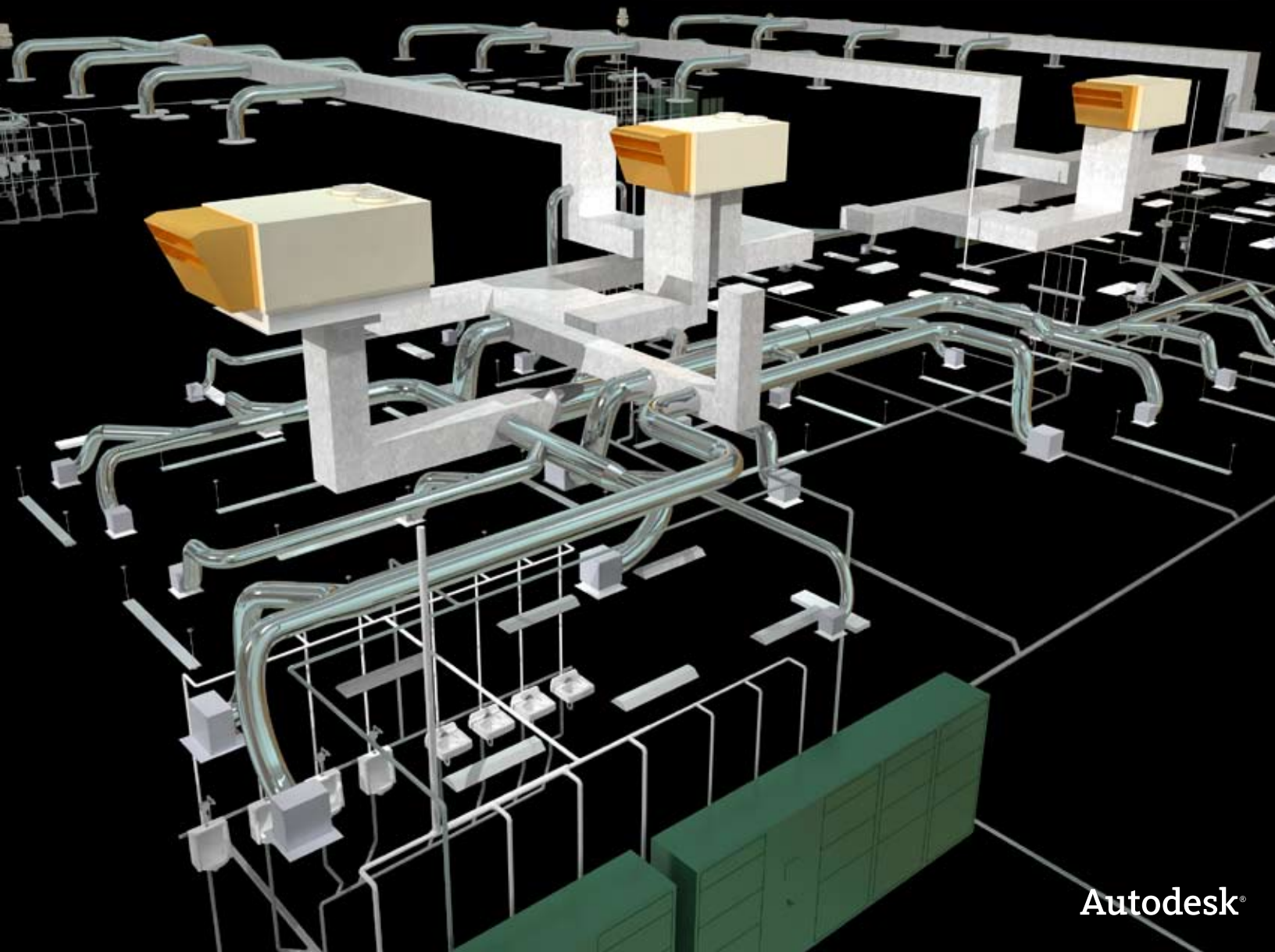


# Autodesk® MEP Engineering Solutions

Creation through collaboration.  
Performance by design.

**AutoCAD®  
Revit®**

MEP Suite



# Look ahead. Stay ahead

Providing MEP engineers and other professionals with technology for more efficient, collaborative, and environmentally responsible design, engineering, and construction projects.

Autodesk Revit MEP facilitated collaboration among all the teams on a single, fully coordinated parametric model, enabling us to deliver integrated solutions that bypassed the problems inherent in drawing-based technologies.

—Stanis Smith  
Senior Vice President  
Stantec

Mechanical, electrical, and plumbing engineering firms are continuously challenged to find innovative ways to meet clients' demands while increasing productivity and maintaining efficiency in the global market. Autodesk MEP Engineering Solutions can help you meet today's heightened demand for building information modeling (BIM), and sustainable design.

The core of Autodesk MEP Engineering solution includes Autodesk® Revit® MEP and AutoCAD® MEP.

#### **BIM for Mechanical, Electrical, and Plumbing Engineers**

Building information modeling is an integrated process built on coordinated, reliable information about a project from design through construction and into operations. By adopting BIM, architects, engineers, contractors, and owners can easily create coordinated, digital design information and documentation, and then use that information to accurately visualize, simulate, and analyze performance, appearance, and cost. Ultimately, BIM helps firms reliably deliver the project faster, more economically, and with reduced environmental impact.

#### **Sustainable Design and Analysis**

Sustainability is a key component of all building design, construction, and management processes. Using the Autodesk MEP Engineering BIM Solution, professionals are enabled to better predict building performance and analyze energy usage based on building information models to support sustainable building design objectives and industry requirements. More accurately and precisely predict building performance with built-in analysis capabilities and partner applications for better decision making and to help users create designs for more cost-effective environmentally conscious buildings.

#### **Design Collaboration**

Today's complex buildings require leading-edge systems engineering with enhanced multidiscipline collaboration. Autodesk MEP Engineering Solutions help minimize design coordination errors between mechanical, electrical, and plumbing engineering design teams; architects; civil and structural engineers; and mechanical contractors; and help enable design alternatives to more quickly and easily be explored.



# A Better, Faster AutoCAD Solution for MEP Designers and Drafters

AutoCAD MEP software offers intuitive systems design, layout, and drafting tools for enhanced productivity with the flexibility to make last-minute design changes more quickly and easily.

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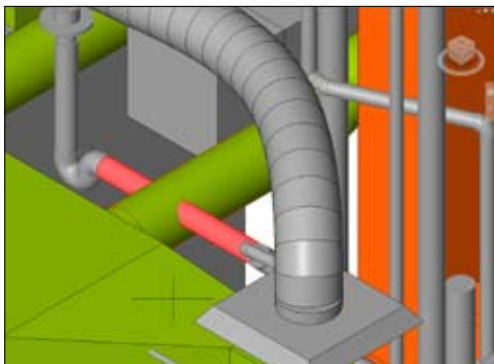
AutoCAD MEP software is the discipline-specific version of AutoCAD software for mechanical, electrical, and plumbing designers and drafters. Sharing and collaborating with architects and structural engineers is made easier through the familiar AutoCAD-based environment.

## Better Design Accuracy

More efficiently create and edit your designs. Review designs, sizing and system balances more easily with integrated calculators that support greater accuracy. Minimize errors by automating drafting tasks and using built-in manufacturers' content.

## Coordinate Design Information

Help reduce requests for information (RFIs) and costly design changes in the field with more accurate and consistent construction documents. Design systems using real-world parts and equipment, which can be used throughout the fabrication and construction of the building.

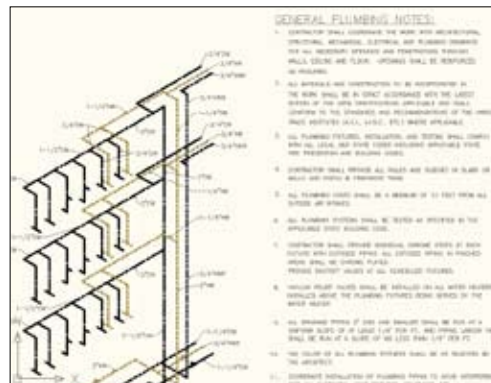


## Collaborate More Effectively

Take advantage of architectural and structural plans developed using AutoCAD-based software applications to better coordinate with your extended team. Help reduce drafting time by working with tools designed specifically for mechanical, electrical, and plumbing engineers, designers, and drafters. AutoCAD MEP software is easier to adapt and customize to existing AutoCAD-based engineering workflows. Flexibly implement AutoCAD MEP to help improve the design and simplify your documentation process.

## Schematic Design

More easily create riser diagrams and schematic plans with enhanced schematic tool palettes that logically group commonly used tools. The Properties palette provides easier schematic object configurations. Convert existing AutoCAD blocks to schematic symbols for quick use in schematic design.



## Single/Double-Line Design

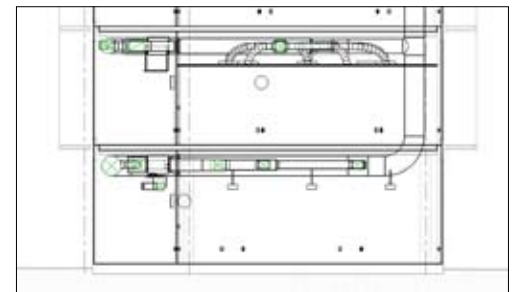
Automate your workflow by creating construction documents more efficiently with single line for design development, and convert automatically to double line for construction documents. Lay out mechanical systems in single line with unsized parts early in the design process, and then use duct-sizing tools and convert the layout to double line. Enhanced sizing tools help to increase drafting productivity when moving from design development to construction documentation.

## Smart Annotation of Objects

Annotate once for all scales. Annotative text and symbols automatically adjust based on the scale of the view. You can annotate objects with labels that consist of text or block definitions. The information in the label comes directly from object properties, such as connection size.

## Seamless Sections and Elevations

No longer wait until the end of your design process to manually create sections and elevations, instead, more quickly create them at any time. You can control the size and shape of the section you generate and assign materials to the section for an optimal visual representation of the sectioned objects.

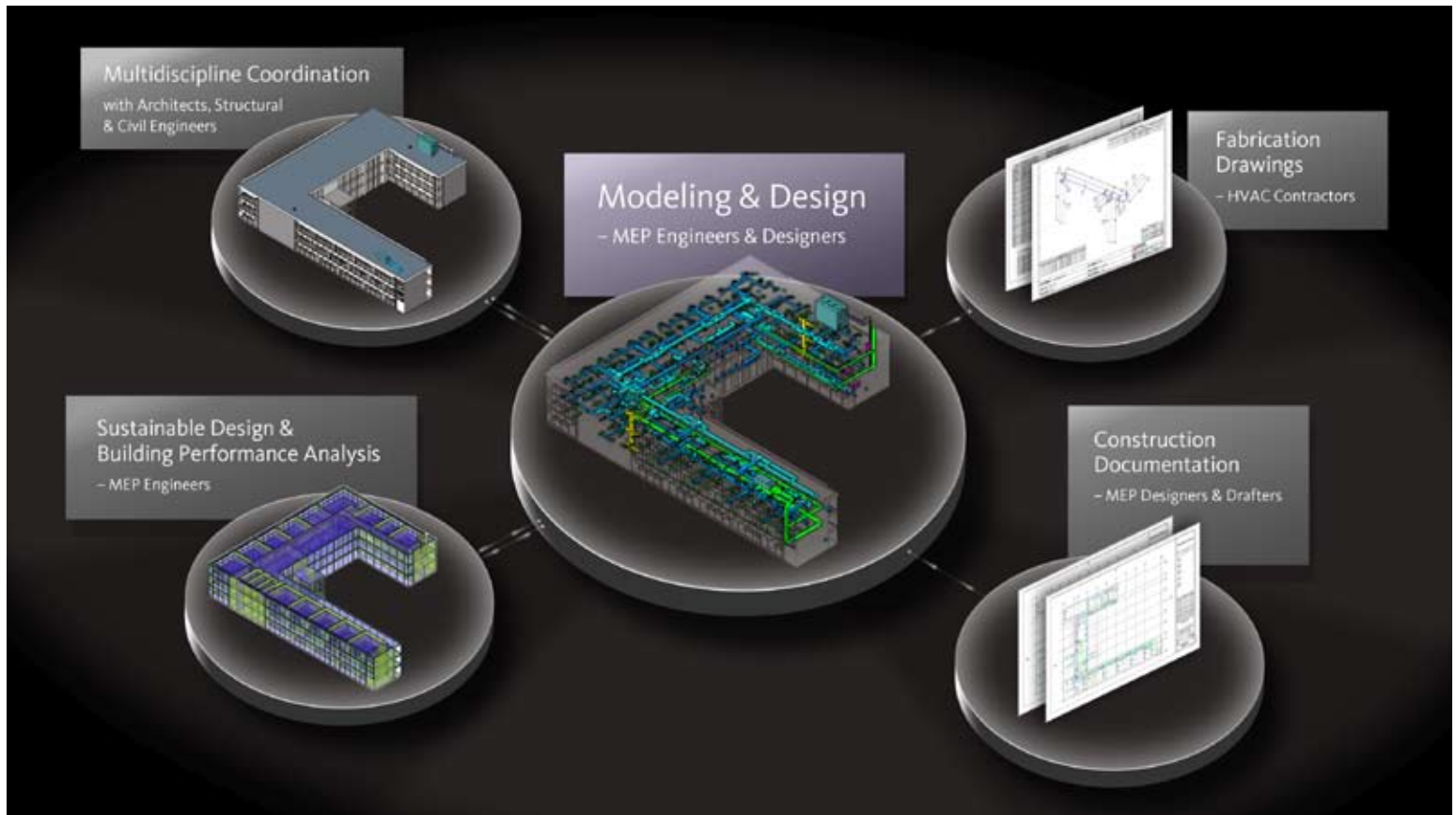


## Fabrication for Contractors

With smoother integration of fabrication partner tools into AutoCAD MEP software, designers, drafters, and contractors can utilize their AutoCAD MEP design for fabrication of sheet metal, plumbing, and piping, making it easier to create shop drawings.

# Building Information Modeling for MEP Engineers

Autodesk Revit MEP software provides design and analysis tools both to help optimize building systems and enable MEP engineers to make better design decisions.



## Building Systems Modeling and Layout

Autodesk Revit MEP software's modeling and layout tools enable you to create mechanical, electrical, and plumbing systems more accurately and with greater ease. Use the automatic routing solutions to model the ductwork, plumbing, and piping systems, or you can manually lay out the lighting and power systems. Because of the parametric change technology, any change to the model is automatically coordinated everywhere. Maintaining a single, internally consistent model of the building can facilitate drawing coordination and help reduce the number of errors.

## Optimized Design Collaboration and Coordination

Architects, structural engineers, and mechanical, electrical, and plumbing engineers can more effectively collaborate and interact based on workflow and project requirements. Minimize design coordination errors between mechanical, electrical, and plumbing engineering design teams; architects; and structural engineers by using the Revit® platform for BIM. Help reduce design conflicts with real-time clash and interference detection.

## Sustainable Design with Building Performance Analysis

By using the rich building information model, with realistic, real-time design scenarios, mechanical, electrical, and plumbing engineers can make better design decisions and minimize errors to fit a project's sustainability strategy. Autodesk Revit MEP software provides native integrated heating and cooling loads analysis tools to help you perform energy analysis, evaluate system loads, and produce heating and cooling load reports for a project, as well as support for green building extensible markup language (gbXML). Export the gbXML file for use with Autodesk Sustainable Design and Analysis Solutions as well as third-party analysis applications.

# Powerful Software Solutions for More Successful Projects

Combine Autodesk® MEP Engineering Solutions with complementary applications to help achieve and exceed even your most ambitious objectives.

We've increased our productivity, thereby allowing us to investigate additional design alternatives and add value for our clients. Using AutoCAD® MEP has made design more efficient and allowed us to quickly realize ROI.

—Bob Bernas  
CAD Manager  
Consoer Townsend  
Envirodyne Engineers

## Design and Documentation

### Autodesk Revit MEP

Purpose-built for building information modeling (BIM), Autodesk® Revit® MEP software provides design and analysis tools both to help optimize building systems and enable MEP engineers to make better design decisions.



### AutoCAD MEP™

AutoCAD® MEP software is the AutoCAD® software for mechanical, electrical, and plumbing designers and drafters. Creation and coordination of construction documents is more efficient with AutoCAD MEP's more intuitive systems drawing and design tools.



### AutoCAD P&ID

Create, modify, and manage piping and instrumentation diagrams with AutoCAD® P&ID software. Built on the latest AutoCAD platform, AutoCAD P&ID is easy to use and familiar to designers and engineers, so design teams can start immediately with minimal training. Common tasks performed every day are streamlined and automated to boost productivity, while component and line information is easily accessed by designers as they work.

### AutoCAD

Drive your projects from concept to completion with the powerful documentation tools in AutoCAD software. Work faster with automation, management, and editing tools that minimize repetitive tasks and help speed your time to completion.

## Sustainable Design and Analysis

### Autodesk Ecotect Analysis

Autodesk® Ecotect™ Analysis software is a comprehensive conceptual building performance analysis tool that covers a wide range of simulation and analysis functions, such as solar radiation, shading and daylighting. Its modeling, visualization, and analysis features help architects and designers to better understand how a building design will operate and perform.

### Autodesk Green Building Studio

Autodesk® Green Building Studio® web service provides whole-building energy, water, and carbon-emission analysis for architects and designers.

## Collaboration

### Autodesk Navisworks

Autodesk® Navisworks® Manage software is a comprehensive real-time review solution for building information modeling. Aggregate existing design data to better visualize the whole project, simulate scheduling, and help identify interferences to help gain better insight and predictability while supporting productivity and quality.

### Autodesk Design Review

Help accelerate reviews with Autodesk® Design Review software, the all-digital way to view, mark up and track changes to 2D and 3D CAD designs without the original creation software.

### Autodesk Buzzsaw

Autodesk® Buzzsaw® collaborative software service helps architecture, engineering, and construction firms centralize and coordinate project-related documents and data at the outset of BIM.

For our clients using Revit® Architecture, our original goal was to produce 100 percent of our construction documents with Autodesk Revit MEP and we've already accomplished that. It really does help us run a much tighter project and put a better product into the field. The 3D models give the entire design team—from the project engineer on down—a dramatically improved understanding of the building. As a result, contractors can build our projects more easily and with far fewer questions.

—Robert Cronk  
Principal  
Design West Engineering

#### **Learn More or Purchase**

Access specialists worldwide who can provide product expertise, a deep understanding of your industry, and value that extends beyond your software purchase. To purchase AutoCAD MEP or AutoCAD Revit MEP Suite software, contact an Autodesk Premier Solutions Provider or Autodesk Authorized Reseller. Locate a reseller near you at [www.autodesk.com/reseller](http://www.autodesk.com/reseller).

To learn more about Autodesk MEP Engineering Solutions, visit [www.autodesk.com/building](http://www.autodesk.com/building).

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