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UPDATE-NEWS RELEASE 2021-2

UPDATE-NEWS 2021-2

This summary contains the most important new features in the 2021-2 release.

You can find the update news for older releases under www.frilo.eu

- Service
- Download + Demo
- Update-News

Further notes and information

- Update information
- Notes on the relet Verview: the most important update information
- System requirements
- FRILO Software: installation and configuration
- License Manager installing a new license
- Project administration in the network
- Basic operating instructions

Update information on the individual programs

The detailed update information for each individual program can be found on our homepage www.frilo.eu

Products

GEO	Building Model	<u>Info</u>	Documents	- <u>UpdateInfo</u>
► GEO-EB	GEO Earthquake analysis			 <u>Manual</u> Graphical input
► GEO-HL	GEO Horizontal Loads			+
► GEO-ME	GEO Mass Calculation			-

Update	info in	FRILO.	Control	Center
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If the release is already installed, you will find the update information in the FRILO.Control.Center under the tab "Programs": simply click with the right mouse button on the respective program and then on "Info".

Programs									
Program	Shortn	Version	Date	License					
Timber Construction									
FUH Trusses Timber		02/21	17.05.2021	02/21					
FUT Trusses Timber/St	Open	01/18	17.05.2021	01/18					
HW Mechanically Joint	Favorites	02/21	17.05.2021	02/21					
H01 Timber Column	Info	02/21	17.05.2021	02/21					
🚻 Skew Notch Joint		02/21	17.05.2021	02/21					
H03 Timber Tension Jo	Documentation ら	02/21	17.05.2021	02/21					
Hop rrame Corner	Properties	01/21	17.05.2021	01/21					
H07 Timber Beam	107	02/19	17.05.2021	02/19					
1011 Timber Design	HO11+	02/21	17.05.2021	02/21					
H012 Timber Construction Deta	ils HO12	02/20	17.05.2021	02/20					

Webinars / online event for the 2021-2 release

The new release will also be presented in an online event on the 20th of May 2021.

See www.campus.frilo.eu (site in german language) We will make a recording of the event available under

▶ Service ▶ Video clips ▶ Webinars.



GENERAL UPDATE INFORMATION

This section shows the most important innovations and new functions of individual programs.

- Soil Settlement SBR+
- BIM-Connector® FBC
- FRILO.Document.Designer
- Building Model
- Eurocodes and further innovations

Soil Settlement SBR+

Extensive enhancements

With the implementation of drilling profiles, polygonal, interpolated soil layer courses and terrain courses can now be defined. Excavation areas for calculating uplifts due to excavation relief are also new. Furthermore, interfaces to the foundation programs and the Building Model have been implemented. This means that all information required for the settlement calculation can be forwarded to SBR+. In this way it is possible to create a holistic calculation model for settlement calculation at any point under the influence of several foundations, foundation loads and additional surface or existing loads - see figure on the right.

FRILO BIM-Connector® FBC

BIM-Connector® positions can now also be managed in the Frilo.Control.Center. Numerous functions for processing the components have been added or improved. The program interface is now also available in English. A practical step-by-step guide is available for the Allplan or Vectorworks/BIM Connector workflow.

FRILO.Document.Designer FDD

The FRILO.Document.Designer FDD now shines with a new viewer, whereby the display of larger items is much faster. Side effect: you can now scroll through the document much more smoothly.





SBR+: Polygonal strata with drilling profiles and excavation areas for calculating uplift

Building Model GEO

The Austrian earthquake norm ÖNORM B 1998-1:2017 was added to the Building Model. In addition, a punching shear check is now available for wall corners and ends with a simplified load estimate - see figure on the right. The thickness ranges have been expanded to include the option of choosing a different concrete quality for individual areas of the ceiling.

The interface to the SBR+ program is also new, with the transfer of all necessary information for the settlement calculation.



GEO: Interface to SBR+

Framework RSX

The definition of area loads and the subsequent distribution to the adjacent bars has been improved. Further improvements have been implemented in the area of dynamic calculation, reinforced concrete design and the presentation of results. In addition, the help has been significantly expanded and can now be called up in a context-related manner (F1 key).

Continuous Beam Timber HTM+

Laminated Veneer Lumber LVL-C and LVL-P are now also available.

Analyse on p	Analyse on punching shear W1.3+W1.4 (Head) / Erdgeschoss 🛛 🗙							
Transfer data to the design program B6+								
→ Tj	/pe of slab:	Ceiling slab						
→ ту	rpe of colum	○ Wall corner (inside) Wall end (inside)						
→ Fe	eed length:	25,1 cm	(Wall section)					
→ Sh	ear Force:	19,62 kN	•1					
		ОК	Cancel					

GEO: Selection of wall corners and ends for the punching shear analysis



RSX: Loads on panels are converted more precisely

Material		0	
Preselection	Wood-based materials		
Timber	Laminated Veneer Lumber	•	
Strength class	LVL 22 C		
Service class	LVL 22 C	-4	
Lamella direction	LVL 25 C LVL 32 C		
Density Y	LVL 32 P LVL 35 P LVL 36 C		
	LVL 48 P LVL 50 P LVL 70 C LVL 75 C		

HTM+: Selection of laminated veneer lumber

Steel construction

In the programs Portal Frame S7+, Steel Frame STR+ and Frame Corner Steel SRE+ it is now possible to choose different steel grades for columns and transoms. SRE+ allows now systems rotated by 90° (beam position above the column).

Properties		?	×				
Material							
in the assemblies	Beam/column different						
Material in beam/o	identical Beam/column different		6				
Туре	differently						
Grade	S235		-				
Characteristic values			1				
Material in the supports							
Туре	Structural steel		-				
Grade	S235		-				
Characteristic values			2				



SRE+: Selection of the type of connection

Selection of different steel grades

Eurocode masonry programs

The updated DIN EN 1996:2019 is now available in all masonry programs.

Poland: Eurocode and localization

The Polish Eurocode with associated load standards has been implemented in various programs for reinforced concrete, foundation engineering and timber design. The program interfaces have also been localized.



MWX+: Selection of the current standard DIN EN 1996_2019

NEW PROGRAMS

At this point we provide an overview of the new programs that have been added to the FRILO portfolio as of this release.

- Cross laminated timber beams HTB+
- Hip/Valley Rafter Roof-GK
- Toolbox Frame Corner Reinforced Concrete TB-BRP
- App StaticsToGo

Cross laminated timber beams HTB+

A completely new development is the HTB+ program for calculating timber beams made of cross laminated timber using the shear analogy method.

Possible applications

The program measures cross-laminated timber elements that are stressed in terms of panels. The cross laminated timber con-sists of at least three layers of sawn timber glued together at right angles. The dimensioning takes place uniaxially and is ideal-ized by a 1-meter strip and viewed as a beam.

System

- Single-span beams
- Multi-span beams
- Cantilever arms

Vertical loading

- Constant line load
- Point load
- Trapezoidal load

Cross-sections

Any material made from soft-wood or special material param-eters from approvals for cross laminated timber can be entered as user-defined values.

- Individual layer structure (num-ber of layers, layer thickness, lay-er orientation length-ways/crossways).
- Optional forcing a symmetrical structure in the input

Design

The cross-laminated timber slab is regarded as a uniaxially tensioned beam element.

The design is carried out using the shear analogue method - so the static systems and the loads are not subject to the restrictions of the gamma method.

In the ultimate limit state of the load-bearing capacity, both the situation and the situation in the event of a fire are considered per-manently/temporarily. The normal stress, the shear stress from shear force and the rolling shear stress are verified in each case.

The design in the event of fire is based on the staircase model and, if necessary, considers sloping layers. In addition, the serviceability limit state is examined.

Hip and Valley Rafters Roof-GK

As the successor to the previous DGK Hip and Valley Rafter program, this module was newly developed as a licensable option for our PLUS solution Roof+.

The verification of hip rafters and optionally valley rafters is possible in the following variants:

- Single-span beam
- Multi-span beam

HTB 🗋 🔛 🐖 🖛			HTB+-001	I_PD (Project: Localisatio	n) - HTB+ Cross Lam	inated Timber Beams 02/2	21 (R-2021-2)			- 🗆	×
File Start R	esults									0	? Help *
Basic System Loading parameter	Design Search	late Design A	(옥슈 * A ⁻ A) Doc	Current Coutput and layouts	Save and back FRILO Software						~
Properties Basic parameter		Graphics	Document								
System Loading Design Output	ų,	BIN EN 199. Eigengewich Gleiches Ma Material: So	t wird nicht ber terial aktiviert ftwood C24	ücksichtigt							
Grundparameter		3									
Bemessungsnom	DIN EN 1995:2013	•									
Nutzungsklasse	1	•									
Lastfaktor für Schnee (A)	2.	0		\downarrow \downarrow \downarrow \downarrow		0	,50		\downarrow \downarrow \downarrow \downarrow \downarrow		
Gemitteltes kmod für Wind							0,5				
Ψ2 für Kranlasten	0.	0					*				
Standort in Windzone3 oder 4]		030	* * * *		+ + +		1,00		
gleiches γG für ständige Lasten				(0,50)				 			
Bemerkungen											
Globale Materialauswahl		8	0.50			6	00		4	0.50	
Alle Schichten gleiches Material?		≤	0,00	1			,00			0,00	
Timber	Softwood	-	1			<i>I</i> ,	,00				
Material code	EN 338:2016	•									
Depeity v	C24	•									
	[rom]			100	C 00			Ausnutzung Tragfähigkeit Gebrauchstau	- Querschnitt		1396
								Gebrauchstau	glichkeit - Verform	ung	61%
		Felder	Schichten	Loads							×

Fig.: HTB+ cross laminated timber beam

- Cantilever arms up/down
- Asymmetrical loading areas
- Load collection areas independent of the storage
- Floor plans deviating from 90°.

Toolbox module for calculating frame corners in reinforced concrete

Neu in unserem Toolboxportfolio ist die "Rahmenecke mit positivem Moment TB-BRP". Sie ermöglicht die Berechnung von Verankerungs- und Übergreifungslängen bei Stahlbetonrahmenecken mit öffnendem Moment – Abb. rechts unten.

StaticsToGo app now for Android and iOS

The StaticsToGo app is now available for Android as well as a current iOS version for iPhones and iPads. For both systems there is a free basic version as well as a pro version with an extended range of functions.







Fig.: TB-BRP Frame Corner with positiv moment.



You can find dates, webinars and online training courses on our FRILO campus www.campus.frilo.eu



FRILO Software GmbH Stuttgarter Straße 40 70469 Stuttgart Tel: +49 711 81 00 20 Fax: +49 711 81 00 230 www.frilo.eu info@frilo.eu





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