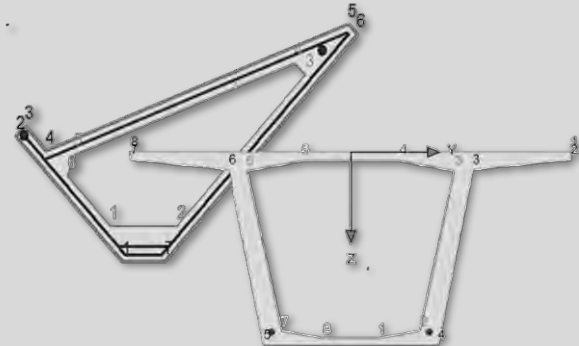


RTzwax

11.10.232 RC- and prestressed cross-sectional design

Design of Reinforced Concrete and Prestressed Concrete Cross Sections

- Design according to DIN 1045-1 & EN 1992-1-1 with consideration of NAs for DE, UK, CZ/SK, AT
- Any polygonal reinforced concrete and prestressed concrete cross-sections with openings
- Any arrangement of reinforcement as single bars or edge reinforcement
- Design of composite cross-sections from several partial cross-sections
- Specification of different characteristic material curves for concrete materials, reinforcement and prestressing steel



The program ZWAX has a graphically interactive working environment for the design of any polygonal reinforced and prestressed concrete cross-sections for biaxial bending with normal force. The design is based on DIN and Euronorm. Additional, arbitrary material characteristics can be described.



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RTzwax Features

Windows® programme with graphically interactive working environment for the design of arbitrarily polygonal reinforced concrete and prestressed concrete cross sections for biaxial bending with normal force. The design basis are optionally the regulations of DIN 1045, DIN 1045-1, EN 1992-1 and according NAs for DE, AT, SK/CZ and UK. Further arbitrary material values//properties can be determined. Thus, also other standard regulations can be considered.

There are the following input and processing options:

- polygonal cross sections with rectangular and circular or polygonal box outs
- graphically interactive processing of composed cross sections
- graphical construction environment for the processing of polygonal cross section geometries with DXF interface and tabular processing option of the polygonal points
- different cross sections can be processed simultaneously with different stress states
- presetting of different material values for concrete material, reinforcement steel and prestressed steel
- the reinforcement can be evenly distributed over the perimeter or arranged as a individual reinforcement in the corners of the cross section
- presetting of the reinforcement with different priorisations
- configuration of the result list

The following verifications can be made:

- ultimate limit states of bearing capacity for biaxial bending with normal force
- design for the unfavourable load case with preset stress resultants
- strain analysis under service load

- strain analysis in ultimate limit state of bearing capacity
- calculation of stress resultants at presetting of strain state caused by edge strains and direction of neutral axis
- stresses in non-prestressed individual - or line reinforcements
- calculation of the soil pressure for foundations with gapping joint

Clear Graphical Output

The graphical output contains a system sketch of the concrete cross sections including reinforcements as well as the centre of gravity and the principal axes' directions. In rupture strength analysis and the preset strain state, the graphic contains the neutral axis as well as the lines parallel to the neutral axes with the maximum and minimum strains. All individual reinforcements are displayed true to scale and the prestressed individual reinforcement is filled in additionally.

