CoCreate® Modeling™

The World's Leading Explicit 3D CAD System

CoCreate Modeling's explicit approach to 3D design is ideal for companies that need a lightweight and flexible design strategy, to shorten design cycles and quickly create one-off product designs.

Faster Design Cycles

An explicit design approach saves you time because it offers immediate, on-the-fly interaction with your geometry. Plus, such an approach captures information economically and embeds it in the model definition, resulting in enhanced development speed. You can use that faster development to add iterations, improve quality in your design, get to market earlier, and extend your product's market life. You decide how it best serves your business needs.

Flexible for Unexpected and Radical Changes

Companies that develop one-off product designs – e.g., one-of-a-kind, new-to-market, or custom design-to-order products, face rapidly changing requirements throughout the design cycle. CoCreate Modeling enables you to make unexpected changes, faster and more frequently – later into the design process.

Flexible Design Teams

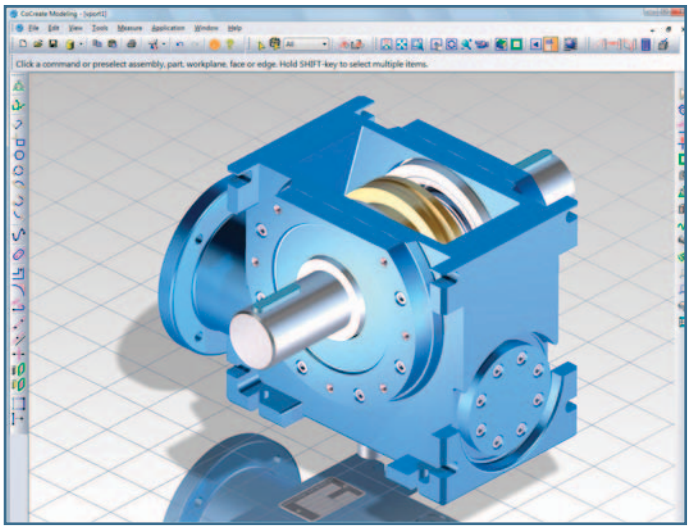
With CoCreate Modeling, any team member can pick up and work on an explicit 3D product design in the same way that anyone can pick up and work on a Microsoft® Word® document. As a result, design responsibility is easily reassigned when different engineers – or even engineering teams – become unavailable during the course of a project.

Flexible for Working with Multi-source CAD Data

An explicit 3D CAD system excels at the import and modification of multi-source CAD data, benefiting companies working across an extended supply chain for procured components or subcontracted design.

Easiest Approach to Learn and Use 3D CAD

An explicit approach is considered by professionals to be the easiest 3D CAD method to learn and use because you interact directly and intuitively with the model geometry.



An explicit approach makes 3D design creation and modification fast, easy, and flexible. You can rapidly evolve a product design in unpredictable and new directions when modifications cannot be anticipated in advance.

Key Benefits

- Shave time off design cycles by repurposing, or radically transforming, existing designs into new and completely different products
- Rapidly iterate product designs to create better opportunities for market-winning products
- Accommodate major, unexpected design changes at any stage of development, while keeping the transition to manufacturing on schedule
- Increase engineering productivity by eliminating resource bottlenecks and project delays via flexible design teams
- Directly leverage multi-source CAD data from suppliers and subcontractors in the design process
- Easily move from 2D to 3D and easily switch from other 3D CAD systems. All legacy 2D and 3D CAD data carries forward in CoCreate Modeling
- Accelerate your product development process by leveraging seamless integrations to other PTC products for advanced CAE, CAM, enterprise-wide visualization and technical illustrations

Capabilities and Specifications

Explicit Modeling

- Interact intelligently and on-the-fly with geometry
- Easily create and edit 3D product designs using familiar 'copy and paste' and 'drag and drop' interactions
- Real-time explicit modeling makes 3D design totally intuitive and predictable
- Use automatic feature recognition to turn any geometry into intelligent features
- Design in a combined part and assembly mode. Design top-down, bottom-up, by using a combination of both

Sheet Metal Design

- Design 3D sheet metal parts
- Create and modify bends and lips, including reliefs
- Design in the flat or in the fold, with bend animations
- Associative 2D flat patterns

Surfacing

- Create sculptured shapes and add more style to designs
- Apply sweep, loft, 3D curves, and helix shapes with ease
- Repair or modify native and imported surfaces quickly

Rendering

- See instant results through real-time rendering
- Create photorealistic images for presentations, design reviews, illustrations, and point-of-sale marketing materials
- Access a complete catalog of real-world materials, light sources, and rendering schemes

Digital Prototyping

- Compare similar 3D designs just as you would compare documents in Microsoft Word
- Apply clash analysis to locate conflicts before you build a physical product
- Use 3D configurations to define part and assembly positions, on/off states, and camera positions
- Micron accuracy (10-6 mm geometric resolution)

Large-Assembly Handling (100,000+ parts)

- Power up to Microsoft Windows® 64-bit Edition. Up to 128 GB RAM available for your largest assemblies!
- Preserve system resources for better performance by using light-weight graphics. Models reload in full geometry automatically, as you need them (requires CoCreate Model Manager)

Machining Capabilities

- Integrate machining features into the design
- Output designs directly to CAM
- Transfer machined features automatically to associative drawings

Product Manufacturing Information

- Work with complete 3D geometric dimensions and tolerances (GD&T), manufacturing symbols, note documentation, and tool containers for parts and assemblies

Associative Drawings

- Automatically create standard-compliant drawings
- See 3D design changes update across drawings, associatively
- Automatically generate an accurate bill-of-materials (BOM) table on drawings
- Export to downstream manufacturing processes with Autodesk® DWG™, Autodesk DXF™, and 2D IGES

Data Exchange

- Use imported designs as if native to CoCreate Modeling
- Import and export native Pro/ENGINEER® 3D CAD files
- Import and export 3D via STEP, 3D IGES, SAT, and Printed Circuit Board IDF
- Export 3D as VRML and STL
- Import 2D via Autodesk® DWG™, Autodesk DXF™, and 2D IGES
- Support lightweight publishing and viewing of eDrawings®
- Take advantage of automatic integrity check and repair
- Seamless integrations to PTC products extend your product development capabilities for CAE, CAM, collaboration and technical illustrations
  - Export parts and assemblies to GRANITE® file formats for advanced analysis and NC and tooling capabilities in Pro/ENGINEER
  - Direct integration to ProductView® enables you to export parts and assemblies to .pvz files for enterprise-wide visualization
  - Leverage CoCreate data in .pvz format to easily create technical illustrations in Arbortext® IsoDraw®

Prerequisites

- None

Platform Requirements

- Windows 7 32-bit and 64-bit Editions of Ultimate, Enterprise, and Professional
- Windows Vista® 32-bit and 64-bit Editions of Ultimate, Enterprise, and Business
- Windows XP Professional 32-bit and 64-bit Editions

For more information, visit www.ptc.com/products/cocreate

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