### ConCrete

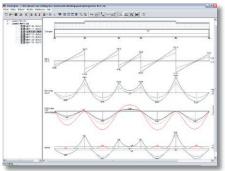
# Structural design analysis of reinforced concrete beams & floor slabs



#### Intuitive

Within ConCrete's user-friendly environment, you define model geometry, cross-sections, (elastic) supports and loads interactively.

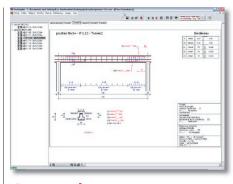
Through a few mouse clicks, you can easily change any design parameter. Instantly, all related analysis results (from internal forces up to reinforcement diagrams) will be updated automatically – maintaining full associativity between analysis data and results.



#### **Powerful**

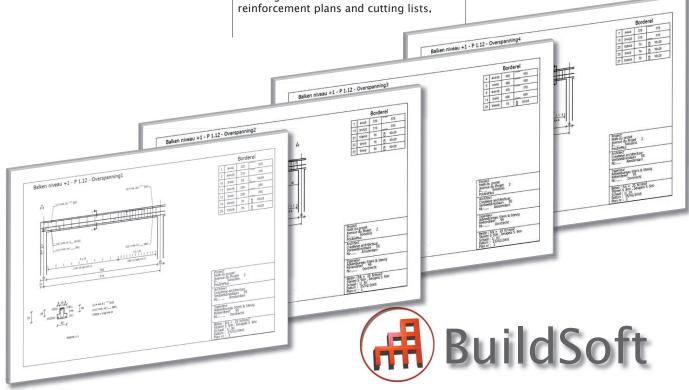
ConCrete performs organic design calculations based on the behaviour of structural members in ultimate and serviceability limit states. All of this complies with Eurocode 2 and a wide range of national standards.

ConCrete instantly provides you with deformations (considering the effects of cracks and creep), internal forces, reinforcement requirements, ... and presents all of this in clear graphs. Results of design verifications are translated into reinforcement plans and cutting lists.

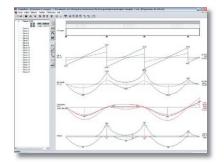


#### Complete

ConCrete provides you with a complete solution – standard. It offers you structural and loads modeling capabilities, static analysis, limit state design verification and the creation of reinforcement plans and cutting lists.



## ConCrete





#### onCrete is split in 2 dedicated modules:

- With ConCrete, the engineer performs the actual limit state design of reinforced concrete beams, floor slabs, ground beams and rafts.
- ConCrete Plus enables the designer to create reinforcement plans for beams and slabs using the analysis results provided by ConCrete.

#### **Features**

Extremely attractive and comfortable user interface with floating toolbars, project navigation tree and interactive windows for definition of geometry, boundary conditions and loads.

Automated creation of loads combinations according to EC1 and national standards.

Static analysis of reinforced concrete beams, floor plates, ground beams and rafts.

Evaluation of longitudinal and transverse reinforcement requirements – according to EC2 and national standards. Evaluation of minimal and optimal cross-sectional dimensions.

Evaluation of cracked deformation based on required and/or actual reinforcement quantities, with allowance for creep effects.

Evaluation of minimum requirements on longitudinal reinforcement in view of allowable crack width

Automatic update of all analysis results upon the change of any design parameter.

Automated creation of design analysis report.

User-definable reinforcement parameters: bar diameter, number of bars per layer, elimination

Automated translation of required reinforcement quantities into a practical reinforcement design. Evaluation of reinforcement bar length considering translation of moment diagram and anchorage length requirements.

Continuous or discontinuous reinforcement bars at support points. Straight or curved reinforcement anchors. Continuous or discontinuous reinforcement anchors.

Verification of cracked deformations and crack width based on actual reinforcement quantities.

Extensive number of annotation options.

Automated creation of cutting list from reinforcement plan.

Export of reinforcement plan to CAD software for concrete design (through DXF or proprietary formats).

#### Benefits

ConCrete empowers both the regular and the occasional user to optimally design reinforced concrete members in the shortest possible time. Analysing and comparing multiple variants becomes really possible and practical.

ConCrete translates theoretical reinforcement requirements into a practical reinforcement design and allows to create reinforcement plans and cutting lists in an automated way.

ConCrete makes the complex European and national standards easily accessible for structural design engineers.

For more information on ConCrete, please contact:

ConCrete is a product of BuildSoft



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