



## What is AutoCAD Plant 3D?

AutoCAD Plant 3D is specification-driven software for creating 3D models of process plant components. You can route pipes, add equipment and other components, and include support structures.

Within AutoCAD Plant 3D, underlying data is directly exchanged between the 3D model, P&IDs, isometrics, and orthographics to ensure that information is consistent and up-to-date.

## Concepts & Terms

An overview

<b>Project Manager</b>	Central hub for all drawings, specs, and data; you always work within a project
<b>Data Manager</b>	Table containing all project or drawing data. You can manipulate this data directly
<b>Part</b>	Piping Component
<b>Placeholder Part</b>	A component that is temporarily used in the model until the part is added to the spec
<b>Custom Part</b>	A component that is not in a piping spec
<b>Project.xml</b>	The project file
<b>*.dwg</b>	A Plant 3D model or P&ID drawing
<b>*.dlt</b>	Data cache files, e.g., piping.dlt
<b>*.spec / *.psp</b>	Spec file (spec)
<b>*.pset</b>	Catalog file

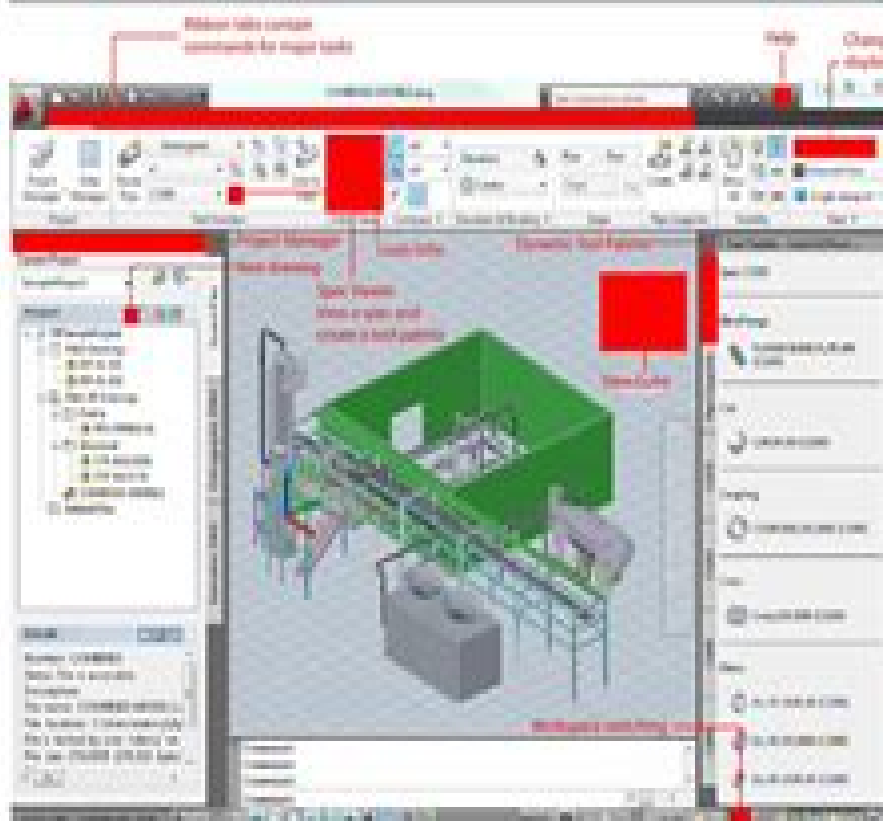
## Navigation

Get around your model



## The Drawing Window

Understand the User Interface



## Using the Project Manager

You can create new drawings, open existing drawings, link or copy files to the project folders, and create a project.

To create a project drawing:

1. In the Project Manager, right-click **Plant 3D Drawings** and click **New Drawing**.
2. In the **New DWG** dialog box, enter the drawing number, author, drawing title, and file name.
3. Click **OK**.

Quick Tip

- Right-click a node to see a list of useful commands.
- Create and organize folders to your project requirements.
- To work with referenced drawings, copy or link them here.

## Using Tool Palettes

You can use Tool Palettes to place valves and fittings in your piping model: select the spec in the ribbon, click an item in a tool palette, and then click in the model to place it.

Quick Tip

- In the Spec Viewer, click **Insert in Model**, **Add to Tool Palette**, or **Create Tool Palette**.

## Getting Started

A Quick Tutorial

Step 1: Open AutoCAD Plant 3D

Step 2: Create a project drawing

- Project Manager > Plant 3D Drawings > New Drawing
- Draw title > OK

Step 3: Create structure

- Ribbon > Structure tab
- Spec > Create
- Settings > member info > Select
- Member > place and align with grid
- Repeat for main, holdups, etc.

Step 4: Create equipment

- Ribbon > Structure tab > Create Equipment
- Select components, specify shape and member info
- Create and place in model

Step 5: Route Piping

- Ribbon > Structure tab > drop-down lists
- Line Number
- Spec
- Ribbon > Route Pipe
- Click points to model, press ENTER to finish

Step 6: Insert a valve or fitting

- Tool Palette or Ribbon > Structure tab > Spec Viewer
- Select valve > Insert in Model
- Place in model

Step 7: Create isometric drawings

- Ribbon > Isos tab > Create Iso > Production Iso
- Specify project line numbers, line type, and output settings
- Create Iso

Step 8: Create Orthographic Drawings

- Ribbon > Isometrics tab > Create Ortho View
- Select within drawing > OK
- Select a view, adjust the scale and view extents > OK
- Place view on Ortho drawing

## Want More Information?

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# Autocad Quick Reference Guide Autodesk 3d Design

**Camilla Rothe**



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**AutoCAD and AutoCAD LT All-in-One Desk Reference For Dummies** David Byrnes, Lee Ambrosius, 2006-08-07

AutoCAD is the leading software tool for creating technical and architectural drawings but it definitely doesn't lead in the easy to master category. That's why there's AutoCAD and AutoCAD LT All in One Desk Reference For Dummies the perfect way to break a complex topic into bite size easy to understand pieces. Once you get the hang of using AutoCAD and its slightly less feature rich cousin AutoCAD LT you discover that it offers wonderful advantages. AutoCAD allows you to Create precision to 14 significant digits. Re use portions of your drawings by copying and pasting. Draw things full size and print your drawings in any scale. Produce drawings that are easier to read when reduced. Electronically share and distribute drawings. Design in 2D or 3D. So obviously the trick is to speed up that getting the hang of it process. That's where AutoCAD and AutoCAD LT All in One Desk Reference For Dummies comes in especially handy. Ten easy to follow minibooks cover every aspect of AutoCAD including the latest features of AutoCAD 2007 so you can find just what you need to know quickly and easily. You'll get the scoop on AutoCAD basics such as setting up drawings finding your way around the interface and using all the tools. Drawing and modifying objects in 2D and annotating your drawings. 3D modeling and viewing working with solids and surfaces and rendering. Understanding how AutoCAD LT differs from AutoCAD and deciding which program you need. Advanced drafting skills including organizing drawings working with blocks and using AutoCAD utilities. Setting up your drawings for plotting to paper and publishing. Sharing your drawings online for collaboration. Customizing and programming AutoCAD to make it work the way you want it to. In the familiar friendly For Dummies fashion AutoCAD and AutoCAD LT All in One Desk Reference For Dummies gives you plain English explanations and step by step directions. Written by a pair of Autodesk Authorized Authors this handy guide will help make your relationship with AutoCAD a happy and productive one.

**Residential Design Using AutoCAD 2023** Daniel John Stine, 2022-05. Designed for new users of AutoCAD 2023. Project based tutorials design a house from start to finish using AutoCAD 2023. Includes access to extensive video instruction. Bonus material covers must know commands sketching exercises a roof study workbook and more. Residential Design Using AutoCAD 2023 is an introductory level tutorial which uses residential design exercises as the means to teach you AutoCAD 2023. Each book comes with access to extensive video instruction in which the author explains the most common tools and techniques used when designing residential buildings using AutoCAD 2023. After completing this book you will have a well rounded knowledge of Computer Aided Drafting that can be used in the industry and the satisfaction of having completed a set of residential drawings. This textbook starts with a basic introduction to AutoCAD 2023. The first three chapters are intended to get you familiar with the user interface and the most common menus and tools. Throughout the rest of the book you will design a residence through to its completion. Using step by step tutorial lessons the residential project is followed through to create elevations sections details etc. Throughout the project new AutoCAD commands are covered at the

appropriate time Focus is placed on the most essential parts of a command rather than an exhaustive review of every sub feature of a particular command The Appendix contains a bonus section covering the fundamental principles of engineering graphics that relate to architecture This book also comes with extensive video instruction as well as bonus chapters that cover must know commands sketching exercises a roof study workbook and much more About the Videos Each book includes access to extensive video training created by author Daniel Stine The videos make it easy to see the exact menu selections made by the author while he describes how and why each step is made making it straightforward and simple to learn AutoCAD These videos allow you to become familiar with the menu selections and techniques before you begin the tutorial By watching these videos you will be more confident in what you are doing and have a better understanding of the desired outcome of each lesson The videos cover the following User Interface Getting Started Draw Tools Modify Tools Annotation Floor Plans Exterior Elevations Sections Interior Design Plotting

**Residential Design Using AutoCAD 2021** Daniel John Stine,2020-03 Residential Design Using AutoCAD 2021 is an introductory level tutorial which uses residential design exercises as the means to teach you AutoCAD 2021 Each book comes with access to extensive video instruction in which the author explains the most common tools and techniques used when designing residential buildings using AutoCAD 2021 After completing this book you will have a well rounded knowledge of Computer Aided Drafting that can be used in the industry and the satisfaction of having completed a set of residential drawings This textbook starts with a basic introduction to AutoCAD 2021 The first three chapters are intended to get you familiar with the user interface and the most common menus and tools Throughout the rest of the book you will design a residence through to its completion Using step by step tutorial lessons the residential project is followed through to create elevations sections details etc Throughout the project new AutoCAD commands are covered at the appropriate time Focus is placed on the most essential parts of a command rather than an exhaustive review of every sub feature of a particular command The Appendix contains a bonus section covering the fundamental principles of engineering graphics that relate to architecture This book also comes with extensive video instruction as well as bonus chapters that cover must know commands sketching exercises a roof study workbook and much more About the Videos Each book includes access to extensive video training created by author Daniel Stine The videos make it easy to see the exact menu selections made by the author while he describes how and why each step is made making it straightforward and simple to learn AutoCAD These videos allow you to become familiar with the menu selections and techniques before you begin the tutorial By watching these videos you will be more confident in what you are doing and have a better understanding of the desired outcome of each lesson

*AutoCAD 3D Design and Presentation* Michele Bousquet,1991 Here is the complete guide to impressive 3 D design and presentations packed with expert advice tips and performance tricks Shows how to integrate Autodesk s popular animation and drawing programs and provides illustrated tutorials designed to help all users

AutoCAD Civil 3D 2016 Essentials Eric Chappell,2015-05-11 Start designing today

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Using AutoCAD 2006 Ralph Grabowski, 2006 This second volume in the Using AutoCAD set explains how to use all the commands required for working with multiple drawings creating 3D designs and renderings as well as programming and customizing using AutoCAD 2006 Intended for intermediate to advanced users this book's tutorial style approach takes readers in depth through every option of the featured AutoCAD commands Readers are then given opportunities to practice and apply the commands to the principles of advanced drafting 3D design externally referenced drawings layouts and AutoLISP Plentiful drawing problems and end of chapter review questions give users a hands on experience that will speed them to proficiency using Autodesk's newest release for design and drafting

**Using AutoCAD 2004** Ralph Grabowski, 2004 CD ROM contains drawing exercises to give users hands on experience

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*Harnessing AutoCAD 2006* Thomas A. Stellman, G. V. Krishnan, 2006 Harnessing AutoCAD 2006 continues in the tradition of previous editions by providing the widest selection of discipline specific exercises and projects for learning how to use today's leading desktop design and drawing software A smart how to and reference this book contains up to the minute functionality including extensively illustrated examples of prompt response sequences whereby certain commands prompt users for additional information such as coordinates or dimensions to complete a function The companion Exercise Manual has also been updated and is included in its entirety on the CD ROM in the back of the book This manual features problems in complete project format for practicing concepts and commands learned in a chapter or section as well as for testing single concepts and commands This complete package is appropriate for either the novice or advanced user

*AutoCAD 2015 and AutoCAD LT 2015 Bible* Ellen Finkelstein, 2014-09-02 The perfect reference for all AutoCAD users AutoCAD 2015 and AutoCAD LT 2015 Bible is the book you want to have close at hand to answer those day to day questions about this industry leading software Author and Autodesk University instructor Ellen Finkelstein guides readers through AutoCAD 2015 and AutoCAD LT 2015 with clear easy to understand instruction and hands on tutorials that allow even total beginners to create a design on their very first day Although simple and fundamental enough to be used by those new to CAD the book is so comprehensive that even Autodesk power users will want to keep a copy on their desks Here is what you'll find inside the book Part I Introducing AutoCAD and AutoCAD LT Basics Part II Drawing in Two Dimensions Part III Working with Data Part IV Drawing in Three Dimensions Part V Organizing and Managing Drawings Part VI Customizing AutoCAD and AutoCAD LT Part VII Programming AutoCAD Part VIII Appendixes Appendix A Installing and Configuring AutoCAD and AutoCAD LT Appendix B AutoCAD and AutoCAD LT Resources In addition the book also explores advanced techniques like programming with AutoLISP and VBA and demonstrates AutoCAD 2015 customization that can smooth workflow The companion website contains real world drawings for each tutorial plus bonus chapters and video tutorials If

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