

Presentation - 3D window lintel

Demonstration example

Internal document – training of distributors, 06/2014

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1. Wizard

Beam wizard

Type of beam

☒ Cast-in-situ concrete beam Reinforced

☐ Pre-fabricated concrete beam

☐ Steel beam

☐ Single span beam

☐ Beam with cantilevers

☒ Continuous beam

Beam alignment: Top surface

Supports position: Bottom surface

< Back Next > Cancel

Beam wizard

Continuous beam

☐ Straight beam loaded in vertical plane

☒ Straight or polygonal beam loaded in 3D

Spans [m]: 3 3

< Back Next > Cancel

Beam wizard

Code, cross-section, loads

Design code: EN

National annex: EN

Design working life: 50 years

Cross-section: Rectangle 300, 450

☒ Self weight according cross-section

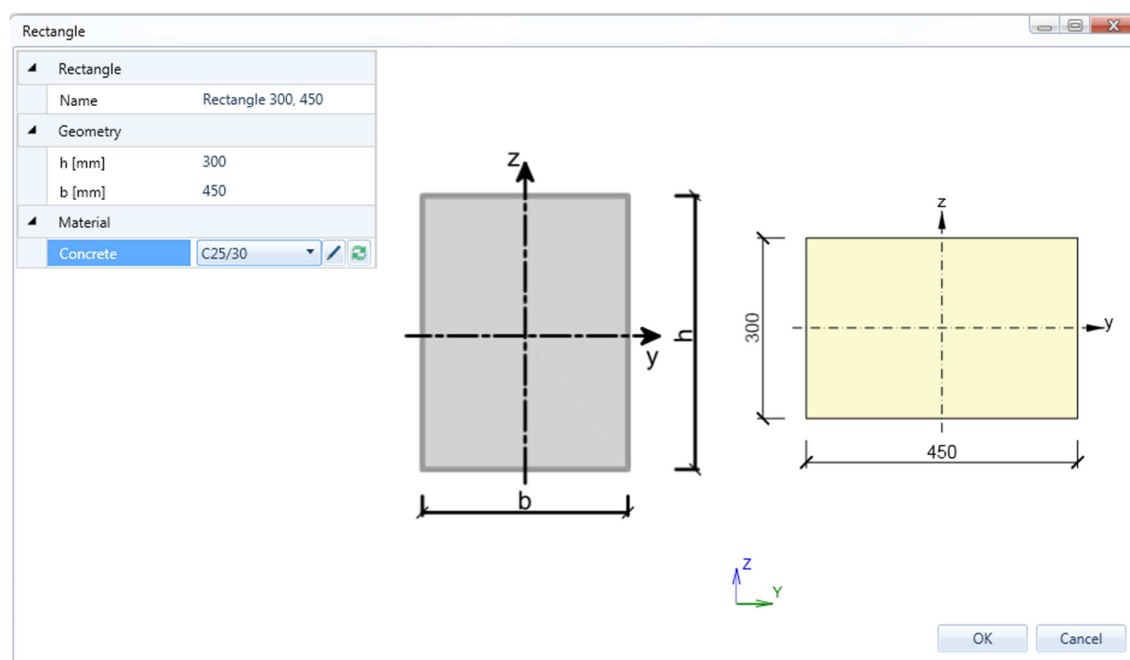
Permanent load [kN/m]: -3

Variable load [kN/m]: -5

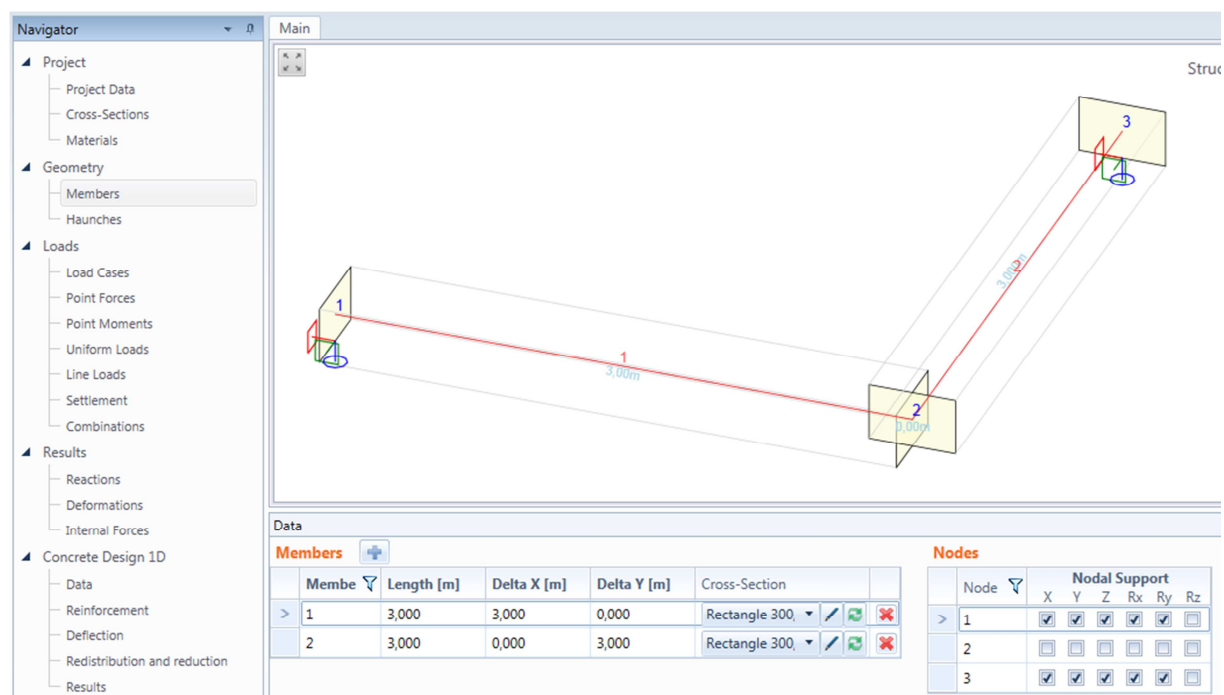
☒ Critical load patterns

Ratio for unloaded spans: 0

< Back Finish Cancel

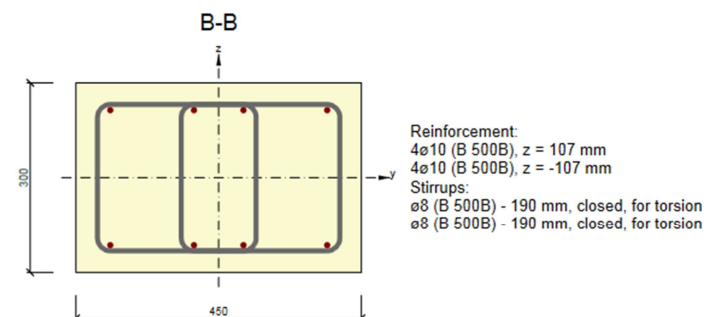
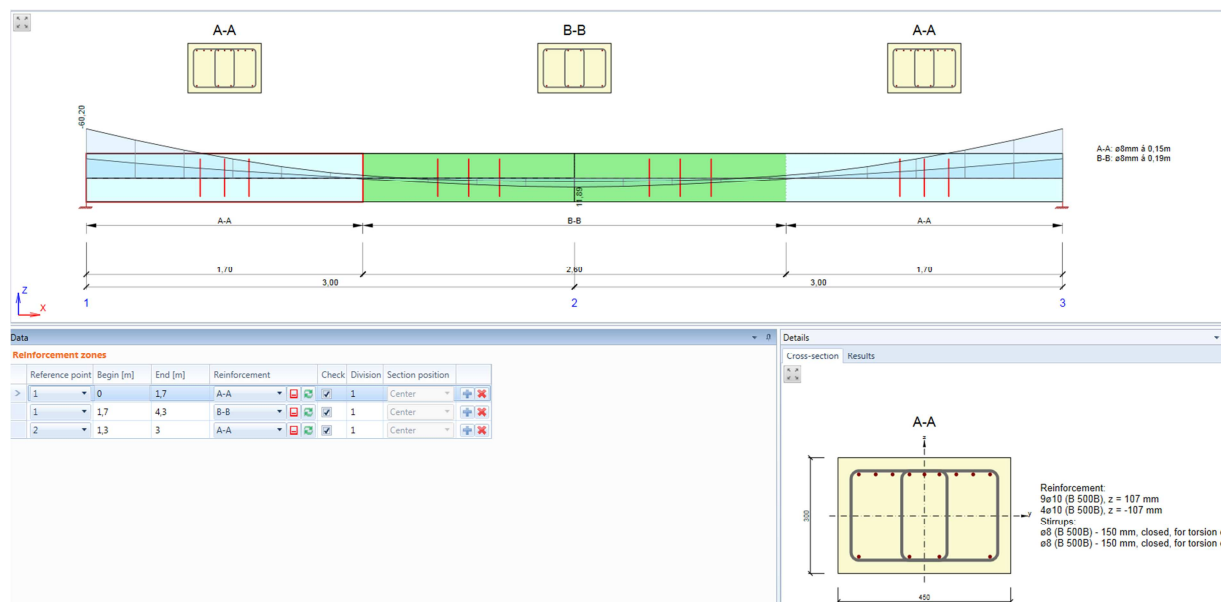


2. Adaptation of beam input



3. Sectional design

Data	
Ultimate limit state	
Capacity N-M-M	<input checked="" type="checkbox"/>
Shear	<input checked="" type="checkbox"/>
Torsion	<input checked="" type="checkbox"/>
Interaction	<input checked="" type="checkbox"/>
Serviceability limit state	
Stress limitation	<input checked="" type="checkbox"/>
Crack width	<input checked="" type="checkbox"/>
Detailing	
Detailing	<input checked="" type="checkbox"/>
Deflections	
Deflections	Detailed calculation
Reduction and redistribution	
Redistribution of moments	<input checked="" type="checkbox"/>
Reduction of moments	<input checked="" type="checkbox"/>
Reduction of shear force	<input checked="" type="checkbox"/>
Limited interaction check	<input checked="" type="checkbox"/>
Exposure class	
No corrosion (X0)	<input type="checkbox"/>
Carbonation	XC1 - Dry or permanently wet
Chlorides	No risk of chlorides
Chlorides from sea	No risk of chlorides from sea
Freeze/Thaw Attack	No risk of freeze/thaw attack
Chemical Attack	No risk of chemical attack
Member Data	
Relative humidity [%]	65
Creep coefficient	Calculated
Member type	Beam
Structural member import	Major
Deflection requirement	Standard



4. Literature, references

1. IDEA StatiCa Prestressing, *IDEA RCS 4 Reinforced Concrete Section, User guide*, IDEA RS s.r.o., U Vodárny 2a, 616 00 BRNO, www.idea-rs.com
2. IDEA StatiCa Prestressing, *IDEA Beam 4, User guide*, IDEA RS s.r.o., U Vodárny 2a, 616 00 BRNO, www.idea-rs.com