

# Pro/ENGINEER Advanced SE

CREATE INNOVATIVE DESIGNS FASTER AND MORE EFFICIENTLY

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

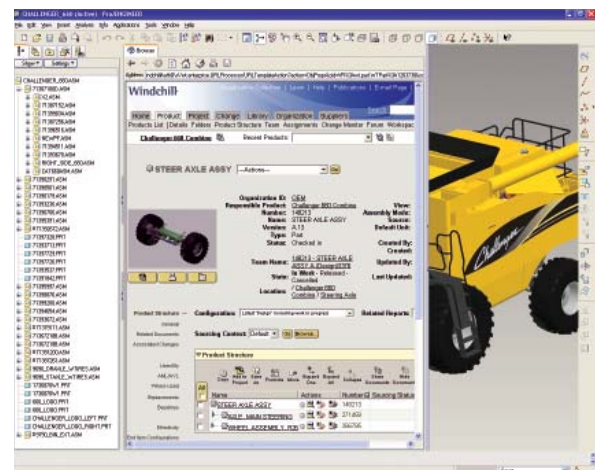
The Pro/ENGINEER Advanced SE Package provides your product development team with all the essential design engineering, production-ready vaulting and document management, and in-depth training tools to accelerate your product development processes. This powerful solution helps manufacturers speed development 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 Pro/ENGINEER. With the Pro/ENGINEER Advanced SE package, you can design parts, build assemblies, sketch sections, produce drawings, construct surfaces, create sheetmetal parts, exchange data, ensure design quality, and connect applications and teams. Pro/ENGINEER'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 Pro/ENGINEER data and other product information from a variety of sources anytime, anywhere. This package offers the optimal solution for comprehensive Pro/ENGINEER workgroup data management, heterogeneous MCAD/ECAD/Software Source Code/text data management and process control capabilities. Available On Demand, Windchill PDMLink delivers a broad product data management solution deployed and managed in a secure, scalable, IBM-hosted environment, allowing you to get up and running quickly without requiring your own IT resources.



Easily access Windchill® PDMLink™ product data management capabilities from the Pro/ENGINEER 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 Pro/ENGINEER data management and broader content and process management capabilities

# Pro/ENGINEER Advanced SE

## Features & 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

### 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

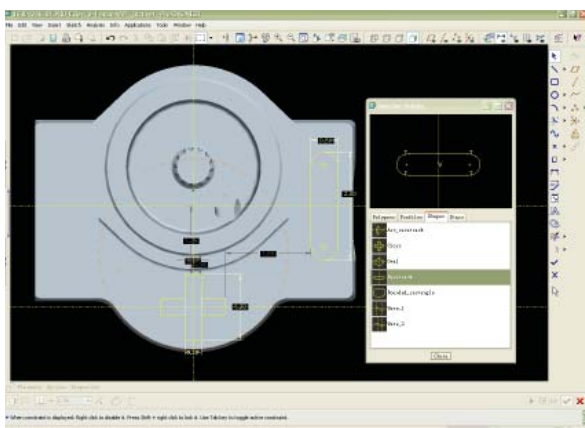
- Develop complex surface geometry using sweeps, blends, extends, offsets, and a variety of other specialized features
- Trim/extend surfaces using tools like extrude, revolve, blend, and sweep
- Perform surface operations such as copy, merge, extend, and transform
- Define complex surface geometry explicitly

### Revolutionary Warp Technology

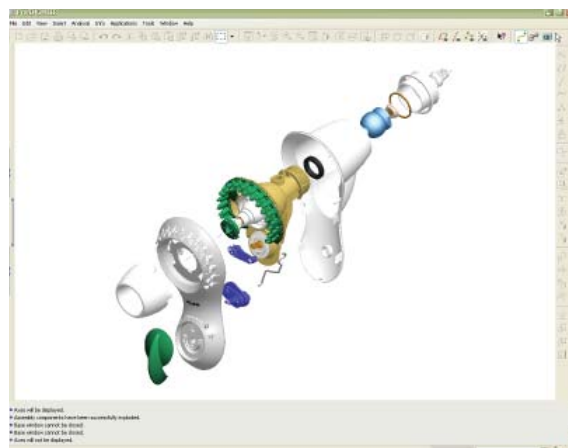
- Make global deformations of selected geometry in 3D
- Dynamically scale, stretch, bend, and twist models
- Apply Warp to geometry imported from other CAD tools

### Sheetmetal 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



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



The intuitive user interface streamlines the process of assembling components.

### 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

### 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

### 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
- 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

# Create Innovative Designs Faster and More Efficiently

## Data Interoperability

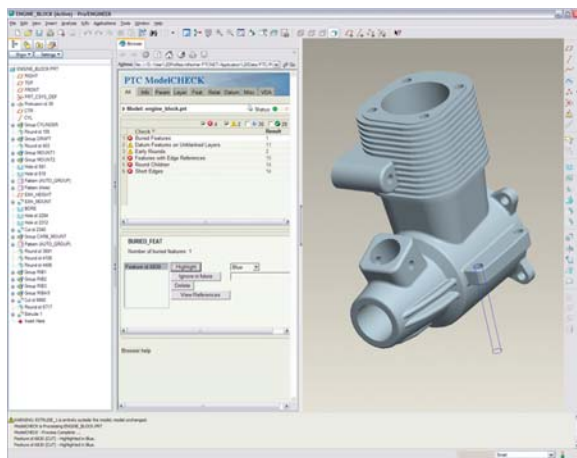
- Kernel support for ACIS,™ Parasolid,™ and Granite®
- Associative Topology Bus™-based cross-release interoperability support, allowing you to work with models created in newer releases of Pro/ENGINEER
- Direct translators for CADD5 and AutoCAD® DWG
- Industry-standard translators: AutoCAD® DXF, IGES, 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 Pro/ENGINEER 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



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.

## Real-Time Photorendering

- Create accurate, photorealistic images of products quickly, while rendering even the largest assemblies
- Make dynamic geometry changes while maintaining photorealistic effects like shadows, reflections, textures, and transparency

## Web Capabilities

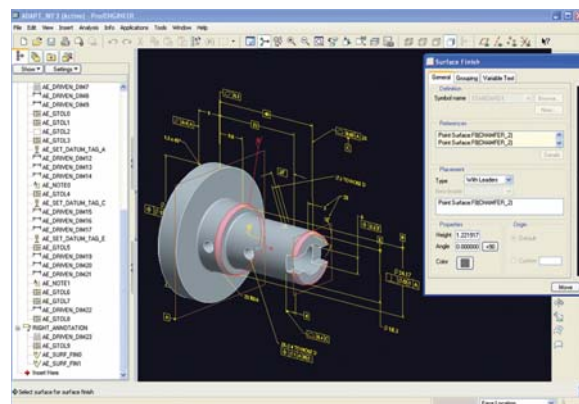
- Enjoy Internet/Intranet support, for fast access to email, FTP, and Web – all from within Pro/ENGINEER
- Query models with interactive XML reports
- Seamlessly connect with PTC's Windchill solutions, enabling the industry's only truly integral Product Development System

## Complete Library of Parts, Features, Tools, and More

- Download predefined parts and symbols

## J-Link Programmatic Interface

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



Communicate your design intent using powerful surface highlighting and 3D annotation features in Pro/ENGINEER.

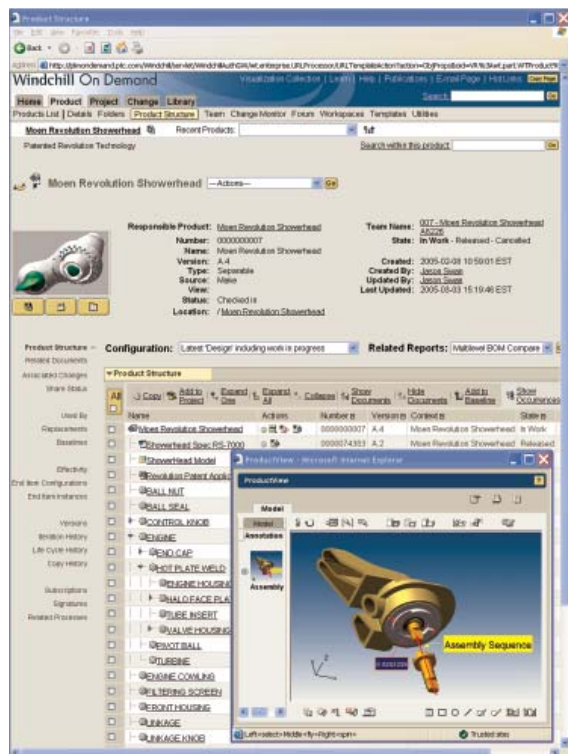
# Pro/ENGINEER Advanced SE

## Windchill PDMLink

- Create a single, secure, Web-based source for Pro/ENGINEER 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 Pro/ENGINEER parts and assemblies as well as other CAD formats and PDFs
- Robust data management for Pro/ENGINEER 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
- On Demand hosting option included

## IBM On Demand Hosting

- Fast data management solution deployment on a secure, scalable and high-performance infrastructure managed by IBM, the leader in On Demand.
- Deployment and 1- year hosting included
- Advanced reliability and security features working at the network (HTTPS), server, and applications levels
- Redundant power and Internet connectivity with 24x7 monitoring and backup of data
- Scalable Internet bandwidth capacity to meet peak performance demands at any time



On Demand hosting lets you quickly add powerful Windchill PDMLink data management capabilities with minimal IT resources. This fast, easy and affordable solution can be deployed in days.

## Web-based Training

- Get up to speed quickly with PTC University training resources. This package includes self-paced Web-training courses on data management for Pro/ENGINEER.

## Platform Support and System Requirements

For more information and system requirements, visit: <http://www.ptc.com/partners/hardware/current/support.htm>

## The Right Solution – Without Compromise

Pro/ENGINEER 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 Pro/ENGINEER Advantage

The Pro/ENGINEER family of integrated 3D CAD/CAM/CAE solutions delivers a distinct advantage for engineers and designers because Pro/ENGINEER 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. Pro/ENGINEER packages are the first choice of engineers and designers because no other 3D CAD package offers more power and speed in one scalable platform.

For more information about Pro/ENGINEER Advanced SE Package, please visit: [www.PTC.com/go/proengineerpackages](http://www.PTC.com/go/proengineerpackages)

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