

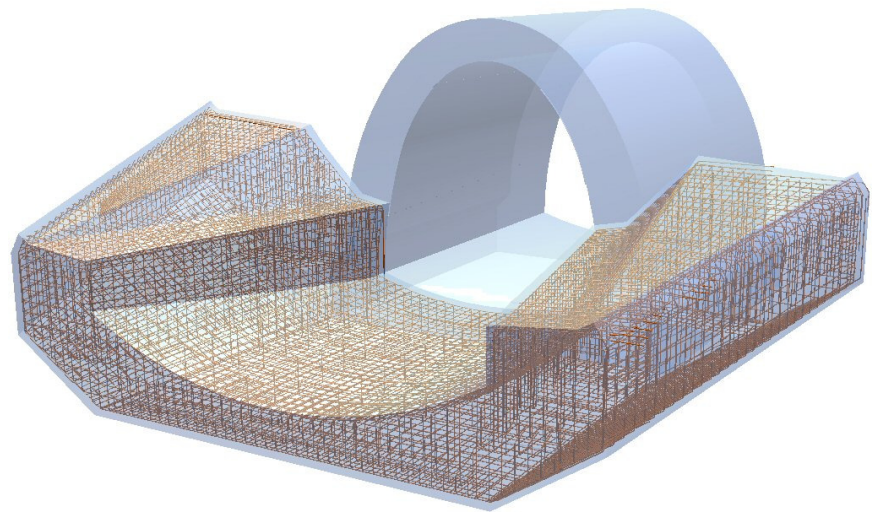
Allplan BIM 2008

Reinforced Concrete Package



The complete solution for
Reinforced Concrete Detailing

The Allplan Solid Construction package is the complete solution for effective layout, general arrangement and reinforcement design. In contrast to traditional CAD systems you can enter plan layouts many times faster and considerably reduce the work involved in reinforcement design. The integration of structural engineering programs makes a considerable contribution to efficient structural design.



Picture: Inlet apron, Baukonstruktion Wolf, Berlin

Includes Allplan Design package

This package includes the entire Design package and builds on its functions for 2D design, 3D modeling, layout, design, visualization etc. Please refer to the relevant data sheet for more information.

Layout Design

Allplan allows you to create a component drawing efficiently and adopt an integrated approach to structural design:

- ▶ Predefined component symbols
- ▶ Automatic exponents of component numbers
- ▶ Numerous options for varying symbols and text
- ▶ Transfer of the information from the component drawings to the component management module of the F+L structural engineering programs

General Arrangement Drawings for Buildings

Allplan allow you to produce general arrangement drawings particularly quickly. Instead of drawing single lines, you can enter complete components using only a couple of clicks.

- ▶ Rapid input of walls, ceilings, columns and other components
- ▶ Input of lines and associated hatchings at the same time
- ▶ Input with or without component height
- ▶ Material catalogs
- ▶ Convenient staircase design
- ▶ Design checking (animation windows)

Skeleton Frame Construction

The component modeling allows the parameters of typical general arrangement shapes to be entered and the items placed dynamically.

- ▶ Constructions of columns, beams etc. component by component
- ▶ Addition of any corbels to column
- ▶ Exact adjustment of beams to fit between columns by resizing

Highlights Reinforced Concrete

- ▶ 2D design
- ▶ 3D modeling
- ▶ Layout design
- ▶ Component-oriented shell and reinforcement design for automatic views and sections
- ▶ Outline recognition for freehand or predefined bending shapes and reinforcement designs
- ▶ Integrated fixtures catalog including Halfen-Deha®, Erico Lenton®, Peikko®, Schöck® and Bamtec®
- ▶ Modeling of any geometry
- ▶ Rafter construction and frame construction, roof design
- ▶ Bridge and civil engineering modeler
- ▶ Fully integrated structural design
- ▶ Building envelope calculation for thermal insulation certificate
- ▶ Animations and films
- ▶ Traceable, VOB-compliant quantity takeoff
- ▶ Layout and design
- ▶ Intelligent data exchange

- ▶ Components can be rotated and mirrored before placement (for correct positioning)

Reinforcement Design

The Allplan Reinforcement modules contain a wide range of tools to make reinforcement design easier.

- ▶ Reinforcing bars, standard stock mesh, new stock mesh, custom mesh, bent-up mesh, spacers
- ▶ Modern palette input for bar reinforcement with point entry or shell shape recognition
- ▶ Freehand or predefined bending shapes
- ▶ Over 90 standard reinforcement designs with automatic shell shape recognition
- ▶ Number off and bending shape consistently updated in views, sections, schemas, labels and reinforcement schedules following modifications
- ▶ Design check of the reinforcement (using animation or color coding)
- ▶ Mesh placement algorithms: stagger, define start mesh, excess mesh
- ▶ Mesh placement limits: longitudinal and transverse distribution, multiple layers, automatic optimization after modification
- ▶ Bar reinforcement area reinforcement: any polyline placement, column rein., edge rein., bending shape catalog, meterage placing, staggered laps, benching
- ▶ Full/partial schemas freely positionable or in component edge projection
- ▶ Steel/bending schedules with interface to bar bending plant etc.
- ▶ Mesh schedules, cutting diagrams, gross/net weight, excess mesh

- placement, separate stock/custom/bent-up mesh
- ▶ Integrated punching shear reinforcement and Halfen-Deha® fixtures catalog
- ▶ Mechanical couplers from Erico Lenton® and Stahlwerk Annahütte
- ▶ Peikko® fixtures catalog
- ▶ Schöck lugs
- ▶ BAMTEC reinforcement carpet placement routines

Fully Integrated Structural Design

The integrated structural analysis software helps you avoid performing structural design tasks twice.

- ▶ Integrated FEM calculations in combination with the add-on packages Allplan Finite Element (F+L) or Allplan Finite Element 3D (SCIA).
- ▶ Display the reinforcement from the calculation results as contours and FEA reinforcement color images; automatic creation of area reinforcement based on these results
- ▶ Link to F+L structural engineering software

Frame Construction: Rafters, Roof and Beams

The Rafter Design module is optimized for timber and steel construction.

- ▶ Frame structures
- ▶ Frame design with standard steel sections and non-standard sections
- ▶ Design of freeform roofs
- ▶ Determination of roof intersection lines
- ▶ Easy creation of dormers
- ▶ Creating roof covering, overhang and eaves
- ▶ Window openings
- ▶ Rafter design

- ▶ Universal timber elements
- ▶ Automatic rafter positioning

Quantity Takeoff Operations

Quantities are calculated almost automatically with Allplan shell design.

- ▶ Fully automatic detection of rooms
- ▶ Area calculation
- ▶ Calculation of area and cubic volume in accordance with DIN 277
- ▶ Traceable, VOB-compliant quantity takeoff
- ▶ Integrated AVA interface

Civil Engineering Design

Allplan enables you to plan and design longitudinal engineering structures and earthworks like bridges, tunnels, retaining walls, underpasses, ramps, ramparts, dams, channels and riverbeds. In just three steps a volumetric model is created – based on this model you can create precise drawings with any views and sections.

Envelope Results Thermal Insulation

Allplan facilitates complex area calculations for thermal insulation requirements in accordance with EnEV.

- ▶ Convenient and easy to follow graphical envelope results
- ▶ Output building envelope design as overview for thermal insulation requirements
- ▶ Automatic generation of keys

Further Information

If you need additional information or would like to find out more about one of our products, please contact your local Nemetschke dealer or visit our website at: www.nemetschke.com.