

Rapid familiarisation
Flow charts

Layout and pipeline plans
Pipe class management
Pipeline isometry

Automatic itemisation

Perfect visualisation
Cross-sectoral approach
PDM integration

From flow chart to finished plant

The more complex a plant, the more difficult is the creation of corresponding layout and piping plans. This applies, for instance, to the fields of logistics, chemical engineering, food processing technology, heat and energy supply, cooling, air conditioning and ventilation technology. Such highly complex constructions and the related drawings pose great challenges to the engineers when it comes to conveying a comprehensible overview of the project planning to all parties involved.

HiCAD provides you with plant engineering-specific functions and automatisms enabling you to plan and process complex 3-D piping systems within complete plant layouts. Whether pipe part or duct part, 3-D part, steel engineering beam or sheet metal cladding - the whole range of industry functions will be available to you in one system. HiCAD is the optimal solution for the complete process chain in plant engineering - from the 2-D flow chart as a basis for your planning, the 3-D layout and piping plan through to the automatic generation of isometric drawings and all relevant production documents. This accelerates decision-making processes, minimises rework and optimises the cooperation with customers and partners.

» HiCAD PROVIDES YOU WITH A
COMPREHENSIVE SOLUTION
FOR THE COMPLETE PROCESS
CHAIN IN PLANT ENGINEERING.



” HiCAD'S SPECIAL FUNCTIONALITIES FOR
PLANT ENGINEERING, PIPELINE CREATION AND
STEEL ENGINEERING FACILITATE OUR PLANNING
SIGNIFICANTLY. IT IS SAFE TO SAY THAT HiCAD
HAS HELPED US, AS WELL AS OUR CUSTOMERS,
TO SAVE COSTS. HiCAD REALLY HAS PROVIDED
US WITH A GREAT COMPETITIVE ADVANTAGE. ”

HOLGER GRONOW, INGENIEURBÜRO DIPL.-ING. GRONOW

This is how it's done

Optimise your planning by P+ID.

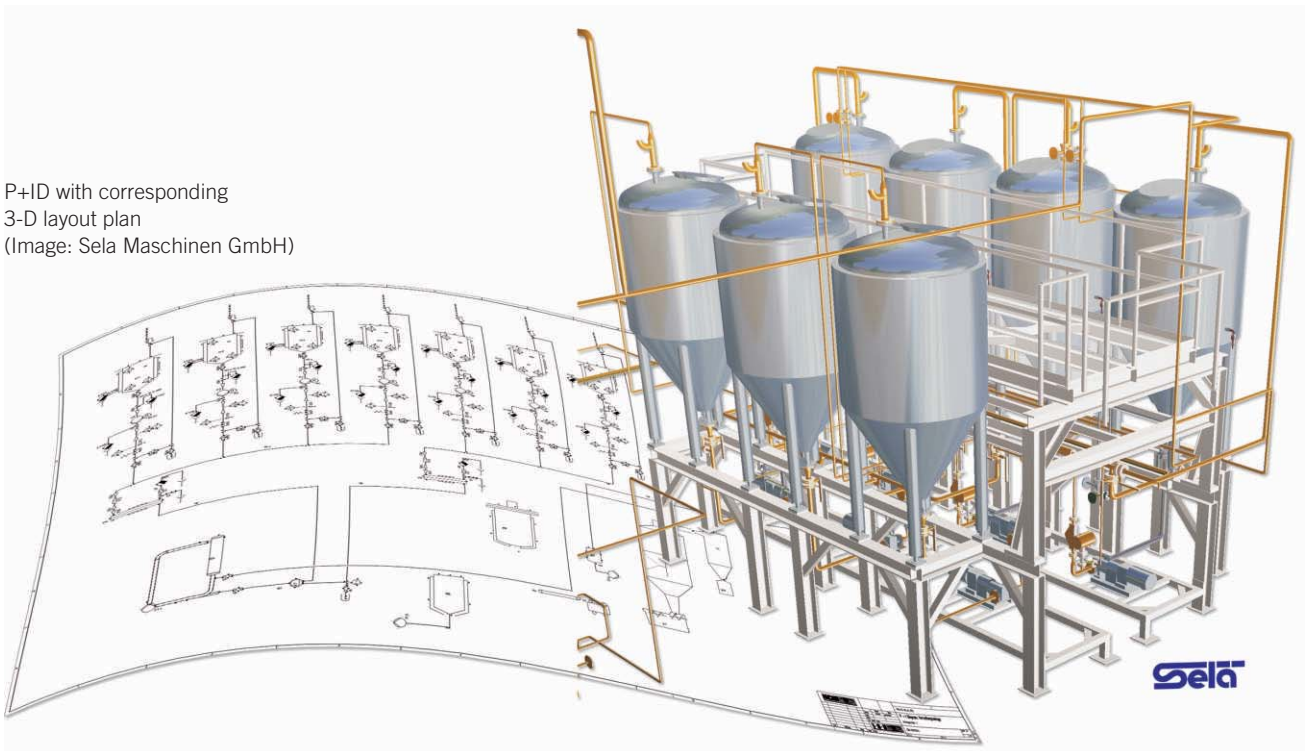
2-D flow charts (P+ID) are the optimal basis for an efficient pipeline and layout planning. The process engineering is graphically displayed by means of intelligent piping and instrumentation diagrams, and represented data-centrally by means of pipe-classes. HiCAD provides you with convenient functions, standardized symbol libraries and a symbol editor for the creation of company-specific libraries. Due to the link to the 3-D layout plan you can copy parts directly from the flow chart to the layout plan.

Create your 3-D layout plans quickly and safely.

During the creation of layout and piping plans, HiCAD supports you with numerous special functions, intelligent automatisms and an extensive, individually extendable library for pipe parts, duct parts and other components. For instance, you can auto-route complete pipelines assisted by pipe class management, and place standardized pipe parts, valves and clamps onto them - taking insulations and weld seam gaps into account, and checking the layout for collisions. Objects provided by external suppliers can be read in via the HiCAD interfaces, can be converted and supplemented by company-specific components.

» WHETHER 2-D FLOW CHART,
3-D LAYOUT PLAN OR
ISOMETRY -
HiCAD OFFERS ALL TYPES OF
REPRESENTATION IN ONE
SYSTEM.

P+ID with corresponding
3-D layout plan
(Image: Sela Maschinen GmbH)



Create production documents at the push of a button.

Detailed 3-D proposals, production drawings containing 3-D objects, sectional and detail views, or legends on the 2-D drawing frame shorten planning times significantly. With HiCAD you can create these documents in only a few minutes, thus providing valuable support to all parties involved in the process chain. Drawing views are generated automatically, and pipe part, length and weld seam lists are directly derived from the item numbers. Individually configured pipeline isometries can be derived from the 3-D layout plan at the push of a button, complete with dimensioning, part and weld seam item numbers, with corresponding bills of materials, connection coordinates and direction arrows. User-friendly reporting tools help you evaluate the layout plans further, e.g. with regard to material lists, order lists or price calculations. And last but not least you can display your 3-D models in a photo-realistic manner to enhance your sales arguments in customer talks, or use them for assembling simulations.

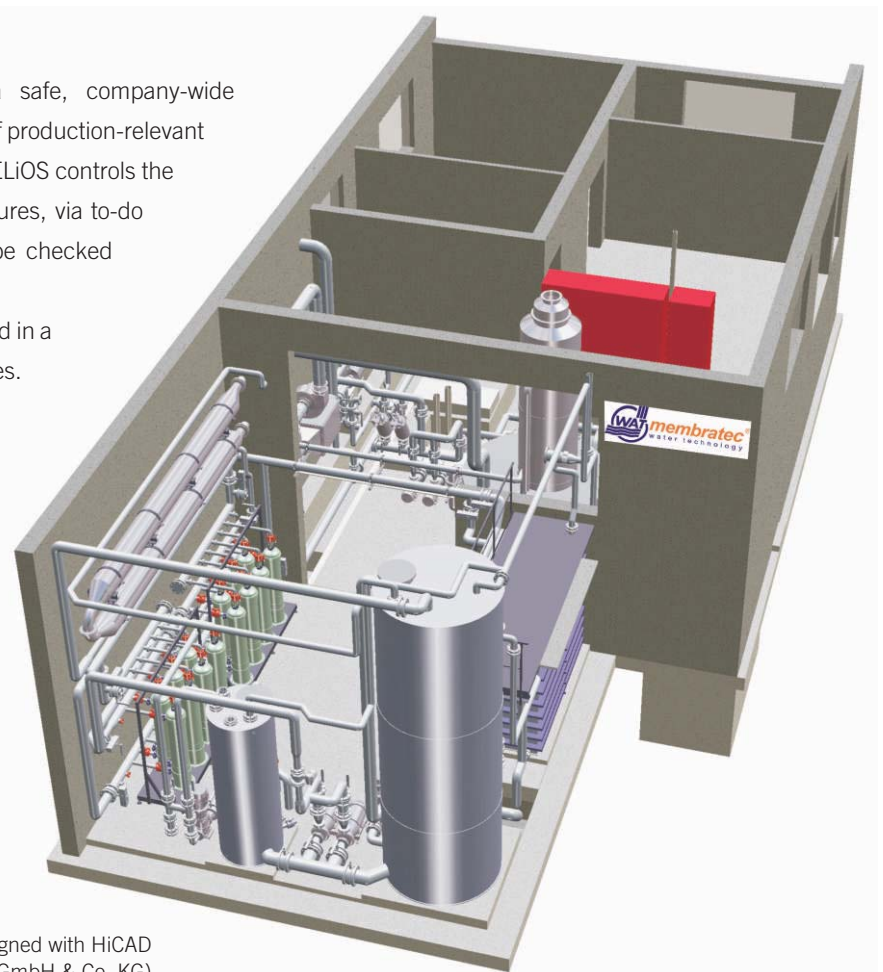
» HiCAD ENHANCES PLANNING
SAFETY, REDUCES COSTS
AND PROVIDES YOU WITH A
COMPETITIVE ADVANTAGE.

Ensure a safe transfer of know-how.

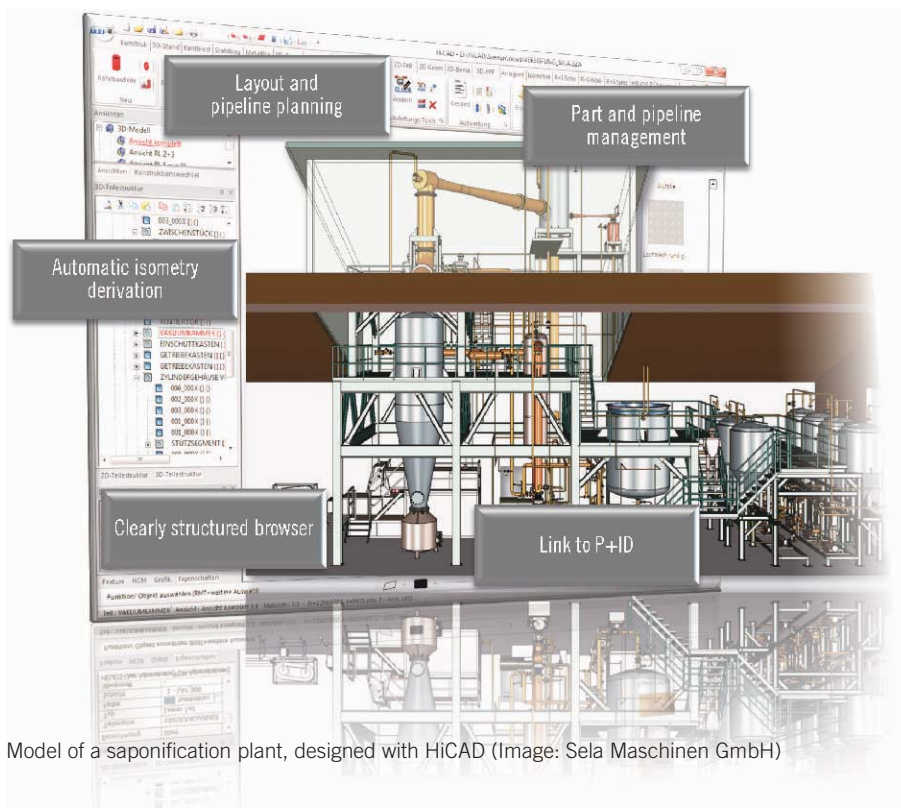
The PDM integration of HELIOS ensures a safe, company-wide management and storage of all current versions of production-relevant data and order documents. At the same time, HELIOS controls the access rights for documents and parts and ensures, via to-do lists, a rapid forwarding of the documents to be checked throughout your enterprise.

Data exchange with third parties can be performed in a safe and transparent manner via various interfaces.

You can, for instance, forward your plannings to an architect, or transfer your design data to a CAE system, such as ROHR2, for static and dynamic analysis.



Water treatment plant designed with HiCAD
(Image: WAT - membratic GmbH & Co. KG)



Model of a saponification plant, designed with HiCAD (Image: Sela Maschinen GmbH)

Thanks to its modular structure, HiCAD can be individually extended and adjusted to your company-specific needs at any time.

For plant engineering and pipeline planning tasks, HiCAD is available to you in three different configuration levels (see table below). If you are frequently dealing with cross-sectoral projects, you should also take a look at our solutions for mechanical engineering, sheet metal processing, steel and metal engineering. Please feel free to contact us and request further information.

HiCAD Plant Engineering			
	Suite	Suite plus	Suite premium
Basic functions For a rapid familiarisation, e.g. GUI with Ribbons, Help, Sketch Technology, Text Editor, Browser, etc.	✓	✓	✓
2-D drawing functions State-of-the-art 2-D drawing functions, all CAD features required for 2-D drawing	✓	✓	✓
3-D modelling Innovative functions and tools for the creation of photo-realistic product models	✓	✓	✓
Sheet Metal basic Basic functions for sheet metal processing, with automatic development and blank calculation	✓	✓	✓
Beams & Profiles Special functions and beam/profile libraries for the creation of steel beam constructions	✓	✓	✓
3-D Layout Plans Special functions for 3-D layout and piping plans	✓	✓	✓
Part Variants Elbows, straight pipes, T-pieces, reducers, caps, saddle connections, flanges, LISEGA	✓	✓	✓
PDM Integration and Part Database Management of part master/welded connection data, pipe class management, links to P+ID	✓	✓	✓
Pipeline Isometry Automatic derivation of isometric drawings from the layout plan		✓	✓
P+ID Fast and easy creation of flow charts for pipelines and instrumentation in plant and process engineering, with extensive symbol libraries and Symbol Editor			✓

Much more than just CAD - all from one source!

The ISD Group, one of the worldwide leading providers of CAD, PDM and automation software, develops innovative solutions for entire process chains. Our software products HiCAD, HELiOS and HELiCON help our customers realise the most demanding design tasks throughout all fields of industry. Besides developing and selling our software products we offer a wide range of services and have experienced specialists for consulting, installation, training, maintenance, and a hotline in place. This enables us to provide you with a truly comprehensive service package from one source. Short ways of communication and customer proximity are a matter of course for us.



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