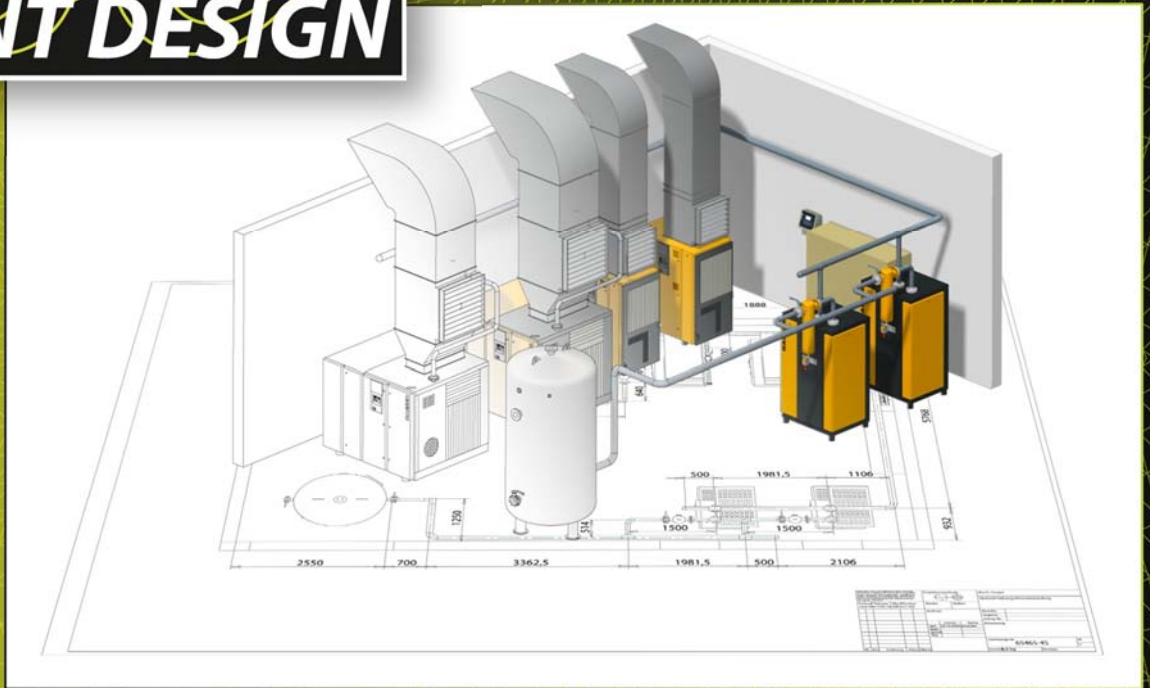
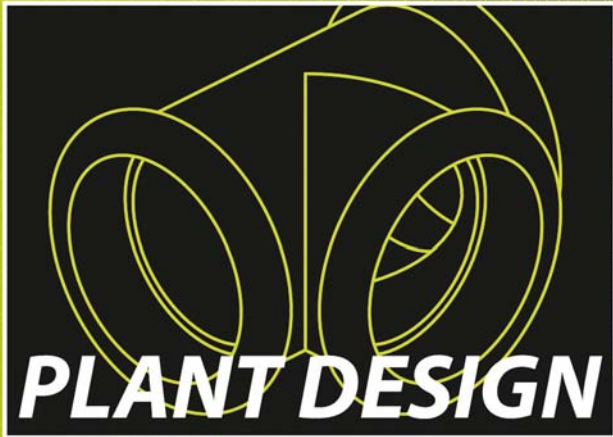
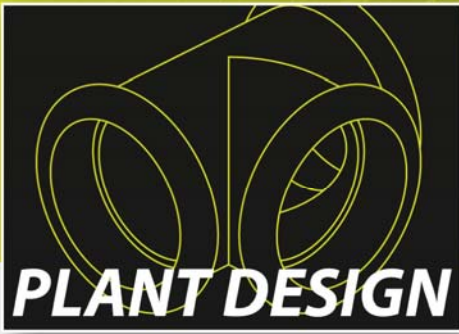


Smap3D

DESIGNED FOR PRODUCTIVITY



www.Smap3D-Plant-Design.com



Smapp3D Plant Design

Intelligent 2D/3D Plant and Piping Design

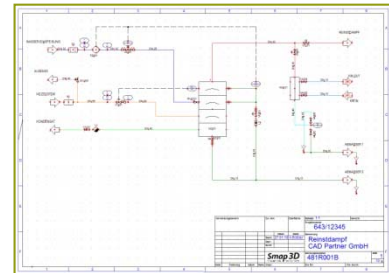
From P&ID diagram
to 3D design
to isometrics

Smapp3D Plant Design is the 3D CAD software for fast, easy design of 3D piping systems for mechanical engineering, equipment production and plant design. Smapp3D Plant Design provides an integrated software solution for an optimal process chain in plant design.

Complete systems such as 3D mechanical constructions and piping designs can be implemented directly in the 3D CAD system environment with a high level of automation. This prevents media discontinuities between individual systems and avoids errors.

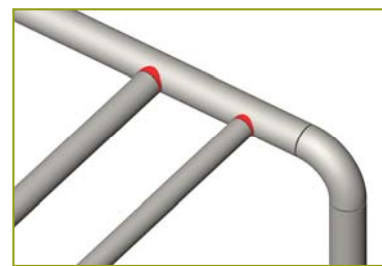
Smapp3D P&ID

2D flowcharts - the first link in the process chain - are among the most important documents in plant design. Our integrated P & ID To-Do List function provides an additional connection between flowcharts and the 3D model.



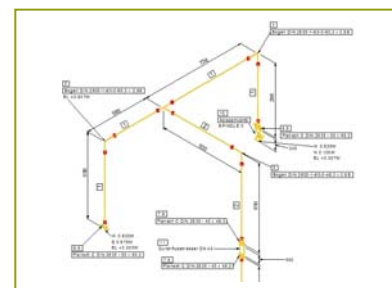
Smapp3D Piping

The second link in the process chain is 3D piping design, which becomes highly automated with the Smapp3D Piping add-in. The automation is based on pipe classes (specifications) which make it possible to create a highly powerful 3D plant design solution from the 3D CAD system.

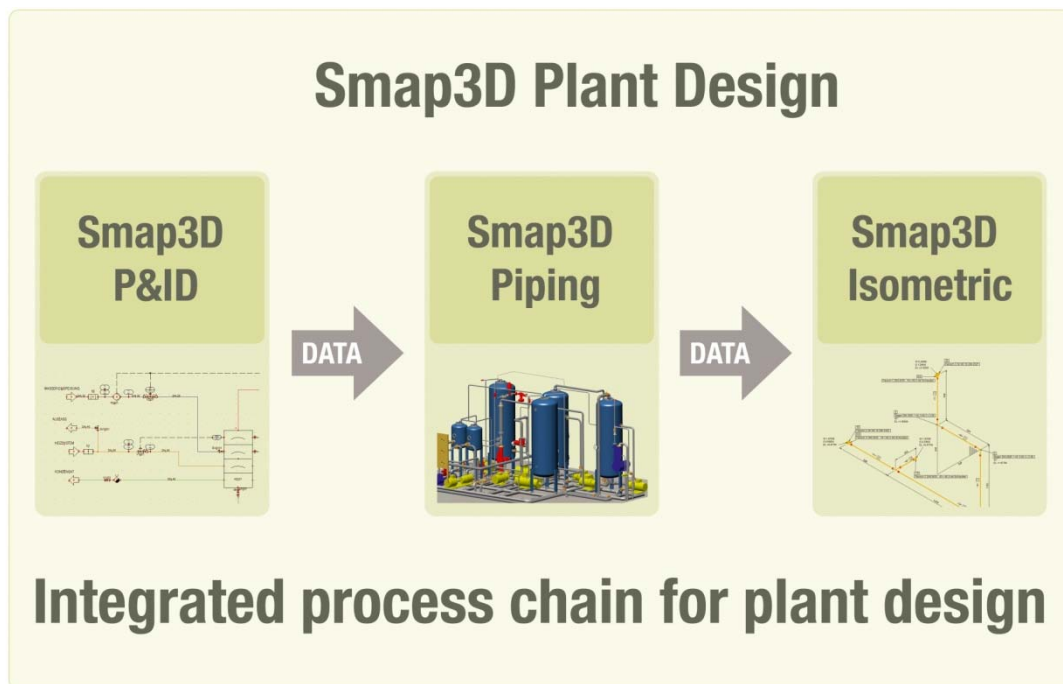


Smapp3D Isometric

The isometric drawing is the third link in the process chain. The piping isometric is a technical drawing in the form of an isometric representation for the production of piping systems. The basic software is ISOGEN[®] from the market leader Alias.

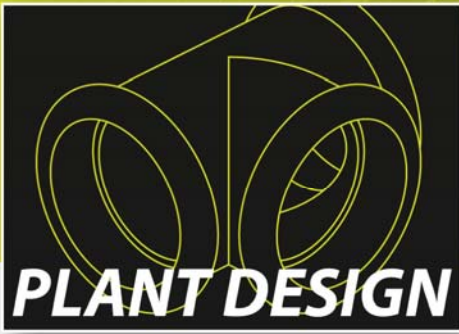


A Single Software Solution for All Plant Design Processes



Your Benefits in Using Smap3D Plant Design

Increased efficiency	Through a comprehensive solution package for the entire process chain
Reliability	Eliminates frustration and costly surprises at the construction site
Time savings	No manual modification work required
Minimization of errors	Through intelligent workflow in the individual process steps
Retention of corporate knowledge	Expertise is kept within the company for the long-term



Smapp3D P&ID Intelligent application of the Smapp3D Plant Design Software Solution

Create, modify
and manage with
database support

With this database-configured software independent of the CAD system, all relevant drawings, data, evaluations and inspections are generated in a single software - from a single initial drawing all the way through to the entire project. Smapp3D P & ID **automates and simplifies** repetitive tasks. All drawings, project sheets and reports are template-based and thus 100% configurable.

- **Process continuity** through the integration of P&ID in Smapp3D Piping.

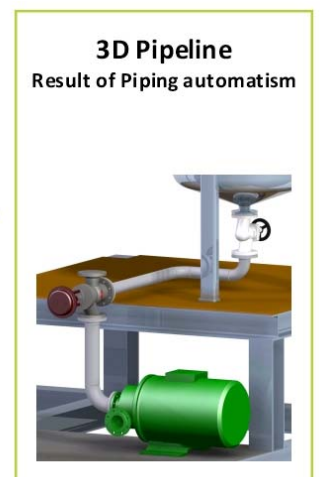
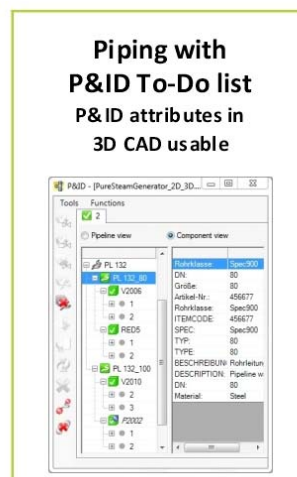
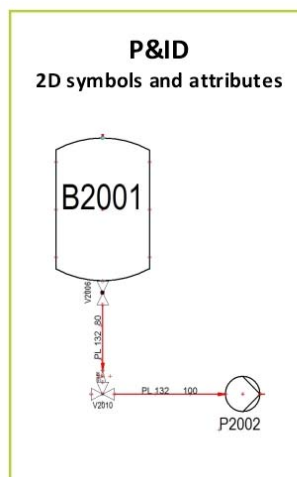
- Dynamic lines (systems) automatically respond to separation and closing (for example, in the installation of symbols).
- **"Design Checks"** for evaluating individual P&ID drawings or the entire project for completeness, validity and accuracy.
- **Automatic search of TAG numbers** through the system.
- Expansion of the symbol libraries (ISO / DIN, ISA) and component database with company-specific symbols and components (as "intelligent" PDFs and as 2D geometry in DXF and DWG formats).

P&ID To-Do List
The intelligent
3D connection

The **P&ID To-Do List** is a function integrated in Smapp3D Plant Design which creates an intelligent connection between Smapp3D P&ID Schematic and 3D piping design with Smapp3D Piping.

lines defined in the P&ID by a process engineer can be evaluated automatically with the P&ID To-Do List. For the designer in 3D CAD, they serve as a basis for creating 3D piping systems and as support for the entire 3D plant design.

The existing attributes of the symbols and



Smap3D Piping Integrated Piping Design in the CAD Environment

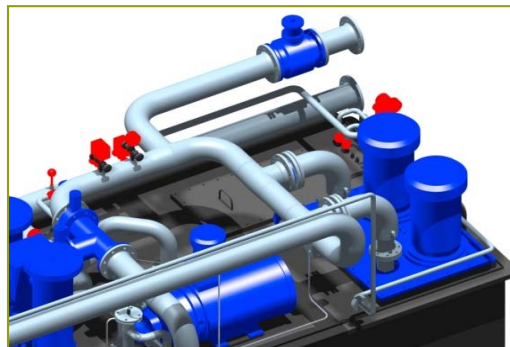
Smap3D Piping turns the CAD system into a high-performance 3D plant engineering solution. As a modern and innovative software solution, Smap3D Piping is **deeply integrated in the 3D CAD system**. Thus 3D Piping can be used within the individual CAD system. A standalone solution is in development.

- In the CAD system, the desired pipeline progressions are drawn as center-point paths with lines.
- Smap3D Piping analyzes the drawn line elements and uses them to **automatically** create the matching **pipeline paths** (main, branch, etc.) according to logical criteria.
- Smap3D Piping positions the fittings from the standard parts library on these paths and generates the necessary pipes in between.

Smap3D Piping makes 3D piping design **simple and convenient** with the use of **pipe classes**. Pipe classes enable high automation and prevent individual errors in piping design by the user. This ensures high process reliability.

In the pipe classes, the compatibility of components (fittings, valves, etc.) is defined to pipe system characteristics such as diameter, pressure, medium, etc. These pipe classes (specifications) control the **numerous automatic functions** of the software. On the drawn pipeline paths, Smap3D Piping gener-

- Smap3D Piping supports the installation of additional components (e.g. valves, instruments) in an existing pipeline. The software allows only "specified" components which are defined in the used pipe class.
- Changes to the pipeline path are automatically updated.

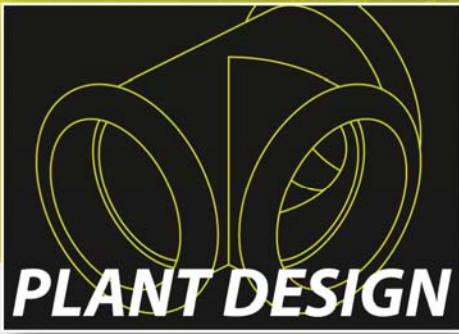


3D mechanical engineering and piping design directly in a 3D CAD environment

ates complete, three-dimensional pipelines with the proper fittings.

Essential parameters for internal software **validity checks** can be defined in the pipe classes. Each pipe class specification is stored centrally in the system. This simplifies maintenance and management of the pipe classes. As a standard feature, the Smap3D Piping product contains all necessary functionality for creating, maintaining and managing the pipe class definitions.

Conveniently create 3D piping systems with pipe classes



Smap3D Isometric Automatic Creation of Isometrics

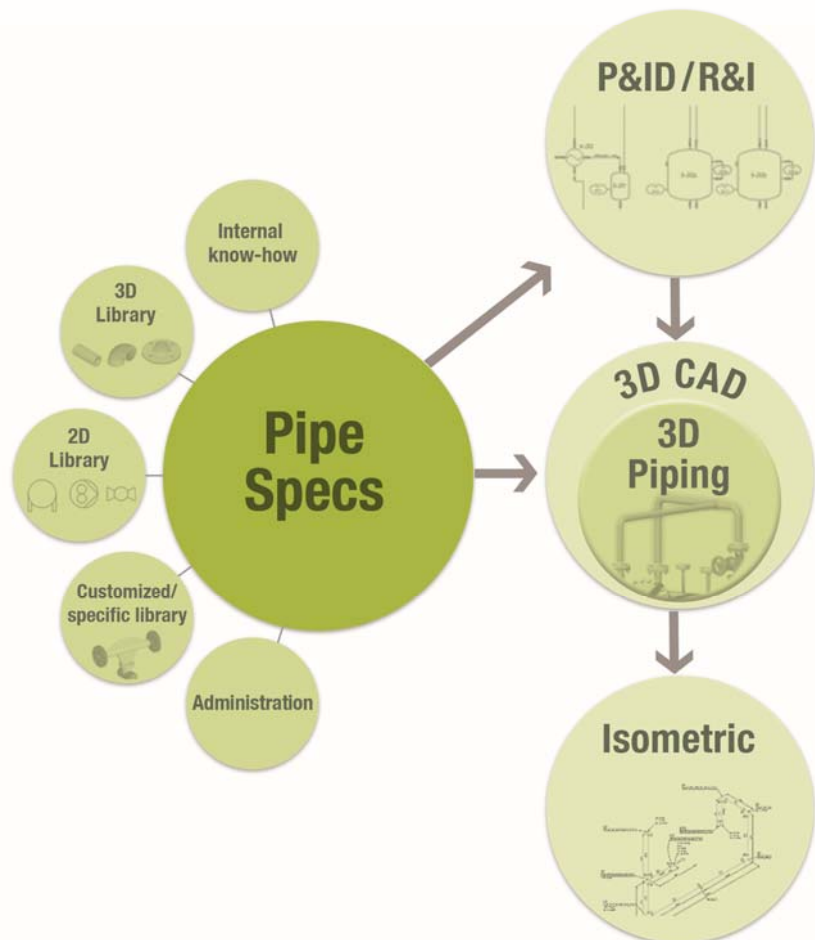
**User-friendly
generation of
isometrics and
reports**

The software exports all 3D pipeline information and **fully automatically** creates the isometric drawing. The basic software is ISOGEN[®] from the market leader Alias.

- Create piping isometrics from the 3D assembly at the touch of a button.
- Adopt the 3D pipelines created with Smap3D Piping - including all installation parts and saved properties - and transfer them to the integrated ISOGEN[®].

The creation of the pipeline figures as well as all corresponding information - such as dimensions, cross-hatches, annotations - is done automatically via pre-adjustable parameters (styles) that can be configured individually. Various BOMs (e.g. material or welding parts lists) can be automatically displayed on the drawing and/or generated as an ASCII file for transfer to an inventory control system.

**Create complete
systems directly in the
3D CAD environment
with a high degree of
automation**



Primary Functions of Smap3D Piping & Isometric



A comprehensive library for plant engineering allows immediate implementation of the Smap3D Piping software. Various international standards are available: DIN/ISO, ANSI, UNI, GB, JIS, GOST.



Automatic generation and modification of complete piping systems After selecting the pipe classes, pipelines are generated at the touch of a button. The user must only define the path; the software takes care of the rest automatically.



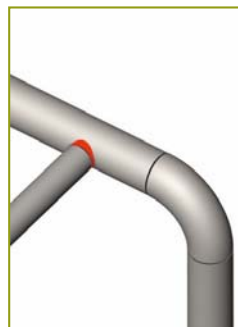
All cross-sections Smap3D Piping can process freely defined system cross-sections. Even non-circular cross-sections for cable ducts, air ducts, etc. can be efficiently designed.



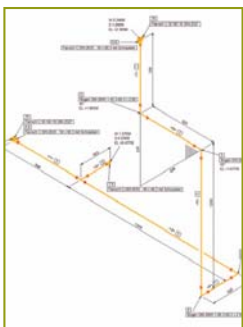
Line reductions and extensions can be implemented with just a few clicks of the mouse. All necessary work - such as separating lines, shortening pipes, changing the diameter, etc. - is done automatically by Smap3D Piping.



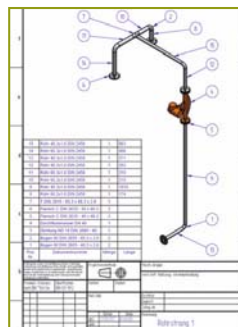
Insulation is defined in the pipe classes. For each diameter, an individual value for the dimension is stored. Insulation and fittings required for breaks are generated automatically.



Extrusions and OLETs may be used at branches as an alternative to T-components. Normally inserted by time-consuming mechanical processing, Smap3D Piping creates the extrusions automatically.



Pipe isometrics are created from the 3D model at the touch of a button. All information such as dimensions, annotations, as well as material, cutting and welding lists is automatically generated. The basic software is ISOGEN[®] from the market leader ALIAS.



Bill of materials For pipelines created with Smap3D Piping, all information relevant to the plant design is available for BOMs. The BOMs can be created using the CAD system and/or via the isometrics.



CAD Partner is a global provider of software and services for mechanical engineering and plant design. The proprietary product Smap3D Plant Design meets the needs of the entire plant design process chain. For more information about the products and services of CAD Partner, visit

www.Smap3D.com

CAD Partner GmbH

Am Marktplatz 7
93152 Nittendorf
Germany
Phone: +49 9404 9639-21
info@CADpartner.de

North and South America

CAD Partner, LLC
United States
Phone: +1 408 600 0574
info@Smap3D.com

Asia

CAD Partner Technology (Asia), Ltd.
Hong Kong
Phone: +852 39971710
sales@Smap3D.com.cn
www.Smap3D.com.cn

CAD Partner Technology (Asia), Ltd.
China
Phone: +86 755 82779313
sales@Smap3D.com.cn
www.Smap3D.com.cn

Smap3D Plant Design needs no further system requirements.
The recommended system requirements of the supporting
CAD systems are sufficient.

©2015. CAD Partner GmbH. All rights reserved.
EN/A4