PTC®

the product **development** company®

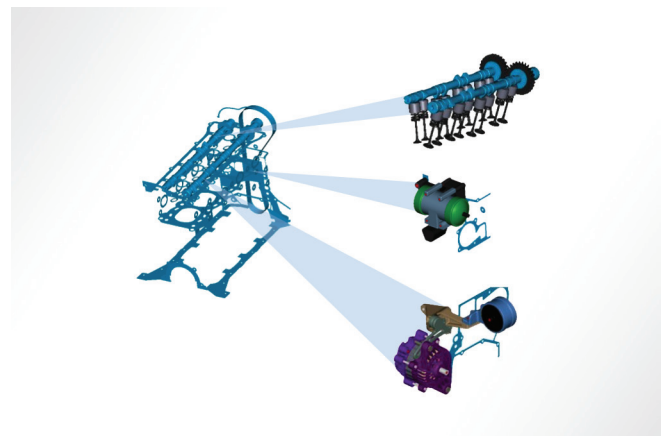# Creo™ Elements/Pro™ Advanced Assembly Extension

TAKE THE COMPLEXITY OUT OF DESIGNING, MANAGING AND SHARING LARGE ASSEMBLIES

Creo Elements/Pro Advanced Assembly Extension (AAX) is the perfect add-on tool for designers who work with large assemblies because it offers a host of specialized functions that make designing and managing even the most complex designs much easier.

With its advanced tools for top-down assembly design, assembly configuration rules management, and assembly process planning, Creo Elements/Pro AAX streamlines the flow of information from design to manufacturing, helping you reach the optimal design—even customized designs—in far less time.

Creo Elements/Pro AAX offers advanced assembly capabilities, such as skeleton models, to support top-down design. Design criteria related to the assembly can easily be communicated to teams working concurrently on designs.

Plan and manage large assemblies

Using top-down design tools, it's easy to plan-out the skeleton of the assembly, so that individual components can be designed in the context of the overall structure. As a result, the complexity of managing various relationships between components is simplified. Creo Elements/Pro AAX also makes it easy to simultaneously share key geometry features among multiple design teams. You can also simplify very large assemblies using Default Envelopes. A design assembly containing many objects can easily be represented by a solid part with less detail in order to reduce the number of objects retrieved and to decrease load times. When you're using tools that facilitate planning and collaboration, concurrent engineering is not only possible, it's easy, enabling you to compress your design cycle and get products to market faster.

Design-to-order with ease

When you can quickly customize product designs to meet a customer's specific needs, you can gain a powerful competitive advantage. Unfortunately, the customization process can be time-consuming and error-prone. With Creo Elements/Pro AAX, you can design-to-order by driving designs based on specific custom criteria, with minimal effort. Even better, all downstream deliverables, such as production drawings and manufacturing information, are updated automatically with each change, which makes customization simple, error-free, and fast.

Plan the sssembly process

Using Creo Elements/Pro AAX, collaboration and communication between engineering and manufacturing reduces the number of engineering changes after the product has been released to manufacturing, thus reducing costs significantly.

Key benefits

- Improve performance by simplifying large assemblies, Use top-down design tools to build the skeleton model, which gives you greater flexibility and control over the entire structure

- Make changes with confidence, knowing that all modifications are automatically propagated from the design to the manufacturing information

- Effectively control and communicate configuration rules, enabling you to create higher-quality designs faster, and reuse your product designs in the future

- Quickly and efficiently customize product variants according to a customer's unique requirements

- Support your company's design- or build-to-order initiatives and provide better-quality, customized products to customers faster, at less cost than your competition

- Concurrently create assembly manufacturing process instructions while detecting manufacturing errors as soon as possible

Capabilities and specifications

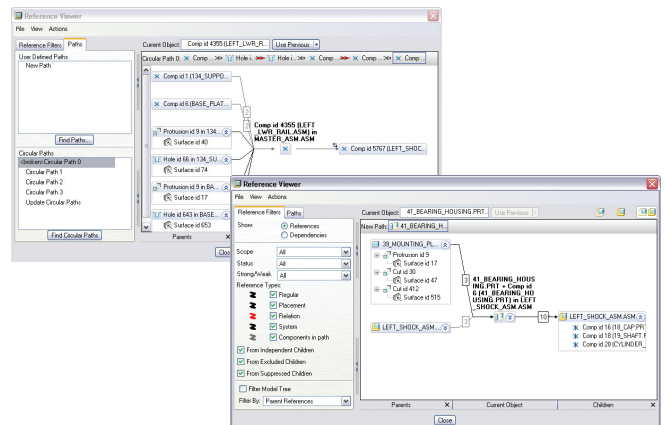### Top-down design tools: products evolve 'naturally'

- Plan the framework of an assembly using skeleton models, to enable true top-down design

- Introduce design teams to skeleton models, to establish and enforce use of consistent design criterion among all engineers

- Publish and control contact interfaces between sub-assemblies and components

- Create one-way associative models, allowing you to inherit the changes from the parent model, and then make changes to the new model

Simplify large assemblies

- Create simplified envelope parts to substitute for detailed design assemblies and to improve assembly performance

Design-to-order

- Customize products through a Web page and automatically generate drawings

- Programmatically automate the customization of your product lines based on input parameters

- Deliver updated, accurate drawings and manufacturing deliverables in record time for a customized product

- Capture design requirements from customers in spreadsheets, layout tables, or other programming applications, which can drive product configuration

The reference viewer in Creo Elements/Pro AAX lets you see and manage your design assembly references.

Reference viewer and reference control

- Manage references to prevent future failures

- View a graphical representation of interdependencies for a clear understanding of how changes will be propagated throughout the model

- Incorporate design management rules directly into the design

- Quickly identify circular reference paths
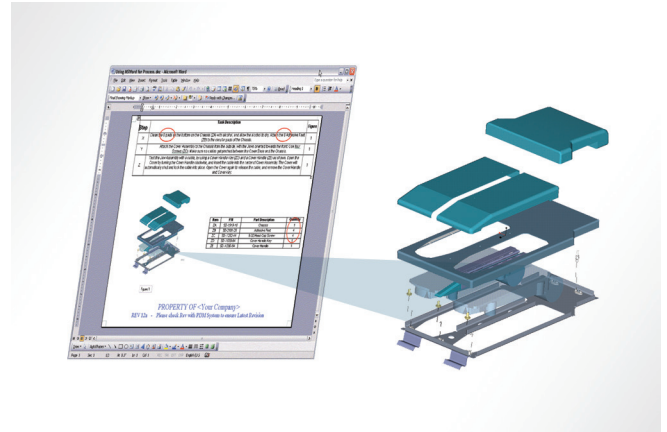
Accurately define the assembly process

- Define the sequence of events for assembly, including step-by-step drawings and views, to detail the process

- Create complete documentation of the process, including associative manufacturing BOMs for each assembly step

- Design color-coded models in drawing steps, to distinguish which parts are being assembled and which parts have already been assembled

The Creo Elements/Pro advantage

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, and 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.

With Creo Elements/Pro, you can work quickly and confidently, knowing that no matter where you modify your design, your changes will be instantly propagated throughout all downstream deliverables. With Creo Elements/Pro Advanced Assembly Extension, you not only add numerous tools that help with the development of large assemblies, but you also simplify the design process.

All Creo Elements/Pro applications are tightly integrated, so you can focus on design and analysis of your product or service—instead of wasting time and energy re-creating the model for use in different applications. Also, the full integration of Creo Elements/Pro tools eliminates errors that result from translating or re-creating models from another program.

Easily create and document the complete assembly process, including an associative bill-of-materials, for each assembly step.

For more information, visit:
www.ptc.com/products/creo-elements-pro