



The Highlights

- 2-D flow charts
- 3-D layout and pipeline planning
- PDM integration
- ERP interface
- Pipe class management
- Extensive libraries for pipe parts, Sheet Metal duct parts and other components
- Welded pipelines and plastic pipelines
- Ermeto pipe joints
- JACOB piping system
- Automatic generation of isometries and pipe spool drawings
- Pipeline planning with Steel Engineering and Sheet Metal parts
- ROHR2 interface
- Realistic visualisation
- Comprehensive cross-industry solutions guaranteeing intuitive design processes
- Maximum flexibility thanks to a combination of free and parametric modelling
- Shared processing of multiple parts from different assemblies



CAD for all-rounders and specialists

With its Hybrid Technology, HiCAD is the only CAD system that does not only offer a wide range of 2-D and 3-D functions, but also functions for all industries as well as product data management tools in one single system, thus covering all areas of engineering - from mechanical engineering, plant construction and sheet metal processing through to turnkey solutions for steel engineering or glass, metal and facade engineering. This truly unique range of functions is made possible by our self-developed software kernel, which is the guarantor for innovative CAD techniques - in 2-D, 3-D and throughout all industries. With HiCAD you are therefore optimally equipped for a future with increasingly complex CAD projects.



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Plant Engineering



Steel Engineering



Sheet Metal



Mechanical Engineering



Metal Engineering



ISD Software und Systeme GmbH
Hauert 4
D-44227 Dortmund
Tel.: +49-(0)231-9793-0
Fax: +49-(0)231-9793-101
Mail: info@isdgroup.de
Web: www.isdgroup.com

ISD Berlin
Paradiesstraße 208a
D-12526 Berlin
Tel.: +49-(0)30-634178-0
Fax: +49-(0)30-634178-10
Mail: berlin@isdgroup.de

ISD Hamburg
Strawinskystraße 2
D-25337 Elmshorn
Tel.: +49-(0)4121-740980
Fax: +49-(0)4121-4613261
Mail: hamburg@isdgroup.de

ISD Hannover
Hamburger Allee 24
D-30161 Hannover
Tel.: +49-(0)511-616803-40
Fax: +49-(0)511-616803-41
Mail: hannover@isdgroup.de

ISD Nürnberg
Nordostpark 7
D-90411 Nürnberg
Tel.: +49-(0)911-95173-0
Fax: +49-(0)911-95173-10
Mail: nuernberg@isdgroup.de

ISD Ulm
Wilhelmstraße 25
D-89073 Ulm
Tel.: +49-(0)731-96855-0
Fax: +49-(0)731-96855-10
Mail: ulm@isdgroup.de

ISD Austria GmbH
Hafenstraße 47-51
A-4020 Linz
Tel.: +43-(0)732-210422-0
Fax: +43-(0)732-210422-29
Mail: info@isdgroup.at

ISD Benelux b.v.
Het Zuiderkruis 33
NL-5215 MV 's-Hertogenbosch
Tel.: +31-(0)73-6153-888
Mail: info@isdgroup.nl

ISD Benelux b.v.
Grote Voort 293A
NL-8041 BL Zwolle
Tel.: +31-(0)73-6153-888
Mail: info@isdgroup.nl

ISD Schweiz AG
Rosenweg 2
CH-4500 Solothurn
Tel.: +41-(0)32-62413-40
Fax: +41-(0)32-62413-42
Mail: info@isdgroup.ch



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HiCAD
UNLIMITED CAD PERFORMANCE DEVELOPED BY ISD

PLANT ENGINEERING PROCESS CHAIN

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THE WORLD OF CAD AND PDM SOLUTIONS



Practical solutions for drafting and implementation planning in 3-D

With HiCAD, the ISD provides you with a powerful CAD solution for process chains in the field of plant engineering - from 2-D process flow charts as a basis for planning to 3-D layout plans through to automatic generation of all necessary production documents.

Step 1: The process flow chart

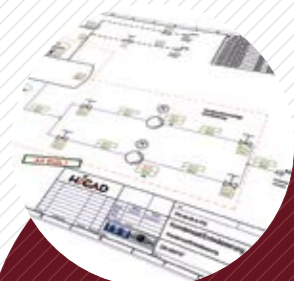
HiCAD P+IDs are 2-D flow charts which provide an ideal basis for the planning of plant engineering projects. Extensive symbol libraries are available for process planning - you can choose between identification according to DIN or KKS. Even individual, company-specific libraries can be conveniently created with the help of the integrated Symbol Editor. Freely definable connections for pipes, drives and signals further enhance the clarity of the P+ID. Precalculation lists, order lists, transfers via DXF/DWG interface as well as a link to the 3-D layout plan (see Step 2) enable a further evaluation of the P+ID.

Extensive symbol libraries

Planning security with pipe classes

Transfer via DXF/DWG interface

Linked 3-D layout



P+ID

Part insertion from P+ID

Automatic placing of pipe parts on guidelines

Auto-selection of flanges/ reducers

Auto-correction of pipelines

3-D layout plan



Step 2: The layout plan

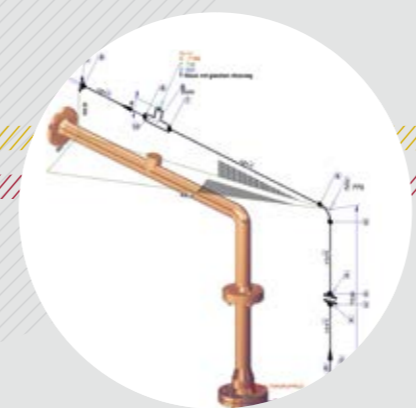
In HiCAD, parts can directly be taken from the P+ID, and placed in the 3-D layout plan via Drag & Drop. Connecting points of components will be linked with the help of guideline routing - if desired, complete with defined pipeline down-grades. Pipe parts will then be placed on the guideline, thus completing the pipeline. In the process, additional support is provided by the activated auto-selection of matching flanges and reducers. Bills of materials taking into account all pipe parts, accessory sets, weld seam gaps and seals will be generated automatically.

As a further basis for planning, 2-D layout plans or 3-D interfering edges can be integrated, edited or expanded.

Isometry and pipe spool drawing

Auto-generated workshop drawings of pipelines „at the push of a button“

Automatic output of pipe part/ pipe length/weld seam lists



Step 3: The workshop drawing

For an efficient forwarding of engineering data, workshop drawings of all pipelines can be generated in HiCAD - virtually „at the push of a button“ - either in the form of pipeline isometries or pipe spool drawings, and can also be individually configured if desired. Automatically generated dimensions, annotations and weld seam gaps complete the drawings. Company-specific drawing frames, illustrations and legends can be managed via catalogue functions and integrated into the drawings. Use convenient reporting tools to further evaluate your layout plan - e.g. with regard to material excerpts, order lists or price calculations. The immediate availability of all essential documents reduces planning times significantly.

Calculation and analyse

Direct interface to ROHR2

Realistic visualisation through 3-D PDF

3-D data exchange via STEP

Motion/assembling simulation



Step 4: The calculation/analysis

Data exchange with third parties can be performed in a safe and transparent manner. For example, you can return the planning documents to the architect, or directly transfer the data from HiCAD to the CAE system ROHR2 by the company SIGMA - an ideal method for static and dynamic analyses of complex pipeline systems. The 3-D representation facilitates the final assembling in the production department. In addition, a photo-realistic presentation of 3-D models (also in 3D-PDF), which can also serve the purpose of assembling simulations, will impressively illustrate and enhance your arguments in customer talks.



Completion of the layout

Depending on your requirements, the 3-D layout plan can be supplemented with 3-D parts, steel engineering beams and profiles, sheet metal claddings and pipe parts, since HiCAD enables a convenient working across several industries in one CAD drawing. In the process, HiCAD will meet all requirements for aeration and ventilation pipings. Pipe racks, clamps, insulations and other auxiliary parts complete the layout of the plant.

Central data management with PDM

HELIOS product data management controls the administration of all production-relevant documents, such as work-shop drawings and bills of materials, with their current revision indices. The part variety in your company will be constantly controlled and optimised through the provision of parts where-used lists. In addition, HELIOS organizes the company-wide storage of order-related documents. At the same time, HELIOS regulates the access permissions for all objects and ensures a speedy forwarding of the documents to be checked throughout your company by means of constantly updated ToDo lists.