

autodesk®

2005

Integrated Building Systems Design, Documentation, and Analysis

Want to reduce risk, increase competitive advantage, streamline processes, and improve profitability? Autodesk® Building Systems 2005 software has you covered. It builds your system models faster, provides instant visual design feedback, enables both sizing and exporting to third-party engineering analysis applications, produces construction-ready documents directly from your design, and much more. The result: you spend more time designing and less time on tedious drafting tasks; your construction documents are virtually error free; and your building systems and project teams are better coordinated.



Using Autodesk Building Solutions has allowed us to work faster and smarter. We no longer have to duplicate efforts as we go from schematic design to design development to construction documents. We can see both short- and long-term ROI benefits, reaffirming our decision to standardize on these building systems applications from Autodesk.

—Norman Kurtz
President and CEO
Flack + Kurtz

Unifying MEP Processes

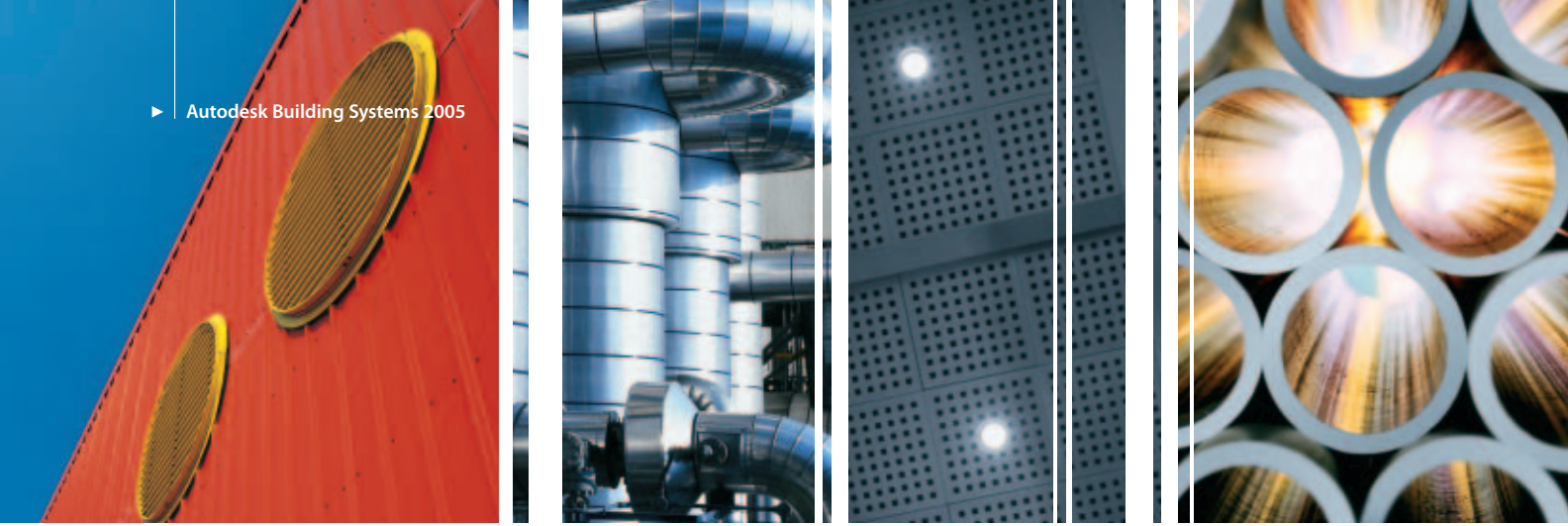
Some building systems software applications provide basic design and documentation capabilities. Others provide modeling technology. And still others provide building engineering analysis. But only Autodesk Building Systems 2005 connects it all. It unifies MEP design, documentation, and analysis in an integrated environment—which translates into improved productivity, automated coordination, and increased accuracy.

What Autodesk Building Systems Can Do for Your Business

Win more work. Reduce risk. Avoid construction errors. Deliver projects on time and within budget. Minimize construction administration costs. Maximize profits. Coordinate design changes. Collaborate with other disciplines.

Whatever you do to build your business, Autodesk Building Systems can help you do it quickly and effectively. Built on the AutoCAD® foundation and optimized for MEP processes, Building Systems includes tools to help you

- Lay out, size, and fit design elements automatically—increasing productivity and accuracy
- Identify and correct systems conflicts—avoiding field changes and improving multidisciplinary coordination
- Make design changes throughout all project information—ensuring consistent documentation
- Export critical engineering data to standard file formats for third-party analysis applications—saving time and reducing errors
- Control bid estimates and meet deadlines by integrating pricing and scheduling information with drawings—improving client satisfaction and profit margins



There's only one building engineering software application that connects the design, documentation, and analysis of complex building mechanical, electrical, plumbing, and fire protection systems—Autodesk Building Systems 2005.



Building Systems will help us to expedite the design process by improving team communications and integrating design, drawing, and engineering analysis.

—John D. Benz, AIA
Chairman and CEO
TLC Engineering for Architects

Custom Made for Building Engineering

Built on the AutoCAD platform, Autodesk Building Systems is the stand-alone MEP application that provides mechanical, electrical, plumbing, and fire protection content and functionality for building engineering. For example, mechanical functionality offers single-line, 2D, or 3D pipes for creating duct and piping systems as well as built-in calculators for sizing duct. Electrical functionality provides intelligent circuit objects for the efficient design and management of circuits and panels as well as built-in calculators for sizing wire and circuit management. And plumbing functionality includes a customizable plumbing code system for automatically calculating pipe sizing and flow requirements.

More Drafting Productivity, Less Tedium

Boost everyday drafting productivity with features like suggested layout path, hidden lines, grip editing, tool palettes, and more. Use intelligent engineering objects such as ducts, conduits, pipes, sprinklers, and equipment to quickly lay out complex systems. Intelligent

objects interact logically and automatically update to reflect changes. Plus you can manipulate objects directly onscreen with grip editing, eliminating the need for dialog boxes. With tool palettes you can instantly access frequently used content and commands, saving both screen space and time. Bottom line— with Autodesk Building Systems you spend less time on drafting tasks and more time actually designing.

Greater Accuracy, Fewer Errors

Autodesk Building Systems helps eliminate the need to make major changes late in the process by creating a true-to-life representation of your design—the building model. This model provides instant feedback on system interferences, so you avoid costly and time-consuming construction mistakes from the get-go. And if you do need to make changes, you don't have to manually track them down in multiple locations as you would with drafting-based software. With Building Systems software, the model is associated with views, documents, annotations, and schedules, so a change to one location ripples throughout your project, increasing accuracy and decreasing errors.



What's more, Autodesk Building Systems eliminates the error-prone manual transfer of design data for analysis purposes. Building Systems has built-in wire, plumbing, and duct sizing tools for quick sizing calculations. Plus it enables you to export critical design data (complete with square footage, volumes, and engineering information, such as air flow and temperatures) to standard file formats for third-party HVAC load and energy analysis applications as well as duct and fire protection pipe sizing tools, thereby increasing the accuracy of your designs.

Improved Coordination, Reduced Risk

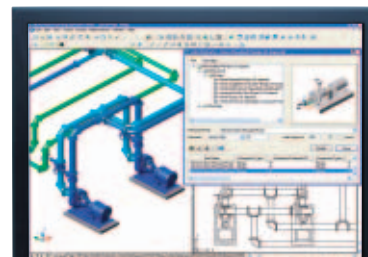
Autodesk Building Systems is interoperable with other Autodesk® building design software and services—such as Autodesk® Architectural Desktop, Autodesk® DWF™ Composer, AutoCAD, and Autodesk® Buzzsaw®, streamlining exchange of design information within the project team. Design disciplines are better coordinated from project outset, since Building Systems automatically detects interferences between MEP and structural systems. Plus dynamic linking between design, construction documents, and schedules ensures that all project information is coordinated. The result: better collaboration and less risk of uncoordinated documents and conflicts on the job site.

A World of Content

Ducts. Pipes. Fire pumps. Sprinkler heads. Electrical panels. Drains. Water heaters. Plumbing fittings. Autodesk Building Systems provides ready-made content for the quick layout of building systems. Content replicates real-world parts, complete with details of size, materials, and more. It's based on standards, like American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) and General Services Administration (GSA) guidelines. Plus it's available in multiple, customizable dimensions—U.S. imperial, U.S. metric, and U.K. metric. And when your design requires manufacturer-specific content, use Autodesk i-drop® technology to bring predesigned content from manufacturers' websites directly into your drawings. Or use it to post your own content libraries to your firm's intranet for improved project control or to the web to share with the design community.

Efficient Management of Construction Documents

Drawing management tools provide consistency throughout the project. The new Sheet Set Manager (integrated in the Project Navigator) presents a single interface from which you can access sheets, group them into logical categories, create a sheet index, manage sheet views, archive sheet sets, and share them with the entire project team—ensuring that everyone is working from the most current documents. What's more, your documents are annotated with new keynoting and callout features. Because keynotes are managed from a Microsoft® Access database, you can update all your construction documents in one easy step.



Autodesk Building Systems 2005

Tools That Boost Productivity

- + Ability to export critical engineering data to standard file format
- + Improved schematic symbols and riser diagrams
- + Ability to isolate objects
- + Dynamically linked schedules, tables, annotations, keynotes, and sheet sets
- + Ability to export design data to Microsoft Access and other ODBC formats
- + Drawing Management enhancements
- + Ability to share drawings through DWF and on the web
- + Installation and deployment improvements
- + Enhanced tool palettes
- + Improved Layer Manager
- + Plotting enhancements
- + Ability to publish i-drop part catalogs on the web
- Suggested layout path
- Hidden-line support through xrefs
- Content Builder
- U.K. and U.S. metric content
- VIZ Render

Mechanical and Plumbing Design

- + Duct sizing
- + Hatch on duct
- + New HVAC and fire protection content
- + Ability to use architectural plumbing fixtures with MvPart Convert
- Rise/Drop symbology: connect dynamically by system types
- Top and bottom of duct/pipe labels
- Plumbing pipe-sizing calculators and table definitions
- Pipe slope calculations

Electrical Design

- + Wire sizing
- Dynamic panel schedules with bidirectional link to Microsoft Access or Excel
- Circuit Manager
- Demand factors
- Voltage definitions
- Circuit analysis tools
- Enhanced circuiting across multiple DWG files
- Circuit overload alarm
- Fire safety content
- Automatic tagging of devices

System Requirements

For a complete list of system requirements, visit www.autodesk.com/buildingsystems.

Companion Products and Services

Autodesk has coordinated with third-party partners for analysis and sizing applications to make your engineering process more productive and accurate. For more information about partner products, visit www.autodesk.com/buildingsystems-partners.

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