

# AutoCAD® Plant 3D Complete Guide

AutoCAD® Plant 3D is designed specifically to create and modify P&ID's (Piping and Instrumentation Diagrams) and 3D plant models. The lectures are structured in a logical work-flow oriented sequence that makes learning the features and capabilities of the software simple and effective.

**AutoCAD® Plant 3D Complete Guide** is specifically aimed at experienced software users looking for advanced skills instruction and introductions to more specialized software. Our on-screen instructors walk you through the processes step by step, allowing you to follow along hands-on if you wish; quickly and easily picking up the new skills you need.

## User's prerequisites

You don't need any previous experience with AutoCAD® Plant 3D to take this course.

## Course Outline

### Introduction to AutoCAD Plant 3D

- AutoCAD Plant 3D User Interface
- Workspaces in AutoCAD Plant 3D
- Grips
- Invoking Commands in AutoCAD Plant 3D
- Creating Backup Files
- Opening Projects
- Opening a Project Drawing
- AutoCAD Plant 3D Help

### Creating Projects and P&IDs

- Project Manager
- Creating a New Drawing
- Grouping Project Files
- Copying, Renaming, and Removing Files with the Project Manager
- Batch Publish
- Creating New Projects
- Project Properties
- Designing a P&ID
- Validating the Drawing
- Moving Equipment
- Editing Lines
- Grouping Lines & Off Page Connectors
- Editing a P&ID Symbol
- Substituting Components
- Converting AutoCAD Components into a P&ID Symbol

### Creating Structures

- Creating a Grid
- Adding Members
- Creating Stairs & Railing
- Ladders
- Creating Plates
- Creating Footings

- Setting the Representation of a Structural Member
- Editing the Structural Members
- Hiding and Displaying Components
- Exchanging Data with other Applications

### Creating Equipment

- Creating Equipment
- Adding Heaters, Pumps, Heat Exchangers and other Equipment
- Modifying Equipment
- Converting Solids into Equipment
- Attaching and Detaching Objects to Equipment
- Nozzles

### Editing Specifications and Catalogs

- The Spec Editor & Creating a New Spec
- Adding and Editing Parts in the Spec Editor
- Adding Notes & Long Descriptions
- Assigning Operators (Actuators) to Valves
- Working with the Catalog Editor
- Adding a New Part to a Catalog
- Creating Branch Table Legends

### Routing Pipes

- Selecting a Spec & Working with the Spec Viewer
- Setting the Route Line
- Routing a Pipe from a Line
- Routing a Pipe Using a P&ID
- Routing a Pipe from Equipment
- Working with the Compass
- Connecting Two Open Ports of Pipes
- Changing the Pipe Size while Routing
- Changing the Orientation Plane & the Elevation while Routing a Pipe
- Editing Pipe Routes with Grips

- Creating a Roll Elbow
- Creating Bends
- Routing Pipe at an Offset
- Routing a Pipe at a Slope
- Creating a Tee Branch & O-let Branches
- Creating a Stub-In Branch
- Placing a Branch at a Specific Location
- Adding a Reinforcing Pad to a Stub-In Branch
- Creating a Weld Connection
- Autodesk Connection Points

### Adding Valves, Fittings, and Pipe Supports

- Adding Valve and Fittings
- Adding Valves and Fittings Using a P&ID
- Placing Custom Parts
- Adding a Dummy Leg
- Adding a Hanger and Connecting it to a Structural Member
- Working with Pipe Supports
- Converting Solids to Pipe Supports
- Attaching & Detaching Objects to a Pipe Support
- Insulating a Pipe
- Working with Fittings
- Validating the 3D Model

### Creating Isometric Drawings

- Creating a Quick Isometric Drawing
- Creating a Production Isometric Drawing
- Placing Iso Messages and Annotations
- Exporting a Pipe Component File
- Creating an Iso from a Pipe Component File
- Locking a Line Number
- Configuring Isometric Drawing Settings

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# AutoCAD® Plant 3D Complete Guide (cont'd)

## Course Outline (cont'd)

### Creating Orthographic Drawings

- Generating the First View
- Creating the Adjacent View
- Adding Annotations to the Drawing
- Adding Dimensions to the Drawing
- Locating a Component in the 3D Model
- Editing a Drawing View
- Adding Gaps to Pipes
- Configuring Ortho Drawings

### Managing Data and Generating Reports

- Data Manager and Viewing Data
- Editing Data Properties in the Data Manager
- Placing Annotations in a P&ID using the Data Manager
- Filtering the Information in the Data Table
- Exporting Data from the Data Manager
- Importing Data to the Data Manager
- Custom Report Projects
- Exporting and Importing the Project Reports
- The Report Creator
- Working with The Report Creator

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