



## Bentley® AutoPLANT® P&ID V8i

Create Intelligent Process & Instrumentation Diagrams  
to Save Time and Improve Accuracy

AutoPLANT P&ID V8i provides an indispensable tool for creating intelligent Process & Instrumentation Diagrams. Using AutoCAD as the drafting engine – linked dynamically to an external database – engineers can quickly and accurately build a project repository for tagged components and related properties.



*Accelerate drawing generation with advance parametric drafting routines.*



*Create assemblies of common components groups.*



*Use Bentley Vision to search for tags and find associated documents.*

### Scalable, Improve Accuracy and Save Time

The scalable nature of AutoPLANT P&ID V8i means that it can be deployed quickly on large, mid-sized, or small projects by engineering/procurement/construction (EPC) firms or plant operators. This provides an essential tool for the design and operation of process plants. Users can improve the accuracy of deliverables created “downstream” from the P&ID by sharing the project tags and data created. And they can save time and man-hours by leveraging the automated drafting routines and by automatically generating project lists and schedules from the data created.

### Data Sharing and Storage Options

AutoPLANT P&ID V8i works in a shared project environment by connecting to the project database. This shared project environment facilitates information exchange between multiple users and disciplines. All the applications within the AutoPLANT Process & Instrumentation and Plant Design Workgroups have the ability to share project data with AutoPLANT P&ID V8i. These applications include Data Manager, Instrumentation & Wiring, Datasheets, Hook Ups, AutoPLANT Piping, AutoPLANT Equipment, and Bentley Vision.

### Advanced Drafting Routines

Advanced parametric drafting routines within AutoPLANT P&ID V8i greatly reduce drawing creation time, saving project man-hours. The Symbol Manager, toolbars, dynamically updated dialogs, and pick-lists make drafting of P&IDs quick and easy. Advanced drafting utilities in AutoPLANT P&ID V8i include automatic line break/mend, line tag updates, valve swapping, reducer orientation, nozzle placement, and attribute display controls.

### Symbols and Assemblies

AutoPLANT P&ID V8i includes over 400 symbols that conform to ISA and DIN standards, along with a complete set of piping and instrument line types. Existing symbols can be customized

and new symbols created to suit all project requirements. Intelligent assemblies can be created from groups of commonly used components and shared between projects.

### Import/Export Capabilities

AutoPLANT P&IDs can be exchanged between projects in the Exchange Drawing format. The Exchange Drawing functionality can also be used to create intelligent archive copies of P&IDs at project milestones. Using the Bentley i-model Composer, distributed review, comment, and redlining of AutoPLANT P&IDs is possible.

### Consistency Checking

The Consistency Checker within AutoPLANT P&ID V8i provides interactive checking of connectivity and consistency such as branch line size vs. header line size and valve size vs. pipe run size. The Consistency Checker will highlight and/or report perceived inconsistencies as well as zoom into flagged inconsistencies on the drawing.

### Tag Register

By communicating dynamically with the AutoPLANT project database, AutoPLANT P&ID V8i automatically maintains a register of tagged project components. No manual synchronization with the project database is required. AutoPLANT P&ID V8i will automatically check for tag uniqueness (if required) and automated tag incrementing is possible to enforce project tagging conventions.

### Process Line – Pipe Run Management

AutoPLANT P&ID V8i employs the piping design hierarchy of process lines comprising one or more pipe runs. Pipe runs have a single size, specifications, source, and destination. Process lines are made up of one or more pipe runs and have nominal values for size and spec. The Process Line Manager tool manages process lines and pipe runs.

## Recommended System Configuration

### Processor:

Intel Core i7, Intel Xeon or AMD Phenom, AMD Phenom II

### Operating System:

Microsoft Windows 7 (32- or 64-bit) Enterprise, Ultimate or Professional Edition

### Memory (RAM):

4 GB for 32-bit Windows 7, 8 GB (minimum) for 64-bit Windows 7

### Graphics Card:

512 MB Microsoft DirectX3D-capable workstation-class graphics card (minimum), 1 GB Microsoft DirectX3D-capable workstation-class graphics card (recommended)

### Disk Space:

2 GB available

### Software:

- AutoCAD 2011 (32- or 64-bit)
- Microsoft Office 2010 Professional (32- or 64-bit)
- Microsoft SQL Server 2008 R2 Enterprise Edition

## Find out about Bentley at: [www.bentley.com](http://www.bentley.com)

### Contact Bentley

1-800-BENTLEY (1-800-236-8539)  
Outside the US +1 610-458-5000

### Global Office Listings

[www.bentley.com/contact](http://www.bentley.com/contact)

## AutoPLANT P&ID V8i At-A-Glance

### Parametric and Automated Drafting Routines

- Enables faster drawing creation
- Includes easy to use Symbol Manager, toolbars, dynamically updated dialogs and pick-lists, and more
- Offers automatic process line break/mend, line tag updates, valve swapping, reducer orientation, nozzle placement, and attribute display controls, and more
- Includes grouping commands to quickly edit, move, and delete components and associated attributes
- Allows use of shared project assemblies to create groups of components and the associated project data
- Offers standard AutoCAD commands (move, stretch, copy, etc.)

### Symbol Manager

- Allows drag-and-drop component placement
- Allows the use of right-click, context-sensitive menus for creating custom component symbols
- Offers user defined symbol groupings to quickly locate most-used symbols
- Converts "dumb" graphical objects into intelligent tagged project components

### Component Data Entry Dialogs

- Populate the AutoPLANT project database by selecting the P&ID components
- Customize to suit individual project needs and set user access control
- Review component project data created via Bentley Data Manager, Bentley Datasheets, or Bentley Instrumentation & Wiring

- Associate manufacturers documents such as installation and operation manuals
- View critical maintenance documents quickly such as loop diagrams and datasheets

### Specification-Driven Valve Placement Functions

- Limit valve selection options to what is available in the spec
- Share the same specs as AutoPLANT Piping V8i
- Ensure accuracy of valve data, end conditions

### Integration

- Make components placed on the P&ID instantly available to other disciplines via the integration with the AutoPLANT Project Database
- Select pipes and equipment to model in AutoPLANT Piping V8i from the P&ID
- Create data sheets for components placed on the P&ID via Bentley Data Manager V8i
- Model loop connections and generate instrumentation and electrical deliverables placed on the P&ID using Bentley Instrumentation & Wiring V8i, or Promiseware V8i
- Exchange with third-party applications and review read-only, open design data via the Bentley i-model format
- Use Bentley Navigator V8i for design review and more
- Manage project design data and drawings via integration with ProjectWise® Integration Server V8i
- Browse P&ID tags and data via Bentley Vision V8i

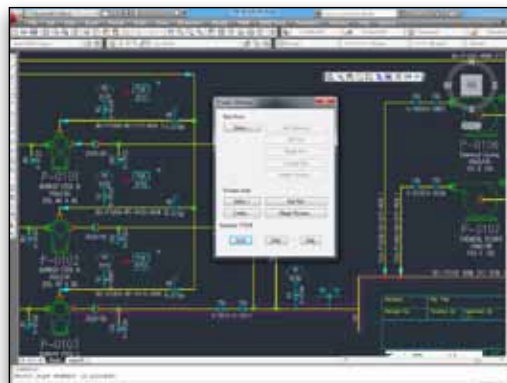
- Generate reports for components placed on the P&ID via Bentley Data Manager V8i
- Pass data to Bentley ProjectWise Lifecycle Server for operations and maintenance

### Exchange Drawings and i-models

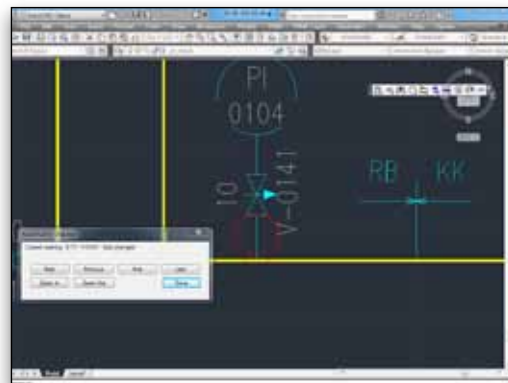
- Copy P&IDs from one project to another via the Exchange drawing format
- Create project milestone archive drawings with the project data embedded into the drawing
- Review P&ID design using Bentley i-model Composer and Bentley Navigator

### Organized and Accurate Drawing Files

- Update intelligent line annotation automatically based on actual pipe line project data
- Use intelligent To/From process line connections spanning multiple drawings
- Enable user-definable tag formats based on any project database field value
- Detect unique tag numbers automatically within the project
- Create automatic incrementing of tag numbers on insertion; Next and Max tag number picks available
- Link component symbols to component tags previously created via Bentley Data Manager V8i or Bentley Instrumentation & Wiring V8i
- Customize application functionality via LISP routines



Manage piping design with the Process Line Manager.



Check the consistency of the P&ID design.