ProjectLink

- Secure, Web-based, online project workspaces where globally dispersed team members, customers, and suppliers can work together on projects

- Online project management that tracks project milestones, deliverables, schedules, and resources

- A central repository for all project-related information

- Embedded visualization, with viewing and markup of multiple CAD formats and PDFs

- Template-driven process automation of key business processes such as NPI and Six Sigma

- Designed to work with familiar, everyday tools such as multiple CAD packages, Microsoft Office and Microsoft Project

Windchill PDMLink

- Creates a single, secure, Web-based source of product data for the entire enterprise, with vaulting, revisioning, structure management, search, and lifecycle management

- Embedded visualization, via ProductView Lite, to view and markup multiple CAD formats and PDFs

- Robust data management for Creo Elements/Pro, as well as multiple mechanical and electrical CAD tools, software source code, and documents

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

- Configuration management that provides all required views of product information

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

Part selection with Windchill PDMLink embedded in Creo Elements/Pro

Pro/INTRALINK

- Provides rich, mature, and reliable Creo Elements/Pro data management on a modern Windchill architecture

- Supports concurrent engineering

- Provides vaulting tools (check-in, check-out, baselines) and reporting tools

- Offers continued support for multi-site deployments with Pro/INTRALINK replication tools

- As a subset of Windchill PDMLink, provides a growth path to more comprehensive data management and process control capabilities

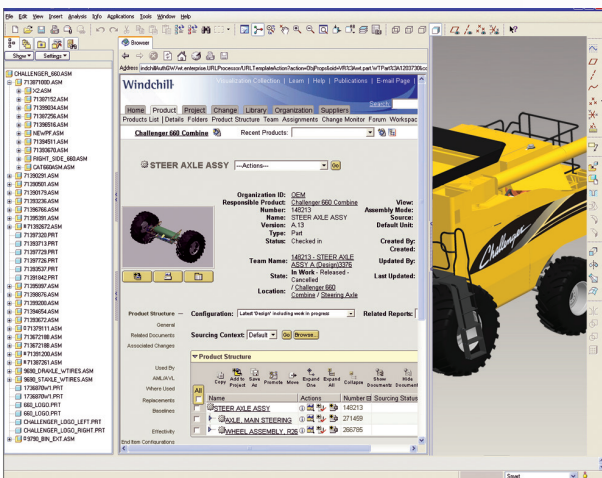## The Right Solution – Without Compromise

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 product development 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/go/creo-elements-pro/packages