For over 30 years, DICAD has been supporting companies worldwide in the field of construction engineering design, formwork design and reinforcement design with our CAD design engineering system, STRAKON. As a result, we offer you the security of decades of experience and continuous further development. This definitive software, STRAKON, is available in the following languages: English, German, French and Polish.

STRAKON – The worlds best CAD system for concrete reinforcement

The 2D/3D/BIM CAD system for civil engineering, building construction and precast construction. STRAKON is a 2D/3D/BIM CAD system for structural design. The focus is on formwork and reinforcement planning. You can create 2D or 3D plans. You can edit the project in BIM (Building Information Modeling) or only in 3D or 2D. The designer or project manager can decide within a project which method is required or useful. As changes during the phases of planning and construction are very common, a high degree of modification comfort is very important. Furthermore, cooperation with many project participants via fast electronic data transfer is absolutely essential. STRAKON allows you to communicate digitally with all project partners such as contractors, architects, structural engineers, MEP-planners, construction companies, etc. BIM in particular requires good interfaces in structural design, where formwork and reinforcement plans play a central role. Here IFC, CPXML or 3D PDF offer a very good standard.

With STRAKON you are excellently positioned in the field of formwork and reinforcement planning for the future. BIM is in increasing demand by both the public and the private sector. It is therefore important that a CAD system can be optimally integrated into BIM process chains in terms of formwork and reinforcement. The decisive factor here is that BIM should offers advantages for your office – in this case STRAKON can support you very well. DICAD is a member of buildingSMART and the structural design group and is actively working on changing planning methods in 3D/BIM processes.

The focus of planning with STRAKON is in the field of formwork and reinforcement planning in 2D, 3D and BIM. With STRAKON you can work on different specialist fields. A structural engineer will find that STRAKON ideally supports his point of view when it comes to Structural engineering, civil engineering, bridge construction, precast construction, unitized construction and much more. But STRAKON can also be used for process in the fields of architecture, steel construction, timber construction etc. The rapidly growing number of STRAKON users shows that STRAKON is gaining more and more approval and becoming the standard system.
Construction engineering with STRAKON

- individual automated planning of bridge superstructures also with change of cross slope, cross section changes, widening, outcropping...
- manual input or import of corresponding files from roadways, gradients, D40, D21
- automatic creation of 3D routes with clothoids, arcs, parabolas etc.
- curve cuts
- automatic evaluations, e.g. height table in self-definable grids
- 3D/BIM planning of abutments, tunnels, round tanks, power plant towers etc. with the modern BIM technology "STRAKON-Cube"
- beautiful professional 2D or 3D plans as a result
- world coordinates (Gauß-Krüger, UTM) and point labels
- IFC-Interface
- import of 3D terrain models via REB, OKSTA, LandXML
- 3D/BIM presentation possibilities from the finest on the plan, as image or live
- best reinforcement planning for bridges and engineering structures
- building construction, construction engineering, civil engineering, industrial construction, bridge construction, tunnel construction, power plant construction, structural precast parts, unitized precast parts
Simultaneous teamwork on 3D civil and construction engineering projects

- fast, modern and economical design of construction, formwork and reinforcement
- reinforcement planning with automatic bar representation, lists and files for data transfer
- associative reinforcement resulting in automated corrections
- automated plan generation from the 3D model
- associative 3D plans for quick changes and consistency in the project
- automatic sections and ground plan views (engineering view)
- automatic hatching of cut surfaces, view surfaces and rising parts
- breakthrough planning with project partners
- automatic breakthrough, opening and 3D object labeling in the plan
- the world’s best CAD system for concrete reinforcement
- BIM planning according to buildingSMART rules
- sophisticated IFC interface (2x3, 4.0) for integration into a BIM process chain
- automatic and individual evaluable data on 3D objects (material, position, volume, release, fire resistance classes, degree of reinforcement ...)
- 3D planning with modern “STRAKON Cube” technology
- fast and understandable 3D modelling
- 2D planning fast and reliable
- various interfaces to project partners
- very high modification comfort
- beautiful professional 2D or 3D plans as a result
- automatic error checking in modelling and reinforcement planning
- 2D and 3D embedded parts
- multiple designers for one project at the same time
- world coordinates
- topographic models
- straight and spiral staircases and ramps
- roadways, gradients, clothoids, polynomials, splines
- building construction, construction engineering, civil engineering, industrial construction, bridge construction, tunnel construction, power plant construction, structural precast parts, unitized precast parts
- steel construction in 2D with design and variants and 3D via STAHLBAU 3D - VirtualSteel
Civil Engineering
Bridge Reinforcement Plan
3D Reinforcement
3D Geographic Model

Structural Precast Planning with STRAKON

- offer planning, position planning, overview planning, shop drawings, production planning, assembly planning
- fast, modern and economical planning of design, formwork and reinforcement
- 3D overview models linked to 3D Shop drawing plans
- associative 3D plans for quick changes and coherence in the project
- reinforcement linked to formwork edges for automated corrections
- automatic collision control
- columns, beams, frost protection, sandwich walls, fire walls, shafts, stairs, balconies
- formwork module linked to 5-axis milling machine
- staircase module
- transfer of production data for master computer, mesh welding systems, bending machines, lasers, etc. (Unitechnik, PXML, BVBS)

- 2D and BIM interfaces to ERP and production controlling systems like Betsy, Gesys, Priamos, Softbauware, Dr. Strauch, 1-TWO...
- automatic labelling of precast parts
- 2D and 3D inserts and online mount part catalogues
- automatic link to sandwich anchor calculation software (Philipp, Pfeifer, Schöck, Halfen)
- automatic lists of precast parts and inserts
- STRAKON is the German market leader in precast construction planning
- BIM planning according to buildingSMART rules
- 3D planning with the “STRAKON Cube” technology
- very high modification comfort
- multiple users for a project at the same time

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Unitized Precast Planning with STRAKON

- automated planning of double walls, filigran slabs, insulation walls, solid slabs, air-handling ceilings
- automatic generation of shop drawings
- free work in the shop drawing
- automated installation of girders, basic reinforcement, 3rd reinforcement layer, mount parts and lattice girders
- generation of production data for master computer, laser, mesh welding systems, automatic bending machines
- 2D and BIM interfaces to ERP and production controlling systems like Betsy, Gesys, Priamos, Softbauware, Dr. Strauch, I-TWO ...
- convenient 3D stacking and pallet modul
Which data exchange formats does STRAKON support?

With STRAKON, structural engineers are perfectly integrated into planning process chains. Thus every structural engineer can optimally carry out his tasks with STRAKON and a multitude of interfaces enable networking with other project partners. Nowadays, BIM (Building Information Modeling) plays an important role in the decision for new software. STRAKON is well positioned in this field and enables a smooth project flow via BIM interfaces (IFC, CPIXML, topographical models).

Conventional interface formats such as DWG, PDF, Measurement Data, Office Data, BVBS, Unitechnik and many more are also very well supported.

Here you will find an overview of possible data exchange with STRAKON:

- CAD systems via DWG or HPGL
- BIM process chain via IFC or CPIXML
- Exchange of plans via PDF
- Project presentations with 3D-PDF
- 3D printer via OBJ
- Office - MS-Excel, MS-Word, LibreOffice, OpenOffice
- Graphic import and export via PNG, JPG, BMP etc. (also in print quality e.g. 300dpi)
- Design - 2D and 3D sandwich wall anchors from HALFEN, PHILIPP, PFEIFER, Schöck etc.
- Precast part production via Unitechnik data - master computer, laser, pallet, stack etc.
- Mould making – formwork planks via XML to milling machines (NC-Hops)
- Calculation interface (BIM-IFC/ 2D results from FEM) - frilo, mb, InfoGraph, PCAE, Sofistik, Tomow, D.I.E., Dlubal, RIB etc.
- ERP, PPS and estimation systems (3D-BIM/2D) - Betsy, Gesys, Priamos, Infor, I-TWO, Strauch, SOFTBAUWARE etc.
- Various manufacturers of component parts via 3D and 2D interfaces (HALFEN, PHILIPP, PFEIFER, Hilti, Schöck etc.)
- Reinforcement data for bending/welding machines via BVBS, Unitechnik or PXML
- Topographical model via REB, OKSTRA, LandXML
- Surveying data - world coordinates, roadways, gradients, D40, D21 etc.
- Various manufacturers of assembly parts via 3D and 2D interfaces
**What is BIM?**
Plan - Construct - Implement - Manage

BIM stands for Building Information Modeling. This is a planning process that focuses on cost security, adherence to schedules, quality improvement and sustainability. In addition to planning, the BIM method also focuses on the construction and management of buildings.

In concrete terms, BIM enables all project participants to work together earlier, in a closer network, coordinating their actions in line with the project partners. As a result, the entire planning process improves in quality and a lot of later replanning can be avoided.

**Open BIM-Data Transfer**
In order to ideally support a BIM process, BIM-enabled software solutions are necessary. All project partners use their own specialist applications. We could learn from the past, that BIM doesn’t work with only one model which all planners use simultaneously. Rather, all project partners keep their own model in the respective application software. However, these models must be smartly coordinated with each other.

With the CAD software STRAKON you get an excellent BIM tool for structural planning, which allows you to integrate very well into BIM process chains. For example, you receive 3D IFC data from the architect, which you can use in STRAKON for formwork and reinforcement planning. You can then pass on this engineering model to the MEP planning via IFC, for example. The CAD program STRAKON actively supports the Open BIM concept.

**Changes and Model Check**
If there are changes in the project, you can easily enter this in the STRAKON-3D model. This is done either manually or automatically. When changes are made all formwork and reinforcement plans derived from the structural model are automatically updated. Reinforcement, bar representation, lists, transfer data, dimensioning and hatching are intelligently included and are therefore correct and up-to-date throughout the entire project.

With STRAKON you automatically receive a lot of information from a model. The integrated BIM-Checker (Model-Checker) allows for an easy comparison between different models (from different project partners, several index levels or project variants). For example, you can let the software compare the model from the MEP with your structural model, and STRAKON will show you where problems might arise.
We, the team of DICAD Systeme GmbH, have been developing software for the construction industry for over 30 years. We specialise in the field of CAD/BIM processing in structural design. This focus has been a great success to this day. Thanks to our software STRAKON, DICAD is unsurpassed in engineering and precast construction, especially with regard to reinforcement planning. This makes the entire DICAD team proud and encourages further development.

The focus is always on our customers: let’s shape the future together and develop what is needed in the market. The solid shareholder structure, consisting of well-known and successful companies in the construction industry, serves as the foundation for high-quality and sustainable product development.

We see our current and future challenges in further developing planning methods and planning tools. BIM (Building Information Modeling) also plays a major role here. One of our company goals is to enable customers to perfectly integrate into BIM process chains with STRAKON. We make sure that BIM requirements can be optimally and easily implemented with STRAKON.

To meet our customer’s needs, we put a lot of emphasis on realistic and practical relevant design. Many engineering and drawing offices as well as precast factories working with us can confirm that customer relations play a major role for DICAD. To build a strong relationship with customers, we offer direct communication, prompt assistance, participation in further development, e.g. through subject-specific working groups, and the willingness to help with requirements in their daily practice.

If you are not yet a DICAD customer, we would be pleased to introduce our products to you - without any obligation.