PTC Illustrate™

Communicate complex graphical information effectively with rich, 3D interactive technical illustrations

The use of 3D illustrations is a rapidly growing opportunity for manufacturers to deliver more effective technical information. PTC Illustrate couples superior 3D illustration capabilities with associative CAD data to deliver task based graphical content, specific to product configurations, supporting formats from hard copy to Augmented Reality (A/R).

PTC Illustrate offers a dedicated environment with the capabilities required to create rich, 3D technical illustrations that accurately reflect current product design to communicate complex information for the manufacturing, operation, servicing and maintenance of numerous products. Additionally, the software facilitates repurposing existing 3D CAD data by maintaining an associative link to original CAD files, allowing for quick updates when there's a design change.

These illustrations, sequences and animations communicate complex information that is easily updated to reflect product and part changes. PTC Illustrate can also restructure CAD engineering bills of materials (eBOMs) to create service bills of materials (sBOMs) or manufacturing bills of materials (mBOMs) to meet a variety of technical content requirements.

Key benefits

Increase comprehension and parts accuracy

- Clearly convey complex information: Create 3D animations to visually describe complex manufacturing and service procedures for easy consumption
- Reduce translation costs: Replace text with illustrated step-by-step procedures, 3D animations, illustrated parts lists, and other graphical representations
- Increase illustrator productivity: Automate illustration change management throughout the product lifecycle by maintaining an associative link to original CAD files
- Automate parts list creation: Generate parts lists and call outs directly from CAD metadata to produce dynamic parts lists

Accelerate repair and maintenance times

- Enable easy 3D navigation of product information, based on specific product configurations and user environments
- Provide technicians and users with easy-to-understand 3D technical information that will increase productivity and accuracy globally

Improve product performance and customer experience

- Deliver interactive training materials and technical information to improve product adoption and customer satisfaction
- Capitalize on growing adoption of 3D devices and applications to deliver advanced 3D product support content that is easy to find and understand

Features

Illustration tools

- Ability to create magnifier "inset" views in a figure to create additional detail views from a different camera viewpoint
- Multiple explode lines to easily illustrate complex part registration
- Lighting options that can enhance the illumination of illustrations. These include multiple light sources and the ability to adjust light levels for individual figures
- Publish preview to review animations and sequences before publishing
- Add callouts, text notes, symbols, and other annotations to enhance information
- Add measurements to your illustrations to better describe movements or procedures

2D and 3D publish and export capabilities

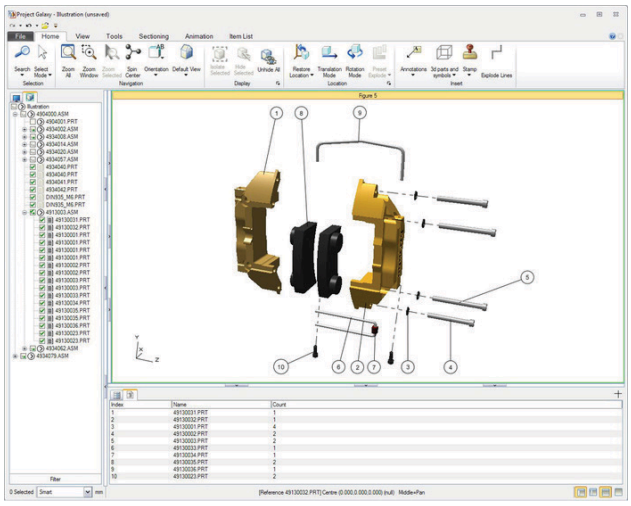
- Add color to vector illustrations
- Page size, border format, and figure caption
- Publish vector illustrations from perspective or orthographic views
- Publish all steps from a sequence to 2D or 3D formats with a single click
- Publish to multiple 3D, 2D vector/raster formats

Sequencer capabilities

- Illustrate a procedure with sequenced steps
- Ability to utilize 3D illustration, textual description and required resources in each step
- Descriptions and resources automatically added from tagged symbols
- Drag and drop to re-order steps within the sequence
- Publish to interactive 3D or static 2D formats

Repurpose CAD for up-to-date 3D technical illustrations and animations

- Easily create 3D technical illustrations by importing design data from all major CAD systems
- Leverage PTC Product View™ 'Adapter' technology to quickly convert essential engineering design data, regardless of its origin, into a readily accessible format for 3D illustration
- Interpret leading formats such as Creo and PTC CADDS® 5, as well as other neutral formats such as STEP, IGES, VRML, and STL
- Leverage additional CAD formats such as JT, Catia V4, I-deas, SolidWorks, and Unigraphics with adapters available for an additional cost
- Import one or more assemblies from original CAD sources and merge and assemble them into a single illustration file
- Maintain an associative link with original CAD files, on local disk or on a Windchill® server, to automate the 3D illustration change process when the engineering design is modified

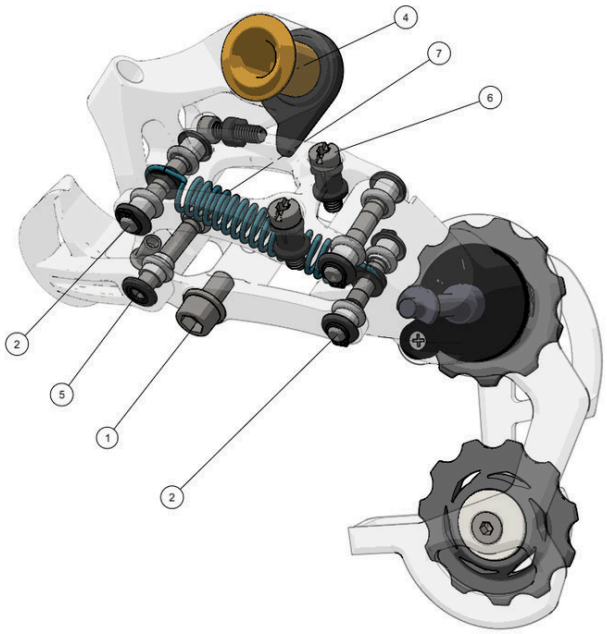


Leverage CAD product structures to dynamically generate parts lists with call outs and maintain associativity with engineering model to automate changes when product design changes occur.

- Restructure engineering product structures into an illustration service Bill of Materials (BOM)
- Generate service BOM (sBOM) information structures to populate with required parts illustration
- Easily drag and drop items from the detailed engineering model structure into the sBOM
- Collapse groups of assembly items into a single serviceable or replaceable part

Generate illustrated parts lists and call outs

- Create an interactive parts list that reflects the structure of the sBOM, representing the entire Bill of Materials or a subset
- Repurpose engineering CAD metadata to produce dynamic parts list information quickly and accurately
- Generate and apply call outs from parts lists automatically
- Dynamically link call outs to the parts and enable cross selection between the call out balloon, model object, and parts list line item
- Drop in extra columns based on model metadata and add description fields to the parts table
- Customize call out styles quickly and easily
- Publish illustrated parts lists quickly using Arbortext® Service Information Solutions, Arbortext® Editor™ or your own custom delivery application based on PTC Product View Express



Apply and update call outs automatically as changes occur during the illustration process.

Create 3D animations for interactive technical information

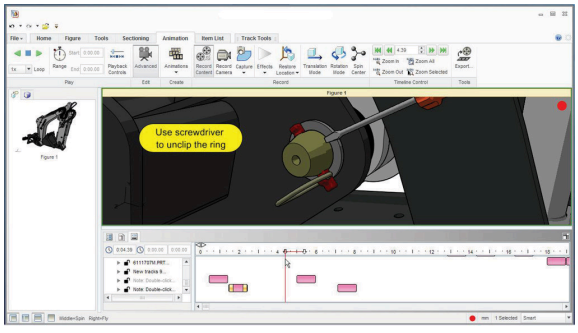
- Create, capture, and play back detailed 3D animation sequences. Events recorded in the timeline can be edited, duplicated, or reversed
- Augment animation with notes, symbols, and tools from a standard or custom library
- Insert 3D notes with warnings or instructions related to the task being described in the animation
- Access built-in effects templates to apply multiple animation steps to a selection of parts
- Separate the animation itself from the camera locations from which the animation is viewed and apply smooth transitions between those camera locations
- Support interactive play back with PTC Product View or export to common formats such as Windows Media

Illustrate multiple figures in a single illustration file

- Author multiple figures per illustration file, repur-posing the same model geometry in each figure
- Automatically capture sBOM structure, part visibility, camera orientation, render style, and additional notations for each figure
- Create new figures from scratch or duplicate a previous static or animated figure
- Animate the transition between each figure to retain context between procedure steps for the viewer
- Document step-by-step procedures with multiple sequential illustration steps within a single figure

Illustrate dynamic sectioning to present internal assembly components

- Section components on a single plane or quarter-cut to produce dynamic section views of a CAD model
- Leverage section views within 3D technical illustrations or record within an animation
- Apply sections to the entire model or, for more complex designs, to a subset of components



Enhance animations to better communicate explicit instructions with notes, tools, and symbols inserted from a standard or custom library.

Repurpose 3D illustration intelligence within high-quality Arbortext® IsoDraw® CADprocess™ 2D illustrations

- Reuse PTC Illustrate output in Arbortext IsoDraw CADprocess to support all 2D service information deliverables
- Save entire 3D illustrations or a single step of an animation
- Leverage 3D intelligence to easily create additional 2D call outs in the proper sequence
- Augment 2D illustrations with additional library elements that are not represented in the 3D engineering data
- Publish to 2D and continue authoring in Arbortext IsoDraw or publish to other 2D media formats
- Preserve balloon hot spots and cross links to the parts lists

Automate illustration change management throughout the product lifecycle

- Maintain associativity with engineering data to automate change processes when design changes occur throughout the product lifecycle
- Integrate with Windchill, Creo, and Arbortext products to enable enterprise-wide delivery of 3D service and parts information

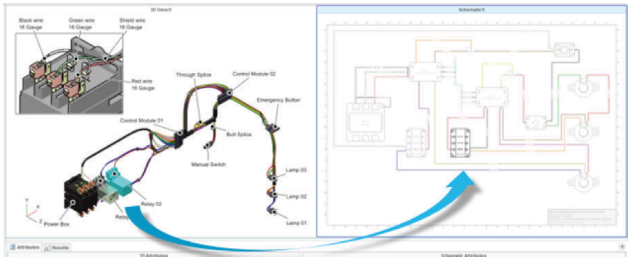
Deployment Options

PTC Illustrate has several deployment options to suit your specific business needs. These offerings are tailored to scale to your technical illustration requirements as well as your budget.

Optional PTC Illustrate Schematic Module

Expands comprehension of schematic data for trouble shooting

- Allow for interactive schematics with cross selection highlighting
- Enables the application of color based on desired interpretation of data
- Retains associativity with engineering data



Enabling the repurposing of schematic diagrams to enhance downstream, interactive trouble shooting

Language support

- English, German, French, Italian, Spanish, Chinese (Simplified and Traditional), Japanese, Korean, and Russian

© 2026, PTC Inc. (PTC). All rights reserved. Information described herein is furnished for informational use only, is subject to change without notice, and should not be taken as a guarantee, commitment, condition or offer by PTC. PTC, the PTC logo, Product & Service Advantage, Creo, Elements/Direct, Windchill, Mathcad and all other PTC product names and logos are trademarks or registered trademarks of PTC and/or its subsidiaries in the United States and other countries. All other product or company names are property of their respective owners. The timing of any product release, including any features or functionality, is subject to change at PTC's discretion..