

CLIENT Autodesk

PROJECT Data sheets

OBJECTIVE

Develop a set of data sheets for mechanical design software.

STRATEGY

Present product benefits in three different formats:

- High-level solutions overview
- Brief summary of new features
- Extended 8-page product brief

PROJECT OVERVIEW

Autodesk Inventor Series provides one integrated solution for designing machinery and other complex assemblies.

While in 2005, many engineers had already migrated to 3D design for new projects, existing libraries of 2D drawings required a solution that supported both 2D and 3D functionality.

Because many of these 2D drawings were created using Autodesk's AutoCAD platform, Autodesk Inventor Series provides a straightforward solution for migrating to 3D without disruption.

The main headline, "The truth about 3D? You still need 2D" supports a message that focuses both on new 3D modeling features and on preserving an organization's investment in existing 2D drawings.



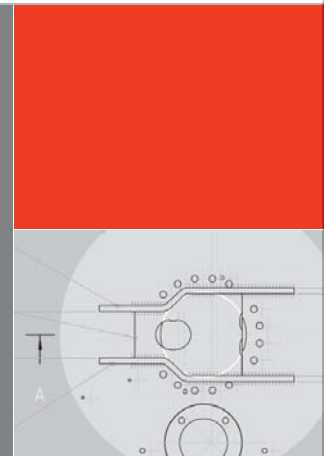
See below for larger views of these data sheets.

Overview sheet/front

Autodesk Inventor Series: Product Overview

autodesk®

**The truth about 3D? You still need 2D.
Welcome to Autodesk Inventor Series.**



As the world's best-selling 3D mechanical design software, **Autodesk Inventor® Series** consistently delivers the right tool for every job.

Through just one integrated solution, you can design your entire product line. Use the latest Autodesk Inventor® 9 design software for your 3D work, AutoCAD® Mechanical for 2D mechanical drawing and detailing, and Autodesk® Vault for more secure management of all work-in-process design data.

With Autodesk Inventor Series, you can take a risk-free path from 2D to 3D. Protect your investment in existing 2D drawings, while taking advantage of the latest 3D technology and the most DWG-compatible platform on the market.

Design Your Complete Product Line

While Autodesk Inventor Series supports larger and more complex assembly files, it was developed with affordable hardware in mind. Through a segmented architecture and new functionality, you can

- Seamlessly combine solids and surfaces to create and edit advanced shapes with more flexibility
- Instantly access a library of more than 500,000 frequently used standard and custom machine components, such as nuts, bolts, and screws
- Create sheet metal parts more efficiently, whether you design them face by face, flange by flange, or by extruding special contours

- Design weldments and postweld operations with more speed and accuracy
- Use existing shapes to quickly create new ones through geometry that propagates existing contours

Create Quality Products the First Time Around

Give your team all the tools they need to stretch the bounds of innovation while speeding up design cycles. With an intuitive, visual design environment, you can create virtual prototypes to test designs, verify specifications, and check for interference without the need for expensive physical prototypes.

Overview sheet/back

Autodesk Inventor Series: Product Overview**Speed Design Cycles**

By associating parts to their assemblies, Autodesk Inventor makes it easy to quickly revise models. Make a change to any part, and all associated parts, assemblies, and drawings are automatically updated — saving hours of work.

Now AutoCAD Mechanical users can open native Autodesk Inventor files, so you can easily share design data with your team. And when a part changes in Autodesk Inventor, it's automatically updated in the AutoCAD Mechanical drawing.

Take the Fastest Route to Production-Ready Drawings

Streamline production drawing and minimize errors. With Automatic Drawing Views, you can create front, side, detail, isometric, section, and auxiliary views of 3D models – then quickly dimension and annotate them.

Additional functionality to speed up workflow includes

- Associative drawing views to eliminate the need for manual updates and checking
- Automatic update of parts lists to keep BOM information current
- Import of AutoCAD drawings, and even layers, right into Autodesk Inventor

Improve Collaboration

Working with extended teams goes more smoothly with powerful import and export tools, including full support for Autodesk DWF™ (Design Web Format™) files. Specialized 3D visualization provides constant feedback on component relations in all design modes.

Protect Your Design Data

With Autodesk Vault, you can enhance data management, organize designs with improved versioning, and protect files from inadvertent changes. Fully integrated into Autodesk Inventor Series, this easy-to-use tool makes all work-in-process data more accessible and reusable.

Learn Easily, Deploy Quickly

With a design environment that offers smarter commands and an advanced help system, Autodesk Inventor Series is easy to learn — offering a risk-free path from 2D to 3D without the need for expensive IT support.

Autodesk Gives You More

Autodesk Consulting offers services to help you streamline your business processes and get the best possible return on your investment in Autodesk technology. Visit us at www.autodesk.com/consulting.

Autodesk® Subscription is the easiest way to keep your design tools and learning up to date. For one annual fee you get the latest versions of your licensed Autodesk software, direct web support, self-paced training, and a broad range of additional technology and business benefits. For more information, contact your Autodesk Authorized Reseller or visit www.autodesk.com/subscription.

Purchase or Learn More

Purchase Autodesk software through your Autodesk Authorized Reseller. To locate the reseller nearest you, visit www.autodesk.com/reseller.

Accelerate Your Design Process.

Move from 2D to 3D at your own pace with the right tool for every job. To learn more, visit www.autodesk.com/inventorseries.

**autodesk**

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New features sheet/front

Autodesk Inventor Series: What's New

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**The truth about 3D? You still need 2D.
Welcome to the new Autodesk Inventor Series 9.**



As the world's best-selling 3D mechanical design software, **Autodesk Inventor® Series** continues to lead the industry — consistently delivering the right tool for every job.

Thanks to a wide range of innovative new features, you can design your entire product line through one integrated solution. Use the latest Autodesk Inventor® 9 design software for 3D work, AutoCAD® Mechanical for 2D mechanical drawing and detailing, and Autodesk® Vault to securely manage all of your work-in-process design data.

Continue on a risk-free path from 2D to 3D. Protect your investment in existing 2D data and drawings, while taking advantage of the latest 3D technology and the most DWG-compatible platform on the market.

So what's new with Autodesk Inventor Series 9?

- **Faster performance** and added capacity to support more complex data sets
- **Positional state validation** for more design flexibility and fewer errors
- **DWG Import/Export** to share data with AutoCAD users and your entire extended team
- **Styles and formatting** to maintain consistent drawing standards automatically
- **Enhanced layers** for more precise control over colors, linetypes, and visibility
- **Streamlined placement of holes**, with built-in parameters based on standard fasteners

A detailed 3D CAD rendering of a complex mechanical assembly. The parts are color-coded: a prominent pink link, a yellow spring, a blue component, and various grey and green parts. The assembly is shown in a perspective view, highlighting its intricate structure and various joints and fasteners.

What's New

New features sheet/back

Autodesk Inventor Series: What's New

**Handle Larger,
More Complex Data Sets**

Autodesk Inventor Series 9 delivers added performance and capacity, but there's no need for expensive hardware. This new release speeds up dozens of commands, such as pattern performance, which now works up to 20 times faster.

**Validate Positional States
to Reduce Errors**

With new flexible assembly functionality, you can enhance product quality and speed workflow. Now you can view multiple representations of a subassembly in different positions to validate motion.

For example, you can create two views of a hydraulic cylinder, in both an open and closed position, to verify all interactions.

**Share Data with Your
Extended Design Team**

Improved collaborative tools help you share information with your entire team, including AutoCAD software users. A new freely distributed viewer offers full-fidelity viewing of native Autodesk Inventor files to anyone on your extended design team.

**Get More Work Done,
More Quickly with Styles**

Instantly format all of your documents to maintain consistency with all organizational standards. New style functionality makes it easy to store specific parameters in a template for your entire project. When you apply a style, all of the formatting instructions are automatically reflected in all documents.

Create Groups Based on Layers

Speed up tedious formatting tasks using groups of layers that provide more control over colors, linetypes, and visibility. You can even map these layers between AutoCAD and Autodesk Inventor drawings.

Streamline Placement of Holes

With automatic holes and hole notes, you can quickly place holes independently of your sketch using a linear (place by two edges), concentric, or point method — and define hole parameters based on standard fasteners. And hole notes are updated automatically whenever you make changes.

Autodesk Gives You More

Autodesk Consulting offers services that can help you streamline your business processes and get the best possible return on your investment in Autodesk technology. Visit us at www.autodesk.com/consulting.

Autodesk® Subscription is the easiest way to keep your design tools and learning up to date. For an annual fee you get the latest versions of your licensed Autodesk software, direct web support, self-paced training, and a broad range of additional technology and business benefits. For more information, contact your Autodesk Authorized Reseller or visit www.autodesk.com/subscription.

Purchase or Learn More

Purchase Autodesk software through your Autodesk Authorized Reseller. To locate the reseller nearest you, visit www.autodesk.com/reseller.

To find out more about upgrading to Autodesk Inventor 9, download a demo, or view the complete list of system recommendations, visit www.autodesk.com/inventorseries.

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Autodesk Inventor Series: Product Summary

autodesk

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As the world's best-selling 3D mechanical design software, **Autodesk Inventor® Series** consistently delivers the right tool for every job.

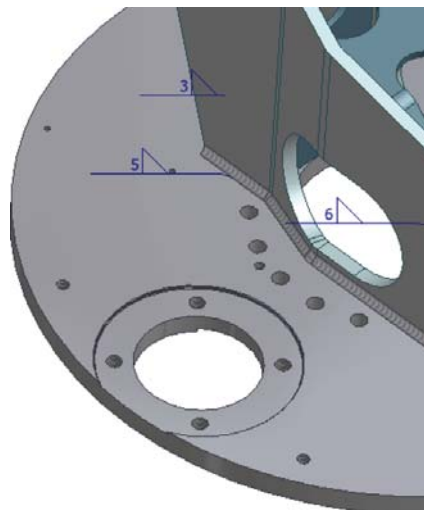
Through one integrated solution, you can design your entire product line. Use the latest Autodesk Inventor® 9 design software for 3D work, AutoCAD® Mechanical for 2D mechanical drawing and detailing, and Autodesk® Vault for more secure management of all work-in-process design data.

Autodesk Inventor Series provides the best risk-free path for moving from 2D to 3D at your own pace. Now you can protect your investment in all of your existing 2D drawings, plus take advantage of the latest 3D technology and the most DWG-compatible platform on the market.

Design Your Complete Product Line With More Control and Precision

Weldments

Using a built-in environment for designing weldments and machine castings, you can easily model welds in 3D — simulating weld preparation, welding, postweld, and cast machining operations to improve product quality.



Advanced Shape Description

Add innovative features to your designs through ShapeManager, a 3D modeling kernel for seamlessly combining advanced shapes and complex surfaces. Now you can adopt a more flexible hybrid design approach because solids and surfaces can be combined in one design.



Component and Feature Reuse

Save time with instant access to a vast library of frequently used machinery content, including more than 500,000 components, such as nuts, bolts, and screws. Other tools include

- **i-drop® functionality:** Incorporate parts that manufacturers post to the web by simply dragging them from your browser into the interface window.

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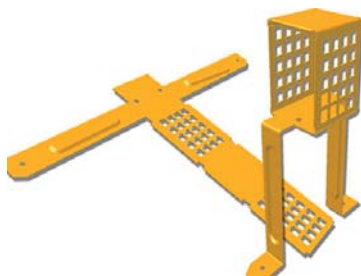
Autodesk Inventor Series: Product Summary



- **iParts:** Access table-driven libraries of component groups (for example, a car wheel can be tabled between 4-, 5-, 6-, or 8-bolt hole patterns depending on the vehicle.)
- **iFeatures:** Use an interactive interface to populate smart features such as connector ports, sheet metal louvers, and hydraulic ports by dragging them into your design.

Sheet Metal

Use specialized tools to quickly design sheet metal components. Create parts face by face, flange by flange, or by extruding contours — whether from a flat pattern, a form, or both. The software automatically associates correct bend allowances based on material and thickness.



Parametrics and Adaptivity

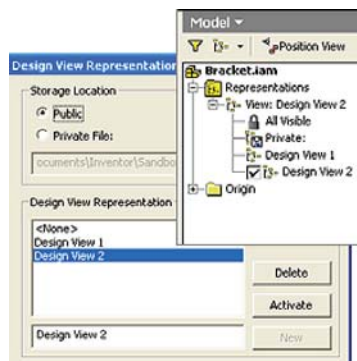
Changes won't add design steps because they're instantly propagated throughout your design using an engine that accounts for parametrics and adaptivity.

Dimension-Driven Design

Test multiple design concepts at an earlier stage, before defining exact form and fit. Within Autodesk Inventor, you can quickly sketch shapes without defining details and then apply dimensions to drive the geometry.

Design Views

More design views enhance productivity even when working with large and complex assemblies. Store and share frequently used views to quickly isolate specific parts or subassemblies as needed.



Sketching

With a free-form sketching environment, you can create conceptual sketches and connect them to build 2D layouts of design concepts.

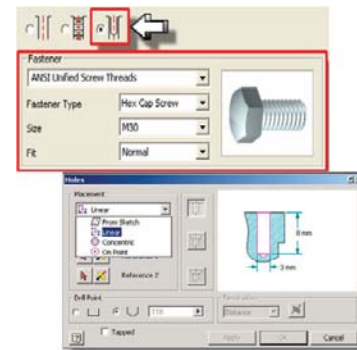
Capacity and Performance

Enhanced Take advantage of added performance to design complex machines with tens of thousands of components, without the need for expensive hardware. And a segmented architecture gives you flexibility to add even more capacity later as your needs change.

Plus, an improved drawing manager provides quick load-on-demand functionality and Z-plane clipping to optimize views for large assembly drawings.

Streamlined Placement of Holes

Enhanced End tedious revisions with a streamlined process to place holes independently of your sketch. Use linear or concentric geometry and define parameters based on standard fasteners. Holes and hole notes are updated automatically with any changes.

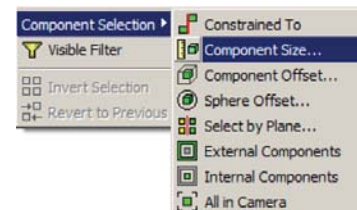


Component Selection

Enhanced Focus quickly on just the items you need for the specific task at hand. Choose a specific assembly component and isolate a view based on your specific selection criteria.

With more visibility, you can enhance assembly performance using advanced selection tools that include

- Selection of Internal or External components
- Selection of components in Camera View
- Selection of components in front of or behind a plane



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Autodesk Inventor Series: Product Summary

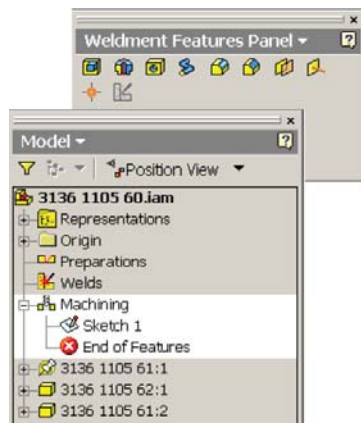


Design Views

Enhanced Incorporate design views directly into assembly files to improve collaboration and boost productivity. Store and share frequently used representations with associative design views now supported in presentation files.

Assembly Features

Enhanced Assembly features now include revolve and sweep (to remove material), fillet and round, and advanced hole termination. You can simulate weld preparation, postweld operations, and machined castings.

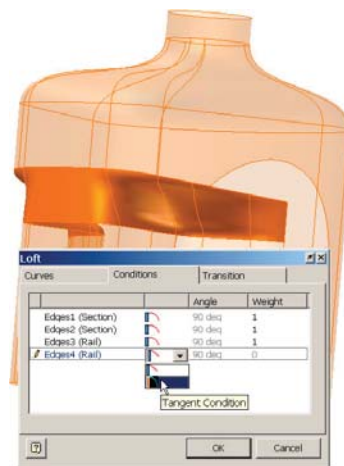


Projected Sketch Geometry

Enhanced Brainstorm new designs more easily by toggling projected sketch geometry between normal, construction, centerline, and reference settings.

Loft

Enhanced With full-fidelity loft preview, you can apply tangency conditions to loft rails to create advanced shapes and complex surfaces.

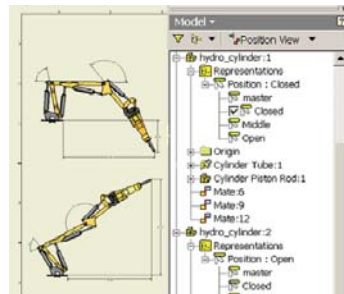


Pattern and Mirror

Enhanced Duplicate parts by patterning and mirroring work features (plane, axis, and point) and solid base bodies.

Positional Representations

New Validate positional states more rapidly by creating assemblies that include multiple representations of specific subassemblies, each



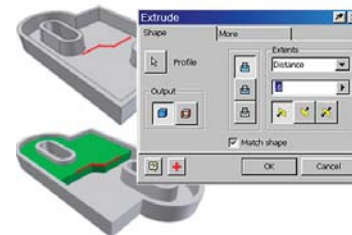
positioned differently. For example, you can create two views of a valve, one in an open and another in a closed position.

Styles

New Make sure all work conforms to organizational formatting standards for font size, color, and linetype. Define a style and all specifications are automatically applied to an entire set of drawings.

Shape Propagation

New Quickly turn existing shapes into new ones using extrude and revolve functionality to propagate existing contours.



Planar Boundary Patch

New Automatically create planar surfaces, combining complex shapes and surfaces through the edges of existing planar geometry.

Flexible Assemblies

New Minimize costly errors and improve functionality by making dynamic adjustments. Create multiple views of the same assembly in a variety of independent states.



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Autodesk Inventor Series: Product Summary



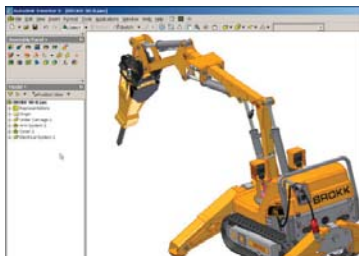
Add More Quality and End Tedious Revisions

Virtual Prototyping

Speed design cycles with interactive simulations to resolve functionality issues early on, before you commit to an actual prototype or finished part.

3D Visualization

With more feedback on how components interact, you can view sketches, subassemblies, and parts in the context of the overall design, and then assign realistic materials, textures, and lighting to your models.



Contact Detection Solver

Drag one component in contact with another to validate the interaction between the two — a simple way to work out conflicts earlier in the design process.



Interference Analysis

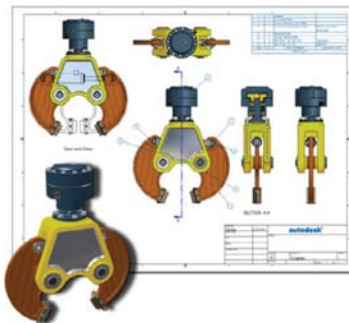
Cut down on costly errors and improve manufacturability through automated testing of part interference. Quickly measure parts for proper fit and vary component tolerances to validate manufacturing flexibility.

Physical Properties

Improve your designs using real-world properties in virtual prototypes. Assemblies and parts created in Autodesk Inventor carry physical property data such as center of gravity, material type, density, color, and texture.

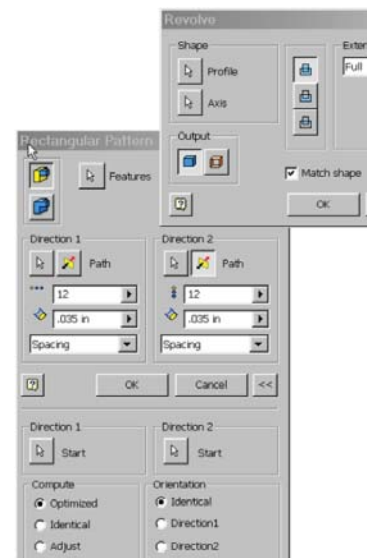
Associativity

Speed up revisions with automatic propagation of design changes. You can associate parts and assemblies using specific design relationships. Any change to a part is automatically reflected throughout the assembly — including parts and drawing files, presentations, and related add-ins such as CNC tool paths or finite element analysis.



Open API

Customize Autodesk Inventor to fit your IT environment through a well-documented application programming interface (API) that automates specialized workflows.



Pattern and Mirror

Quickly pattern and mirror 2D and 3D shapes in all design modes to create associative or nonassociative patterned copies.

Interoperability with AutoCAD Mechanical

Using associative 2D and 3D collaboration features, you can turn AutoCAD Mechanical files into detailed drawings of new Autodesk Inventor part models. When the design is changed in Autodesk Inventor, the AutoCAD Mechanical drawing is automatically updated.

Customizable Hot Keys

Define and customize your own keyboard shortcuts for quick access to the commands you use most.

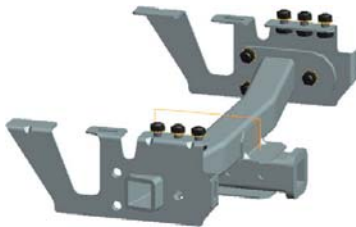
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Autodesk Inventor Series: Product Summary



Assembly Mirror

Enhanced Quickly mirror even complex geometry to create symmetrical parts or subassemblies, with full support for patterns, welding preparation, automatic part naming, machining, and the option to reuse standard content.



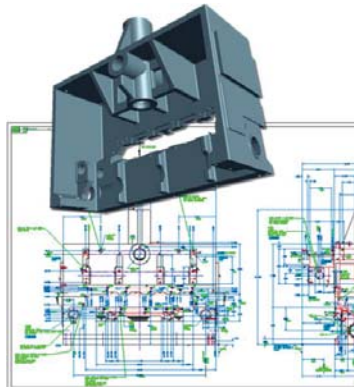
Take the Fastest Path Yet to Production-Ready Drawings

Automatic Drawing Updates

Avoid time-consuming manual error checks by associating drawing views with original components. Changing any part will automatically change all the associated drawings.

Automatic Drawing Views

Take advantage of automatic retrieval of front, side, isometric, detail, section, and auxiliary views when creating 2D drawings. A robust palette of dimension, annotation, and 2D symbols helps you create your drawing set quickly and easily.



AutoCAD Drawing Templates

Speed the transition from 2D to 3D by using all of your existing AutoCAD design templates, including layers, title blocks, and standards information.

Title Blocks

Enhanced Create a set of standard drawing templates with improved editing features that include

- Input of dimensional values to define specific blocks with added precision
- Modification of block information using "stretch" functionality
- Editing of title blocks in the context of the existing drawing



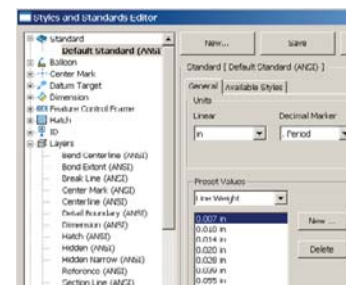
Component Copy

New A new time-saving utility copies assemblies, subassemblies, and parts from previous designs. With automatic and flexible naming, you can simply create "same-as" and "except" versions of designs while maintaining the integrity of all constraints, welds, and other assembly features.



Standards

Enhanced Automatically prepare production-ready drawings with complete consistency to organizational standards. You can modify all standard settings, mix multiple standards within a drawing, and update drawings globally.



AutoCAD Migration Utility

Make the most of your existing AutoCAD data using a migration utility that improves workflow and saves time. You can import AutoCAD drawings and map layers into the Autodesk Inventor environment either as a completed assembly or as a part of your 3D layout.

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Autodesk Inventor Series: Product Summary



Text

Enhanced Use AutoCAD-type text tools to quickly rotate text to any angle and justify text to meet specific annotation standards.

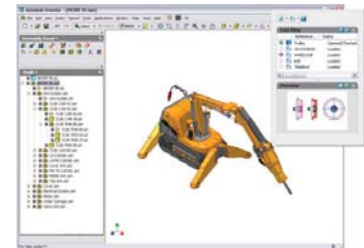


Layer Name	On	Color	Line Type	Line Weight
Border Center War (ANSI)		Blue	Chain	0.020 in
Border Center (ANSI)		Red	Continuous	0.020 in
Border Line (ANSI)		Blue	Continuous	0.020 in
Center Mark (ANSI)		Blue	Continuous	0.030 in
Centerline (ANSI)		Blue	Continuous	0.010 in
Control Boundary (ANSI)		Blue	Double Dash Chain	0.020 in
Dimension (ANSI)		Blue	Continuous	0.010 in
Hidden (ANSI)		Black	Continuous	0.007 in
Hidden (ANSI)		Black	Hidden	0.014 in
Hidden Narrow (ANSI)		Black	Dashed	0.030 in
Hatchline (ANSI)		Black	Double Dash Chain	0.020 in
Section Line (ANSI)		Black	Double Dash Chain	0.020 in
Sketch Geometry (ANSI)		Blue	Continuous	0.010 in
Symbol (ANSI)		Blue	Continuous	0.010 in
Symbol Text (ANSI)		Blue	Continuous	0.010 in
Visible (ANSI)		Blue	Continuous	0.010 in
Visible Narrow (ANSI)		Blue	Continuous	0.014 in

Improve Collaboration With Extended Design Teams

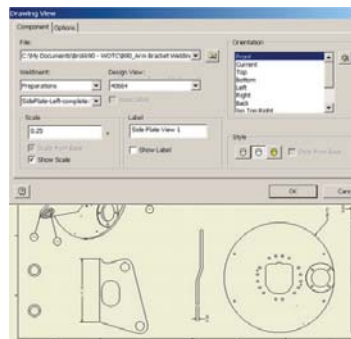
Autodesk Vault

Share files among workgroups securely with Autodesk Vault, a file management solution that's integrated into Autodesk Inventor software to improve version control and protect data against inadvertent changes.



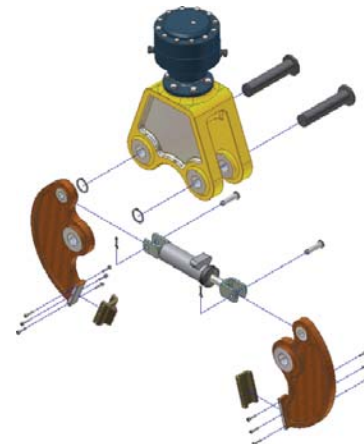
Weldment Preparation Drawing Views

New Now you can create customized views of component weld preparations to update production drawings of all weldments.



Technical Illustrations

Quickly create all the technical illustrations, parts manuals, assembly instruction sheets, process sheets, and videos you need to train your manufacturing teams.



Dimensioning

Enhanced Automatically center all dimensional text and edit any extension line origins as needed.

Section Views

Enhanced Manage section views more precisely with added control over the depth of a slice. With enhanced selection tools, you can predefine specific components on a per-view basis.

Associative Parts List

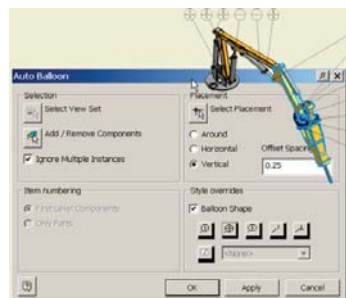
Enhanced Generate an accurate parts list more quickly than with traditional 2D methods. Because assembly changes are associative, any revisions will automatically update, reorganize, and repopulate your parts list so it's always kept up to date.

Layers

New Autodesk Inventor now supports layers, a powerful feature that's familiar to AutoCAD software users. Layers can be grouped to reflect specific color, linetype, and visibility settings. And by mapping layers between the AutoCAD and Autodesk Inventor applications, you can import and export data more quickly.

Auto-Balloon Enhancements

New Document assemblies more accurately through improved control over automated balloon placement on drawings.



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Autodesk Inventor Series: Product Summary

**Import/Export Formats**

Enhanced Autodesk Inventor Series supports all standard data transfer technologies and formats for more efficient import and export of drawings and data. New functionality for exchanging data with suppliers and customers includes

- Import of DWG, DXF™, ProE®, SAT, IGES, and STEP files
- Export of part assembly files such as SAT, IGES, STEP, STL, and Autodesk Streamline® online service
- Exchange of drawing files in formats such as DWG (with full layer mapping), DWF™, and DXF

Plus, new AutoCAD 2005 support makes it easier to import and export all file properties, including OLE scaling.

DWG Compatibility

Enhanced Improve collaboration with AutoCAD software users through enhanced DWG compatibility for importing and exporting layers, text, thread notes, and bitmaps.

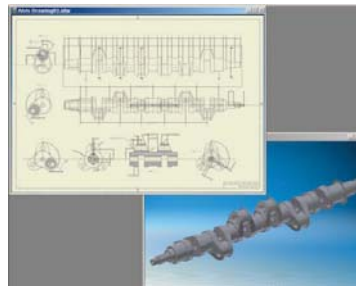
IGES Wireframe Import

Enhanced Import 2D and 3D wireframes so you can reuse data created in other design systems. Communicate more effectively with suppliers and customers with enhanced functionality for

- Designing laser machinery using data from third-party optic design systems
- Importing wireframe data from 3D scans to improve reverse engineering
- Validating parts against original 3D designs to verify performance of coordinated measurement machine (CMM) systems

Autodesk Inventor View

New Share data with your entire extended team, even those users without access to the Autodesk Inventor application. A new freely available viewer provides non-users with full-fidelity viewing and printing of part files (IPT), assembly files (IAM), and drawing files (IDW).

**3D DWF Publishing**

New New support for DWF (Design Web Format™) provides even more flexibility for sharing complex design files.

**Learn Easily, Deploy Quickly****Ease of Use**

Autodesk Inventor provides a more intuitive interface and smarter commands. Visual feedback and gesture-based interactivity responds intelligently to anticipate your needs.

Advanced Help System

Speed the transition to 3D with contextual help from the award-winning Design Support System (DSS). Plus, browser-based support offers an electronic infrastructure for more intuitive help.

Design Doctor

Resolve errors in 3D models with a sophisticated diagnostic tool that recognizes potential design issues and provides recommendations for correcting them.

**Skill Builders**

Flexible access to up-to-date tutorials accelerates training. Extended learning modules provide enriched online help including "show me" animations — with updates available on the web.

Project Files

Enhanced Assure project integrity from start to finish through more effective organization of design data. Project files are automatically set up to track all design-related data, making it easy to find files wherever they're stored.

Network Installation

New Quickly deploy Autodesk Inventor on your network through new "network push" installation that supports Microsoft® technologies, including SMS and GPO.

Product summary/page 8 of 8

Autodesk Inventor Series: Product Summary**Autodesk Give You More**

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