Bentley® AutoPLANT® P&ID V8*i* (SELECTseries 4)

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

AutoPLANT® P&ID V8*i* provides an indispensable tool for creating intelligent process and 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.

Advanced parametric drafting routines speed drawing generation.

Create assemblies of common components groups.

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

Provides Scalability, Improved Accuracy and Time Savings

The scalable nature of AutoPLANT P&ID V8*i* means that it can be deployed quickly on large, mid-sized or small projects by EPCs or plant owner-operators. Improve the accuracy of deliverables created "downstream" from the P&ID by sharing the project tags and data created. Users can save time and man-hours by leveraging the automated drafting routines and by automatically generating project lists and schedules from the data created.

Shared Project Data Facilitates Information Exchange

AutoPLANT P&ID V8*i* works in a shared project environment by connecting to the plant project database. This shared project environment facilitates information sharing between multiple users and disciplines. Applications such as Bentley Data Manager, Bentley Instrumentation and Wiring, Bentley Datasheets, Bentley Hookups, AutoPLANT Piping, AutoPLANT Equipment, and Bentley Vision share project data with AutoPLANT P&ID V8*i* via the plant project database.

Advanced Drafting Routines Reduce Drawing Creation Time

Advanced parametric drafting routines within AutoPLANT P&ID V8*i* greatly reduce drawing creation times saving project man-hours. The Symbol Manager, toolbars, dynamically updated dialogs and pick-lists make the drafting of P&IDs quick and easy. Advanced drafting utilities are included in AutoPLANT P&ID V8*i* including automatic line break/mend, line tag updates, valve swapping, reducer orientation, nozzle placement and attribute display controls.

Symbols and Assemblies

AutoPLANT P&ID V8*i* 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.

Easily Share and Archive Project Data

AutoPLANT P&IDs can be exchanged between projects in the Exchange Drawing format. The same 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 made easy.

Consistency Checker Saves Time

The Consistency Checker within AutoPLANT P&ID V8*i* 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 zooming into flagged inconsistencies on the drawing.
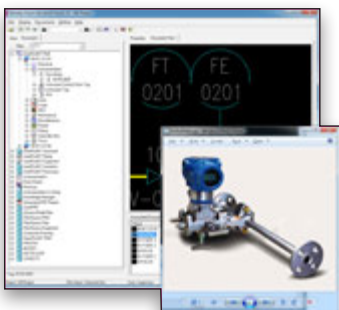
Automatic Tag Register

By communicating dynamically with the AutoPLANT plant project database, AutoPLANT P&ID V8*i* automatically maintains a register of tagged project components. No manual synchronization with the database is required. AutoPLANT P&ID V8*i* will automatically check for tag uniqueness (if required) and automated tag incrementing is possible to enforce project conventions.

Process Line – Pipe Run Management

AutoPLANT P&ID V8*i* employs the piping design hierarchy of Process Lines comprising of one or more pipe runs. Pipe runs have a single size, set of 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 on the P&ID to more easily manage the design of entire runs.

AutoPLANT P&ID V8*i* At-A-Glance

Parametric and Automated Drafting Routines

- Offers standard AutoCAD commands (move, stretch, copy, etc.)
- 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

Symbol Manager

- Drag-and-drop component placement
- Right-click, context-sensitive menus for creating custom component symbols
- User defined symbol groupings to quickly locate most-used symbols
- Convert "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
- Associate manufacturers documents such as installation and operation manuals

- Review component project data created via Bentley® Data Manager, Bentley® Datasheet, or Bentley® Instrumentation and Wiring
- View critical maintenance documents 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 V8*i*
- Ensures accuracy of valve data, and end conditions

Integration

- Components placed on the P&ID are instantly available to other disciplines via the integration with the plant project database
- Select pipes and equipment to from the P&ID model in AutoPLANT Piping V8*i*
- Create datasheets via Bentley Data Manager V8*i* for components placed on the P&ID
- Model loop connections and generate instrumentation and electrical deliverables, and place on the P&ID using Bentley Instrumentation and Wiring V8*i*, or Bentley® Promis•e® V8*i*
- Exchange models with third-party applications and review read-only, open design data via the Bentley i-model format
- Use Bentley® Navigator V8*i* for design review
- Manage your project design data and drawings with ProjectWise® Integration Server V8*i*

- Browse P&ID tags and data via Bentley® Vision V8*i*
- Generate component reports via Bentley Data Manager V8*i*
- Pass data to eB Data Quality Manager 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

- Automatically update intelligent line annotation based on actual pipe line project data
- Intelligent To/From process line connections spanning multiple drawings
- User-definable tag formats based on any project database field value
- Automatic checking for unique tag numbers within the project
- Automatically increment tag numbers on insertion. Next and Max tag number picks available
- Link component symbols to component tags previously created via Bentley Data Manager V8*i* or Bentley Instrumentation and Wiring V8*i*
- Application functionality customization possible via LISP routines

Manage piping design with the Process Line Manager.
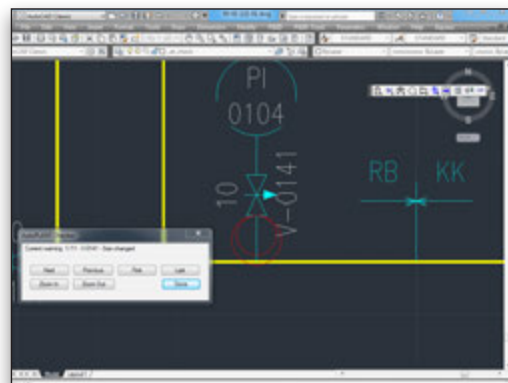
Allows users to check the consistency of the P&ID design.

Bentley®
Sustaining Infrastructure