

# Steel Connect R

Steel washer designed for creating connections in dry anti-collapse prevention interventions.

Combined with Steel Connect C6 or Steel Connect S5 steel screws, Steel Connect R ensures the fastening of Glass Net fibreglass meshes to the floor slabs for dry anti-collapse prevention systems.



1. Compatible with concrete and steel screws
2. High level of durability
3. Easy to install

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## Areas of application

### → Intended use:

- Dry anti-collapse prevention system for brick and cement floor slabs in combination with Steel Connect C6 steel screws and GFRP meshes from the Glass Net range

- Dry anti-collapse prevention system for floor slabs with I-beams and hollow bricks in combination with Steel Connect S5 steel screws and GFRP meshes from the Glass Net range

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## Instructions for use

### → Preparation

The Steel Connect R washer is ready to use. It is suitable for any length of Steel Connect C6 steel screws and for Steel Connect S5 screws.

### → Preparation of substrates

Proceed with the removal of any damaged plasters/renders and damaged portions of brick courses.

In case of brick and cement floor slabs, the designer will assess whether it is possible to carry out volumetric reconstruction or strengthening of damaged concrete beams using Geolite thixotropic mineral geo-mortar as indicated in the respective product technical sheets, by means of:

- Geosteel SRG systems (Geosteel steel meshes combined with Geolite thixotropic inorganic matrix)
- Geosteel SRP systems (Geosteel steel meshes combined with Geolite Gel thixotropic organic matrix)

### → Application

#### 1. Brick and cement floor slabs

- After preparing the substrate, use a roto-percussion drill to drill 5 mm-bores in the beams, with a depth 5 mm greater than the length of the chosen screw, for the subsequent installation of Steel Connect R in combination with Steel Connect C6. The quantity and spacing of the connectors should be as indicated by a qualified technician; it is recommended to use at least 4 connectors per m<sup>2</sup>.
- Position the Glass Net fibreglass mesh on the intrados of the floor, perpendicular to the reinforced concrete beams; install the dry mechanical anchoring using a drill screwdriver made by inserting the Steel Connect C6 steel screw into the appropriate Steel Connect R washer and fixing the connection system to the floor slabs. Ensure additional connections along the overlap area between adjacent meshes. Where it is not possible to create a direct connection on the concrete beams, bores can be drilled into the hollow floor blocks and the connection can be made by anchoring to the slab itself.

#### 2. Floor slabs with I-beams and hollow bricks

- After preparing the substrate, drill a 2 mm-diameter bore for the subsequent installation of Steel Connect R in combination with Steel Connect S5 screws. The quantity and spacing should be as indicated by a qualified technician; it is recommended to use at least 4 connectors per m<sup>2</sup>.
- Position the Glass Net fibreglass mesh on the intrados of the floor, in a direction orthogonal to the I-beams by inserting the Steel Connect S5 steel screw into the appropriate Steel Connect R washer and fixing the connection system to the floor slabs. Ensure additional connections along the overlap area between adjacent meshes.

# Certificates and marks



## Abstract

Supply and installation of a dry anti-collapse prevention system for brick and concrete floor slabs, made with bi-directional FRP mesh consisting of AR fibreglass cords completely impregnated with thermosetting resin (total mass 315 g/m<sup>2</sup>) – such as the dry anti-collapse prevention system made with Glass Net 315 by Kerakoll. Characteristics of the mesh: mesh size 50x52 mm, nominal cross-sectional area 8.33 mm<sup>2</sup> (weft) and 5 mm<sup>2</sup> (warp), typical tensile strength 486.11 MPa (weft) and 567.98 MPa (warp), typical ultimate strain 2.05% (weft) and 1.88% (warp), typical tensile elastic modulus 24.67 GPa (weft) and 28.78 GPa (warp), typical knot shear strength 0.62 (weft) and 0.84 kN (warp). The connections to the floor slabs are made using 4 elements per m<sup>2</sup>, by means of a dry connection made with self-tapping steel screws for concrete with a hardened thread surface and anti-corrosion coating, CE-certified, with an external diameter of 6.1 mm and a length of 75 mm – such as Steel Connect C6-75 by Kerakoll. Technical characteristics of the connector: installation depth > 30 mm in a 5 mm-diameter pre-drilled bore and depth > 35 mm. Typical pull-out resistance 2.24 kN. The procedure will be conducted as follows: eventual preparation of the surfaces to be strengthened by complete removal of damaged plasters/renders, old paint layers and any already damaged or about to be damaged pieces of brick; possible repair and/or strengthening of damaged or damaged joists (to be accounted for separately); drilling of pilot bores (diameter: 5 mm) for the installation of the connectors; positioning of the mesh at the soffit of the floor slabs and dry anchoring using screws installed in the pre-drilled bores with appropriate washers; installation of appropriate perimeter anchoring (to be accounted for separately).

The quantification is calculated per unit area of surface covered including any overlaps.

### Technical Data compliant with Kerakoll Quality Standard

Material:	steel with Aluzinc covering
Total washer diameter	76 mm
Washer hole diameter	6,5 mm
Washer thickness	0,7 mm
Shelf life	unlimited
Pack	100 pcs box

## Warning

- 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](http://www.kerakoll.com/contatti)



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