

Steel Connect W

Vertical connector for flexural reinforcement of wooden floors.

Steel Connect W ensures the connection of the existing wooden floor slab to the new floor slab, guaranteeing the correct transfer of seismic actions and implementing flexural strength and rigidity.



1. Dry installation without bore pilot
2. High rigidity and shear strength
3. Certified fastening with Geolite FRC systems
4. Protective galvanization
5. Intervention with reduced thicknesses

Areas of application

→ Intended use:

- Improvement and seismic upgrade of masonry and reinforced concrete structures
- Suitable for flexural strengthening and storey stiffening with Geolite FRC systems and traditional or lightweight concrete
- Connection of the existing wooden floor slab to the new floor slab in order to ensure the correct transfer of shear stresses
- CE-marked according to EAD 130090-00-0303 Wood Concrete composite slab with dowel-type fasteners

Instructions for use

→ Preparation of substrates

After propping up the floor slabs, remove any existing floors and screeds; clean the substrate removing any remaining dust, grease, oil and other contaminants using compressed air or a high pressure washer.

If installing/mounting on broken planks, perform a continuous cutting with a circular saw. Then place a breathable waterproof sheet on the extrados surface.

In the case of lightening by laying insulating panels, leave a space at least equal to the width of the wooden beam.

Mark the position of the connectors according to the design drawings.

→ Application

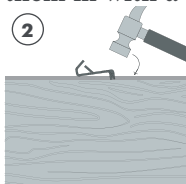
- ① Position the connectors with the raised part towards the perimeter walls and then the spurs towards the centre of the beam.

①



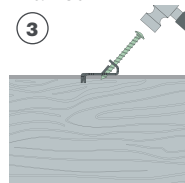
- ② Insert the spurs onto the substrate by driving them in with a mallet.

②



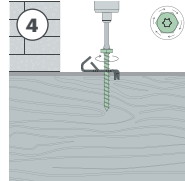
- ③ Insert the screws using an impact wrench or screwdriver with a torque of at least 55 Nm and TD-40 insert, after lightly driving them in with a mallet.

③



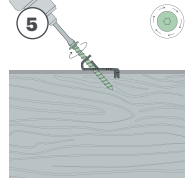
- ④ The first 25 cm along the walls are to be fitted with 90° screw connectors.

④



- ⑤ After the first 25 cm, 45° screw connectors are to be fitted.

⑤



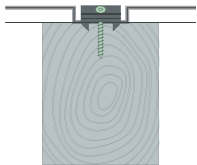
- ⑥ Completion of the flexural strengthening by extrados application of composite-action casting of the Geolite FRC system: Geolite Magma Xenon & Steel Fiber.

⑥

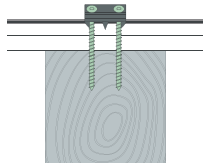


Instructions for use

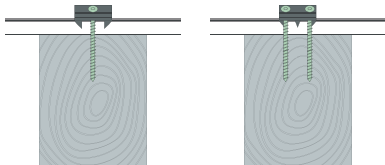
- Installation can be carried out:
- on beams, even on planks cut continuously, using Steel Connect W 45-100 and W 90-80



- on double planks using Steel Connect W 2x45-160 and W 2x90-120.



- on single planks using Steel Connect W 45-160 and W 90-120 or Steel Connect W 2x45-160 and W 2x90-120.



Abstract

Supply and installation of a vertical connection for extrados flexural strengthening of wooden floor slabs. Will be carried out by using the collaborating slab technique featuring a steel connector suitable for direct installation on beams or single or double planks, composed of a C-shaped plate with three crampons, 1 or 2 bores in the inclined edge of the plate and 1 or 2 bores in the base, for installation of either 45- or 90-degree inclined screws, such as Steel Connect W by Kerakoll.

Technical Data compliant with Kerakoll Quality Standard	
Material	Galvanized steel
Reaction to fire	class A1
Pack	50 pcs box

Performance			
Composite system			
	$F_{v,Rk}$ (N)	K_{ser} (kN/mm)	K_u (kN/mm)
Timber-FRC			
Absent boarding:			
- W 45-100	13.323	16,12	19,30
- W 90-80	11.267	6,46	4,48
25 mm boarding:			
- W 45-160	14.568	10,68	9,45
- W 90-120	9.496	1,83	1,63
- W 2x45-160	31.402	14,95	11,69
- W 2x90-120	19.805	4,04	2,26
2x25 mm boarding:			
- W 2x45-160	23.303	16,57	13,36
- W 2x90-120	13.558	2,90	2,15
Timber-concrete			
Absent boarding:			
- W 45-100	10.991	18,52	14,94
- W 90-80	13.022	10,00	3,63
25 mm boarding:			
- W 45-160	16.473	13,04	11,01
- W 90-120	10.914	2,01	1,38
- W 2x45-160	30.967	20,84	19,28
- W 2x90-120	20.627	3,39	2,38
2x25 mm boarding:			
- W 2x45-160	20.104	21,77	24,58
- W 2x90-120	15.715	3,48	3,02

Warning

- Product for professional use

→ abide by any standards and national regulations

→ when handling the material wear protective clothing and goggles, and follow the instructions regarding methods for applying the material

→ store the material under cover in a dry place, well away from substances that might damage it
- the product is an item according to the definitions of the EC Regulation No. 1907/2006 and therefore does not require a Safety Data Sheet

→ for any other issues, contact Kerakoll Technical Customer Service: + 39 0536.811.516 www.kerakoll.com/contatti



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