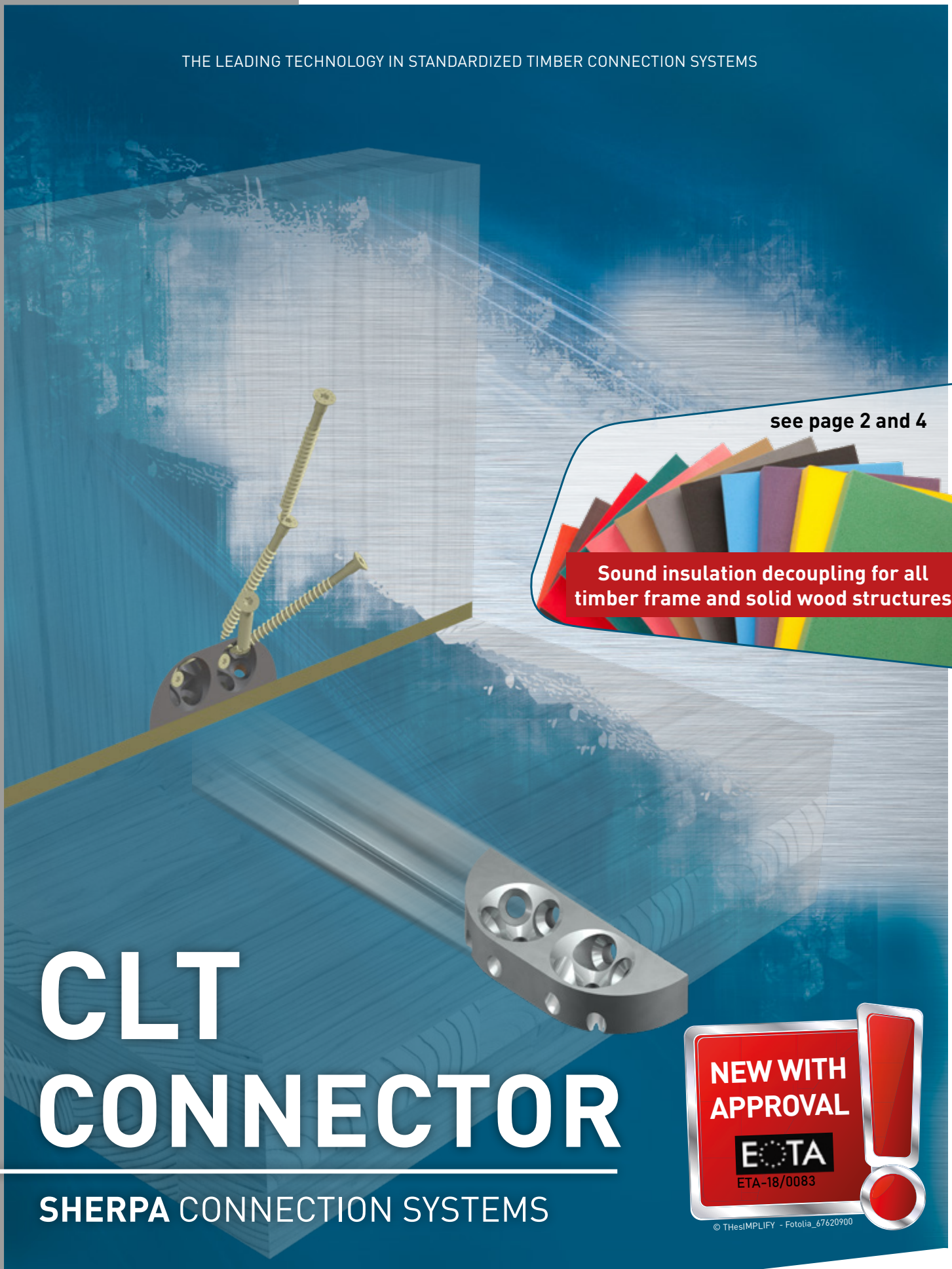
THE LEADING TECHNOLOGY IN STANDARDIZED TIMBER CONNECTION SYSTEMS



see page 2 and 4

Sound insulation decoupling for all timber frame and solid wood structures

CLT CONNECTOR

SHERPA CONNECTION SYSTEMS

NEW WITH APPROVAL

ETA
ETA-18/0083

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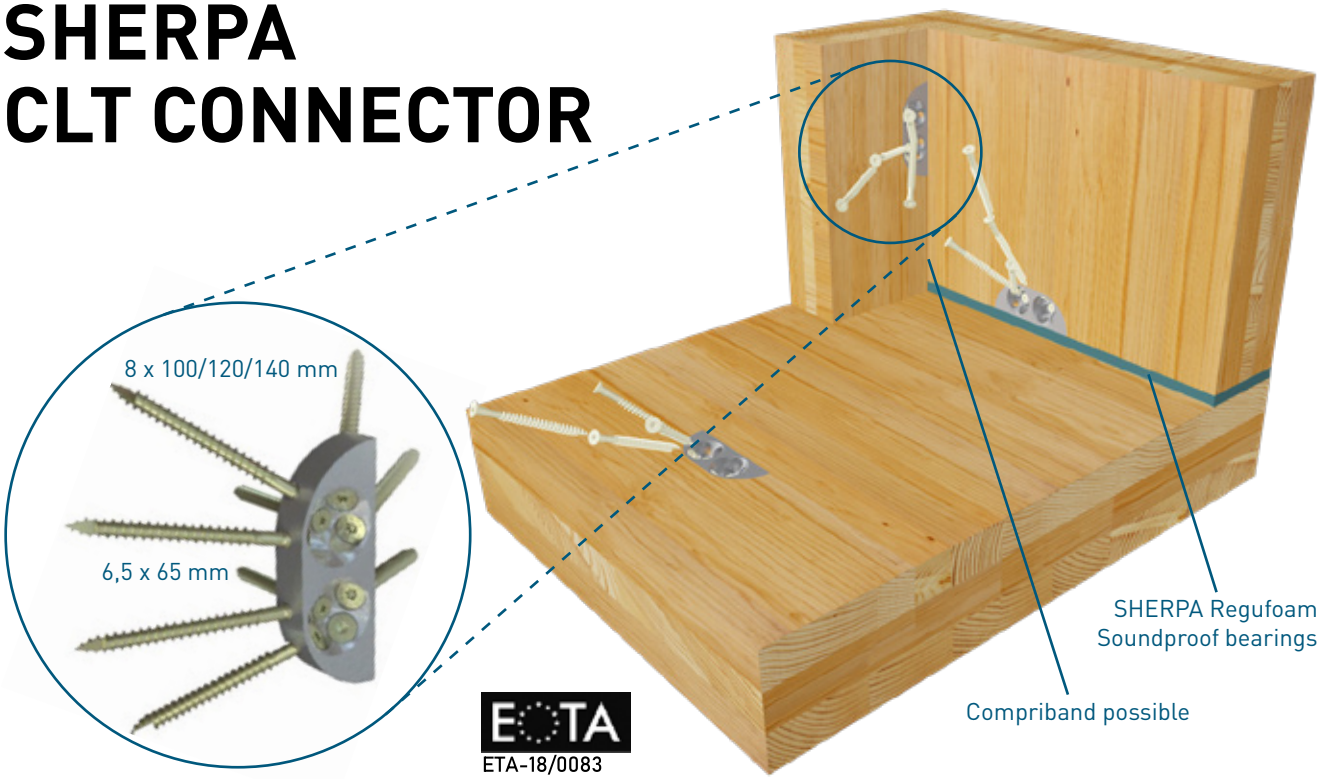
- Leading worldwide system connector for laminated timber boards
- Rapid and simple assembly
- Optimised static calculation

SHERPA®

SHERPA
CLT CONNECTOR



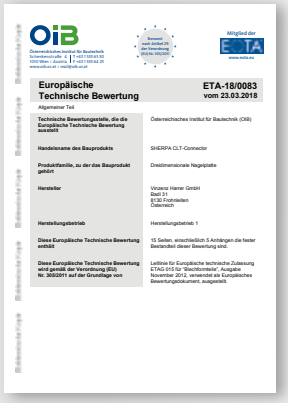
ETA-18/0083

ADVANTAGES

- Multifunctional in strength and use
- Quality reliability through the system
- Can be combined with sound-proofing
- Pre-assembled for optimal assembly
- Complete element screwing from the inside

CONNECTOR REQUIREMENT PER CONNECTION

Wall - Wall	1 - 2 pcs. / lfm
Ceiling - Wall	2 - 3 pcs. / lfm
Ceiling - Ceiling	2 - 3 pcs. / lfm



Europäische Technische Bewertung ETA-18/0083 vom 23.03.2018

Allgemeiner Teil

Technische Bewertungsstelle, die die Europäische Technische Bewertung ausstellt: Österreichisches Institut für Bautechnik (OIB)

Handelsname des Bauprodukts: SHERPA CLT-Connector

Produktfamilie, zu der das Bauprodukt gehört: Dreidimensionale Nagelplatte

Hersteller: Vincenz Horner GmbH Bad 31 6130 Schwaz/Inntalen Österreich

Herstellungsbetrieb: Herstellungsbetrieb 1

Diese Europäische Technische Bewertung enthält: 15 Seiten, einschließlich 5 Anhängen die fester Bestandteil dieser Bewertung sind.

Diese Europäische Technische Bewertung wird gemäß der Verordnung (EU) Nr. 305/2011 auf der Grundlage von: Leitlinie für Europäische technische Zulassung ETAG 015 für "Dreidimensionale Nagelplatten", Ausgabe November 2013, verwendet als Europäisches Bewertungsdokument, ausgestellt.

ETA-18/0083

"The SHERPA CLT connector - the only system connector in the laminated timber board field – now benefits from an assessment called ETA-18/0083. The ETA assessment is widely-accepted evidence of the technical serviceability of a construction product, as outlined in the Construction Products Regulation. With the first standardised connector for BSP plates and wood frame walls assembly and application in timber construction is significantly facilitated."

You can download the full approval at any time from the downloads page on our website: **www.sherpa-connector.com**

TECHNICAL SUPPORT

Whether per e-mail, phone or videoconference - SHERPA users are welcome to contact our experienced support team consisting of civil engineers and practitioners at any time.
Support ranges from simply inquiries to select the appropriate connector to on-site trainings and talks with inspection engineers within large-scale projects.

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office@sherpa-connector.com

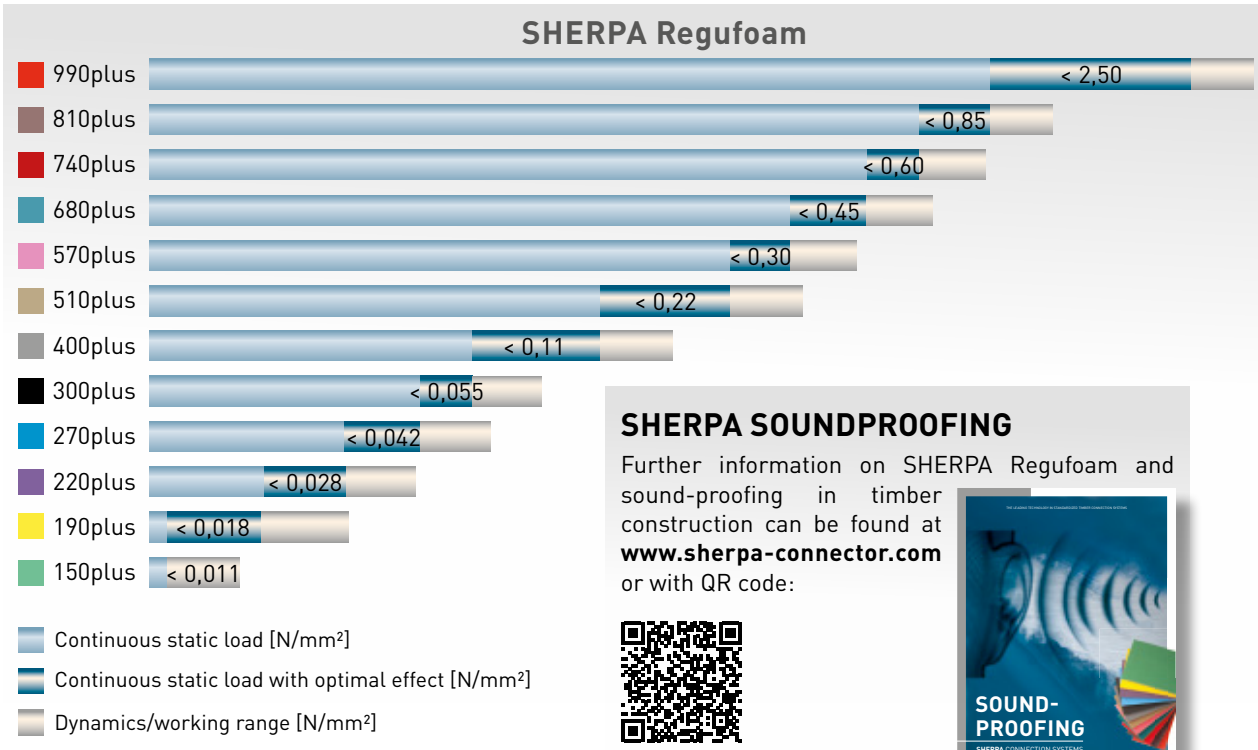
SOUNDPROOFING WITH SHERPA REGUFOAM

SHERPA Regufoam expands the SHERPA product range with sound-proofing decoupling bearings for solid wood (BSP plates) and wood frame construction.

New in the SHERPA range

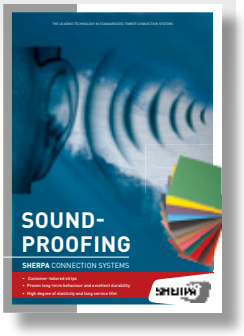
DESCRIPTION OF MATERIAL

Regufoam is a waterproof, rot-proof and mixed cellular polyurethane foam produced in twelve different strength levels. These various degrees of hardness are distinguished by colour. At the standard thicknesses of 12.5 and 25 mm a wide range of bearing frequencies can be achieved up to 8 Hertz.



SHERPA SOUNDPROOFING

Further information on SHERPA Regufoam and sound-proofing in timber construction can be found at **www.sherpa-connector.com** or with QR code:



The loads accepted revolve around a sample object. Every construction plan should be preceded by computation by a building physicist/statistician!

THE ADVANTAGES ARE CLEAR:

- Fast delivery
- Time and cost savings on the construction site
- Optimised & cut to your specifications
- High degree of elasticity and long service life
- Area of static application from 0.011 to 2.50 N/mm², dynamic application area up to 3.5 N/mm²
- Minimal amplitude dependence
- Proven long-term behaviour and excellent durability

The first 5-storey wooden construction in Styria was completed in July 2015 in Peter-Rosegger-Strasse in Graz.
Sound-proofing is an important point, especially in projects where business and office premises impact residential areas.

In cooperation with architects Nussmüller, Kulmer Holz-Leimbau, Aktiv Klimahaus and other partners.

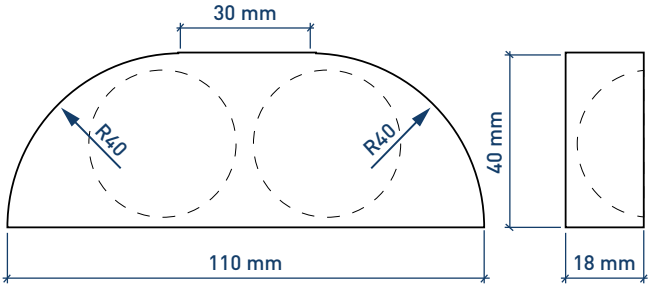
The SHERPA CLT connector is a coupling element for angle joints, t-joints and longitudinal joints, wall to ceiling connections, as well as ceiling joints.

Optimised for three-layer and five-layer cross-laminated timber elements, the SHERPA CLT connector can be mounted flush in solid wood or glulam already in the preinstallation phase, enabling ready-for-installation delivery to the construction site.

The CLT connector must be milled flush into cross laminated timber or glulam. The load capacity according to ETA can only be guaranteed when using SHERPA special screws.

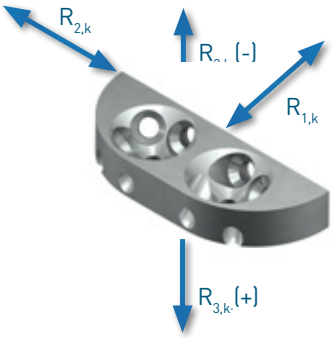
GEOMETRY

CLT connector	
Dimensions	18 x 40 x 110 mm
Connecting material	8 pcs. 8,0 x 100 /120 / 140 mm 2 pcs. 6,5 x 65 mm

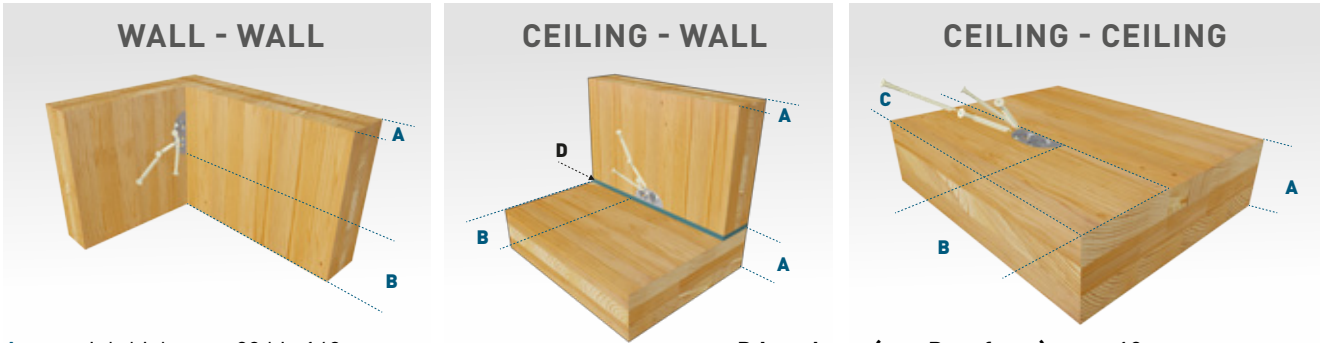


TECHNICAL DATA

Configuration			Characteristic value [1]		
			Interlayer ≤ 12 mm	Compriband ≤ 2 mm	
Normal forces	Carrying capability	$R_{1,k}$	18,80 [2]		kN
	Stiffness	K_{ser}	9.750		N/mm
Shear force on the surface	Carrying capability	$R_{2,k}$	10,00 [2]		kN
	Stiffness	K_{ser}	3.300		N/mm
Shear force from the surface (positive)	Carrying capability	$R_{3,k}$(+)	16,00 [2]	16,50 [2]	kN
	Stiffness	K_{ser}	3.600		N/mm
Shear force from the surface (negative)	Carrying capability	$R_{3,k}$(-)	5,30	7,00	kN
	Stiffness	K_{ser}	870	1.000	N/mm



[1] ETA 18/0083
[2] screw l = 120 mm: ns = 1,22 screw l = 140 mm: ns = 1,44 $R'_k = n_s \cdot R_k$



A material thickness: 80 bis 160 mm;
> 120 mm: flush milling or install both-sided

B edge distance: min. 250 mm

C min. 100 mm

D Interlayer (e.g. Regufoam): max. 12 mm
Compression hardness: min. 0,2 N/mm²
Static elasticity modulus: min. 1,0 N/mm²

INSTALLATION INSTRUCTIONS

- Milling: 18 mm into solid wood or glulam
- Max. distance between the CLT connectors: e_{max} = 2 m
- 2 pcs. special screws 6.5 x 65
- 4 pcs. special screws 8.0 x 100 / 120 / 140 (fix to solid wood / glulam)
- 4 pcs. special screws 8.0 x 100 / 120 / 140 (mount on the second element)

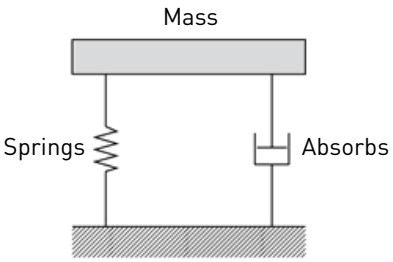
RECOMMENDED SCREW TORQUE

SHERPA SPECIAL SCREWS

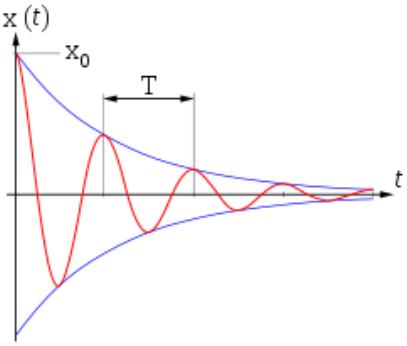
6,5 x 65 mm .....M_T = 2,5 Nm
8,0 x 100 mm .....M_T = 5,0 Nm
Min.: screw head must be in contact with counter sink

SOUNDPROOFING WITH SHERPA REGUFOAM

Regufoam soundproof bearings reduce vibrations (air, body and footfall sound) effectively, increase building value and improve working and living quality in the house.



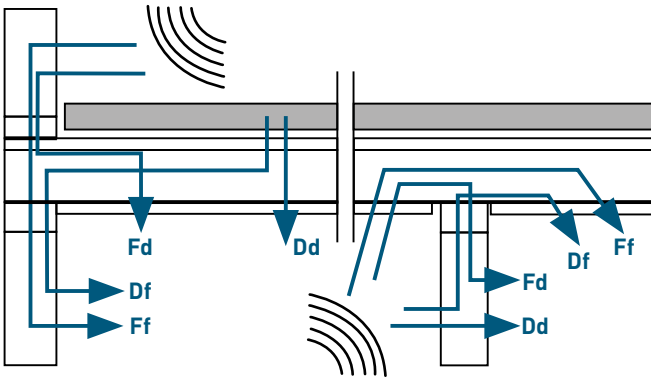
If a mass is thrown out of its equilibrium position by a short-term external force, it begins to vibrate with the natural frequency of f_0.



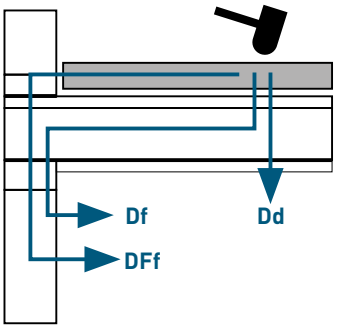
Reduction of these vibrations depends on absorption in the springs.
In Regufoam materials this absorption is described in terms of **mechanical loss factor**.
Irrespective of its type Regufoam has a loss factor of **between n = 0.09 and n = 0.28**.

CALCULATION PROCESS

Acoustic excitation



Footfall noise stimulation



Fixing with
SHERPA CLT connector

authorized retailer

THE ADVANTAGES ARE CLEAR:

- SAFETY THROUGH AN APPROVED SYSTEM
- MULTIFUNCTIONAL IN STRENGTH AND USE
- STANDARDIZED AND SIMPLE EVALUATION
- A HIGH DEGREE OF PRE-FABRICATION
- QUICK ASSEMBLY

CLT & Regufoam_EN_051018

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