



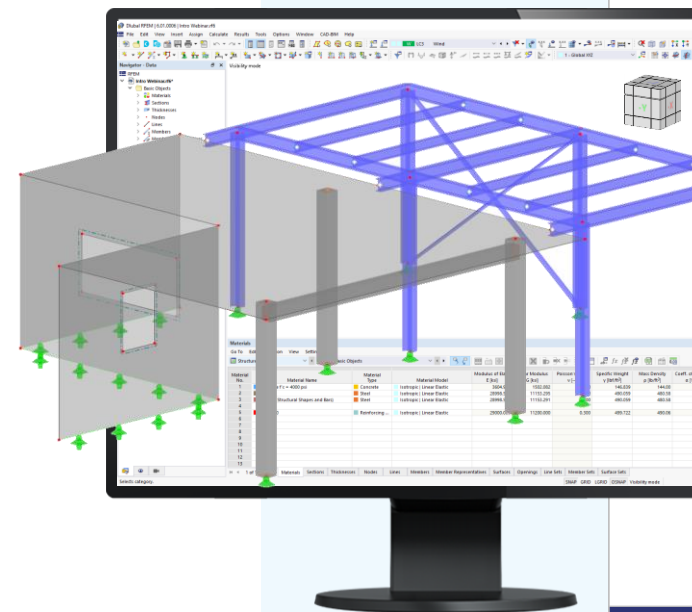
Structural Analysis & Design Software

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Webinar

Introduction to the New RFEM 6



Amy Heilig, PE
Presenter

CEO - USA Office



Alex Bacon, EIT
Moderator

Technical Support Engineer



Cisca Tjoo, PE
Moderator

Technical Support Engineer



Questions During the Presentation



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The screenshot shows the GoToWebinar control panel interface. At the top, there is a menu bar with 'File', 'View', and 'Help'. Below it is the 'Audio' section, which includes a 'Sound Check' indicator with a green bar and a question mark. There are two radio buttons: 'Computer audio' (selected) and 'Phone call'. A red 'MUTED' indicator is visible. Below this, there are dropdown menus for 'Mikrofon (2- Sennheiser USB h...)' and 'Lautsprecher (2- Sennheiser U...'. A volume slider is also present. The 'Questions' section is below the audio settings, featuring a text input field with the placeholder '[Enter a question for staff]' and a 'Send' button. At the bottom, the 'Webinar ID: 373-901-987' and the 'GoToWebinar' logo are displayed.



Adjust audio settings

Ask questions

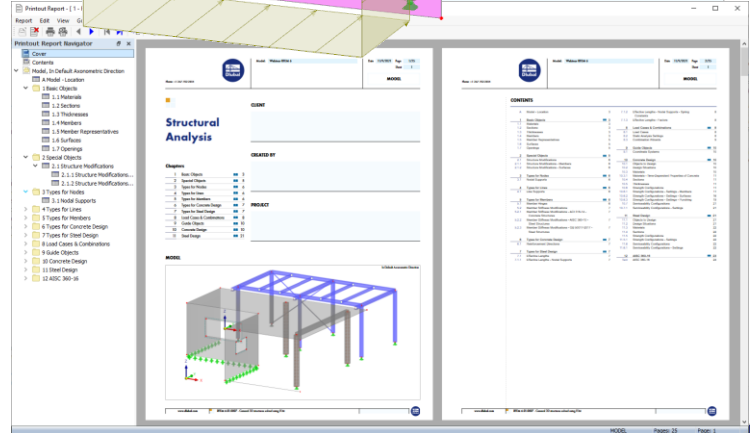
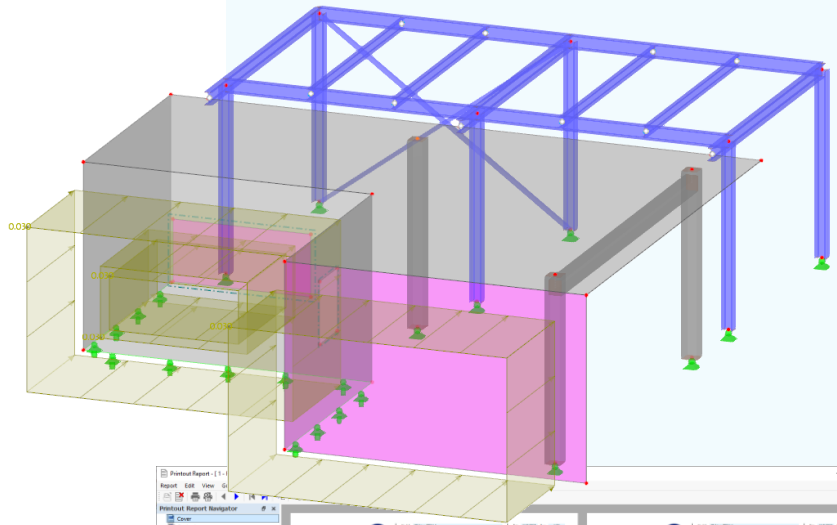




CONTENT



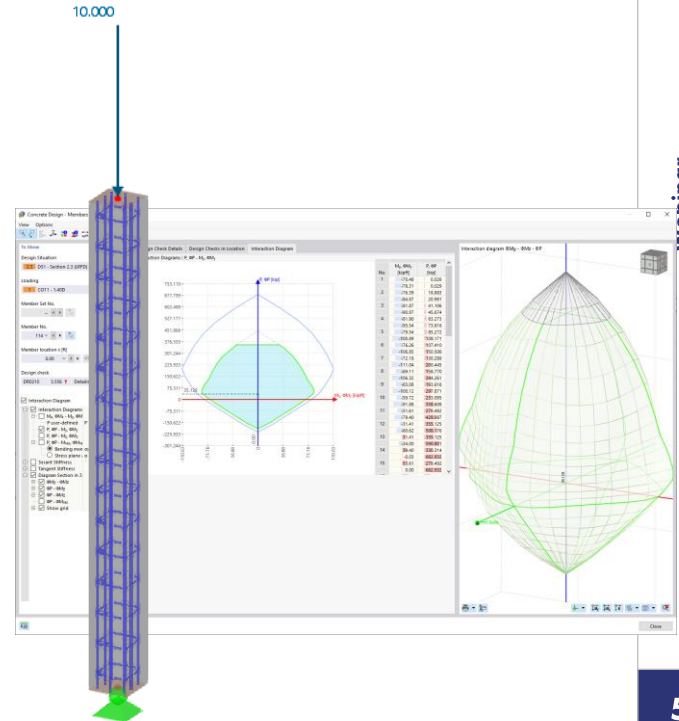
- 01** RFEM 6 background and future development
- 02** New features and improvements
- 03** Introductory example including modeling, analysis, and design
- 04** Improved printout report



RFEM 6 Background and Future Development

- Developed in parallel with RFEM 5
- Rewritten in a modern framework programming language (C++ with Qt)
- First release includes new features but not all capabilities of RFEM 5 (e.g. glass, CLT, BIM, etc.)
- Several release phases planned for ongoing development
- Frequent access to updates in the Dlubal Extranet
- Full support of RFEM 5 for ~2 year overlap period
- Forward compatibility with RFEM 5 to RFEM 6 (loss of add-on module data)
- Separate RFEM license configuration for concurrent RFEM 5 and RFEM 6 use

➔ [FAQs for Existing RFEM 5 Users](#)



New Stand-Alone Programs

RSTAB 9

Analysis and design for 3D beam, frame, or truss structures including integrated design add-on

→ [More About RSTAB 9](#)

RSECTION

Calculation of section properties for custom thin-walled and massive cross-sections and general stress analysis

→ [More About RSECTION](#)

RWIND 2

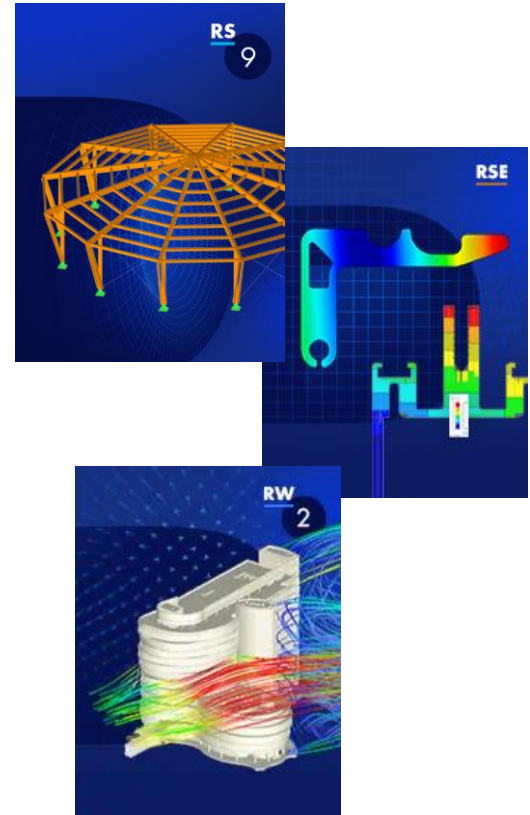
Numerical simulation of stationary and transient incompressible turbulent wind flows

→ [More About RWIND 2](#)

Web Service and API

Programmable interface to read/write data with RFEM and RSTAB

→ [More About Web Service and API](#)



New Add-ons

Building Model

Add-on for RFEM to define and modify building stories

→ [More About Building Model](#)

Optimization & Costs / CO₂ Emission Estimation

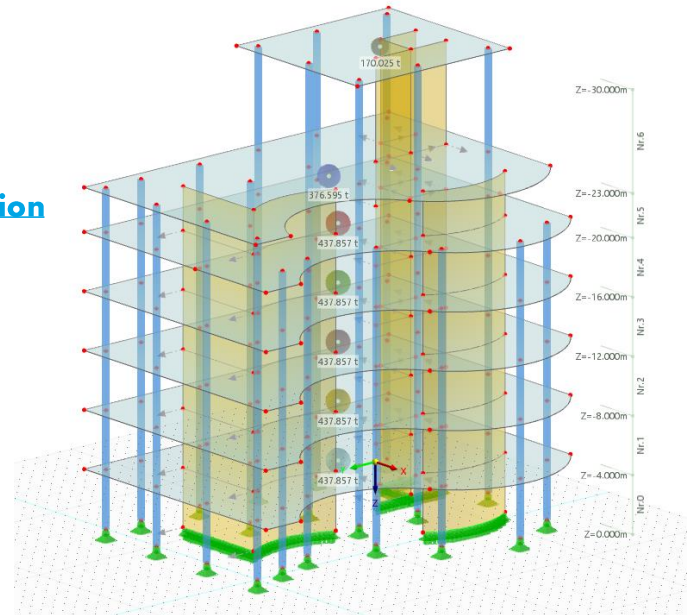
Add-on for RFEM to optimize models using artificial intelligence (AI)

→ [More About Optimization & Costs / CO₂ Emission Estimation](#)

Time-Dependent Analysis (TDA)

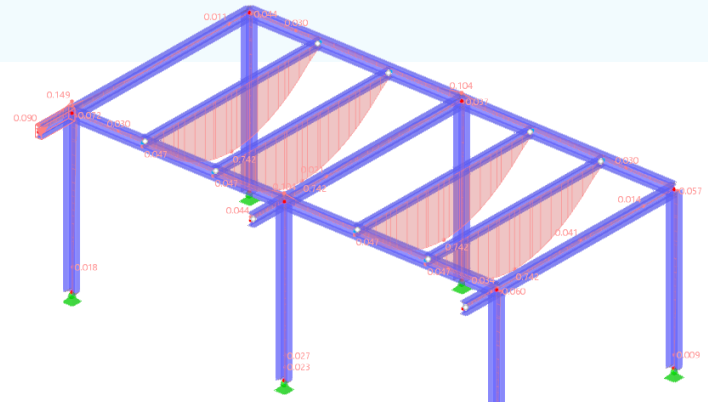
Add-on for RFEM to consider time-dependent material behavior of members

→ [More About Time-Dependent Analysis \(TDA\)](#)



RFEM 6 New Features

- Integration of add-ons into the main program
- Output of design formulas from relevant standard
- Member and Member Set Representatives
- Cloud based licensing system
- Hot-key definitions
- Improved printout report
- Multi-core solver for quicker calculation
- Web services and API



Steel Design - Members - Design Check Details

Design Checks in Location: W 40x145 C15

Design Check	Value	Limit	Status
Design Check: Axial Force	-530 kip		Negative
Design Check: Shear Force	-4347 kip		Negative
Design Check: Horizontal Moment	0.00 kip-ft		
Design Check: Flexural Moment	4.24 kip-ft		

Design Check	Value	Limit	Status
Design Check: Required compressive strength	9.330 kip		
Design Check: Effective member length	2.200 ft		
Design Check: Yield stress	50.000 ksi		
Design Check: Modulus of elasticity	29898.000 ksi		
Design Check: Shear modulus	11153.000 ksi		
Design Check: Gross area of section	17.100 sq-ft		
Design Check: Moment of inertia	225.000 sq-ft ²		
Design Check: Moment of inertia	75.100 sq-ft ²		
Design Check: Torsion constant	118.000 sq-ft		
Design Check: Elastic buckling stress	3.330 ksi		
Design Check: Critical stress	44.402 ksi	44.402 ksi	OK
Design Check: Nominal compressive strength	759.267 kip		
Design Check: Resistance factor for compression	0.90	1.0	

Design check ratio: $\kappa = 0.894$ -> $\kappa < 1$ -> AISC 360-16, E4

Design formulas:

$$F_c = \left(\frac{P}{A_g} + \frac{C}{S_x} \right) \frac{1}{\sqrt{1 + \left(\frac{P}{A_g} + \frac{C}{S_x} \right)^2}}$$

$$F_c = \left(\frac{0.894 F_c}{A_g} \right) F_c$$

$$F_c = \left(\frac{0.894 \cdot 759.267 \text{ kip}}{17.100 \text{ sq-ft}} \right) \cdot 759.267 \text{ kip}$$

$$F_c = 44.402 \text{ ksi}$$

$$F_c = F_y \cdot \kappa = 50.000 \text{ ksi} \cdot 0.894 = 44.700 \text{ ksi}$$

$$F_c = 44.402 < 44.700 \text{ ksi}$$

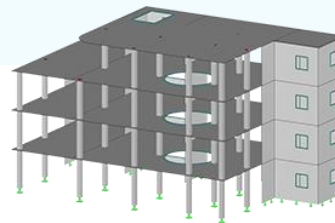
Legend:

- F_c : Elastic buckling stress
- C : Modulus of elasticity
- C : Slipping constant
- L_{eff} : Effective member length
- S_x : Shear modulus
- J : Torsion constant
- I_y : Moment of inertia
- V : Moment of inertia
- F_y : Yield stress
- F_c : Critical stress
- F_n : Nominal compressive strength
- A_g : Gross area of section
- P : Required compressive strength
- κ : Resistance factor for compression

➔ [More New Features in RFEM 6](#)

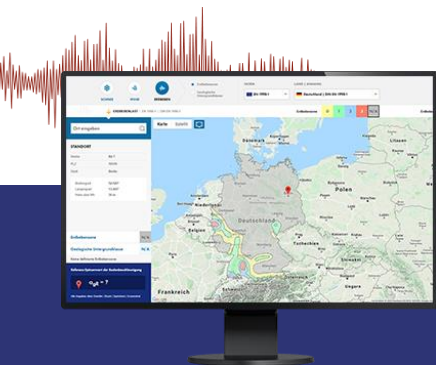


Free Online Services



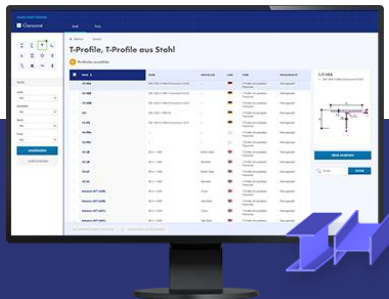
Geo-Zone Tool

Dlubal Software provides an online tool with snow, wind and seismic zone maps.



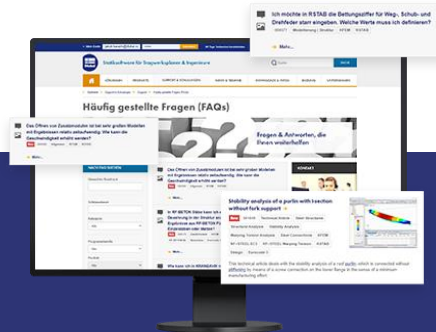
Cross-Section Properties

With this free online tool, you can select standardized sections from an extensive section library, define parametrized cross-sections and calculate its cross-section properties.



FAQs & Knowledge Base

Access frequently asked questions commonly submitted to our customer support team and view helpful tips and tricks articles to improve your work.



Models to Download

Download numerous example files here that will help you to get started and become familiar with the Dlubal programs.





Free Online Services

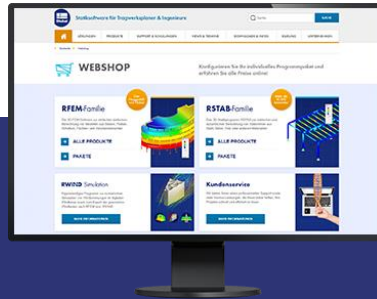
Youtube Channel - Webinars, Videos

Videos and webinars about the structural engineering software.



Webshop with Prices

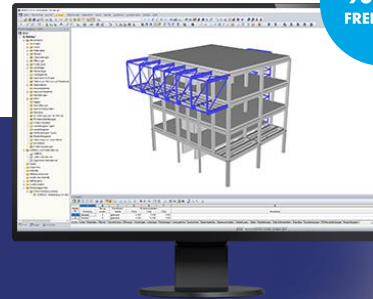
Configure your individual program package and get all prices online!



Trial Licenses

The best way how to learn using our programs is to simply test them for yourself. Download a 90-day free trial version of our structural analysis & design software.

90-DAY
FREE TRIAL



— Dlubal Software Information



Visit website

www.dlubal.com

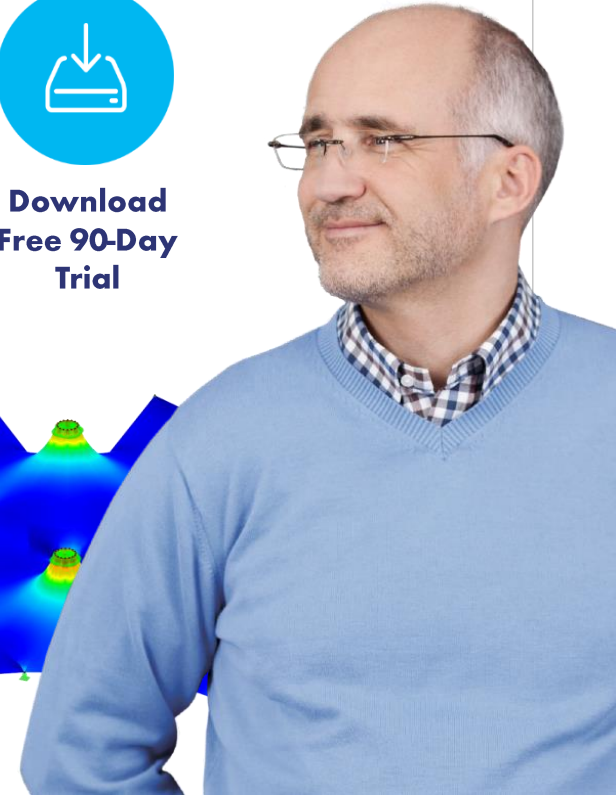
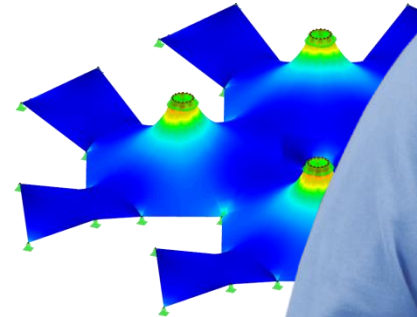
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Dlubal Software, Inc.

The Graham Building, 30 South 15th Street,
15th Floor, Philadelphia, PA 19102

Phone: (267) 702-2815
E-mail: info-us@dlubal.com



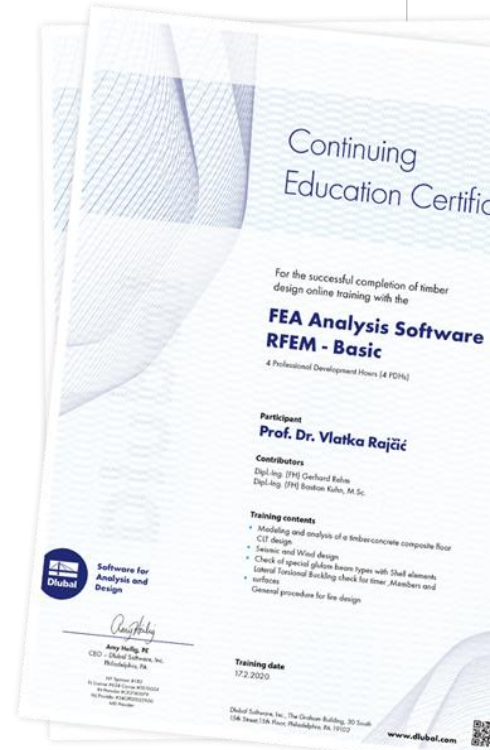
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