REVOGRID - REVOGRID CORNER

EAD 340392-00-0104
ETA-25/0119

PRODUCT DESCRIPTION

REVOGRID is a preformed monolithic structural mesh made of GFRP (Glass Fibre Reinforced Polymer).
Consisting of pultruded glass fibre rods impregnated with epoxy resin, designed for the consolidation and structural reinforcement of buildings.
Its configuration makes it ideal for the CRM (Composite Reinforced Mortar) technique, which combines structural meshes and specific mortars to improve the stability and strength of masonry in both static and seismic conditions (Ref. ETA 25/0119).
In combination with REVOGRID CORNER and REVOGRID CONNECTOR-L, it guarantees perfect adhesion between the mortar and the wall substrate, ensuring uniform reinforcement.
This integrated system allows for a stronger, more ductile reinforced masonry capable of withstanding intense stresses, making it particularly suitable for seismic improvement and structural rehabilitation.
In addition to being a reference solution for the CRM reinforced plaster technique (Ref. European Technical Assessment (ETA) 25/0119), REVOGRID is also suitable as a traditional reinforcing mesh, effectively counteracting plastic or hydraulic shrinkage and reducing the risk of micro-cracking and detachment.
Its compatibility with both historical and modern materials, coupled with its durability and high mechanical performance, broadens the possibilities of its use.

PRODUCT APPLICATION

• Construction of CRM (Composite Reinforced Mortar) system in combination with angle brackets, connectors and structural plaster mortar
• Reinforcement of infrastructures to improve strength and durability without increasing weight
• Consolidation of traditional masonry to prevent fractures and collapsing
• Consolidation work on historic buildings, preserving original materials

• Reinforcement of slabs and floors to increase load-bearing capacity without increasing weight
• Seismic improvement to increase resistance to seismic or telluric stresses

ADVANTAGES

• High mechanical strength: ensures long-lasting, high-performance reinforcement
• Lightweight and easy to install: simplifies installation and reduces work times
• Compatibility with traditional materials: excellent adhesion with common mortar and masonry
• Chemical resistance: resistant to weathering and aggressive environments
• Electrical and magnetic isolation: prevents electromagnetic interference
• Bi-directional weaving: robust structure that distributes forces in both directions

PREPARATION AND APPLICATION

The preparation and installation data refer to normal environmental conditions (temperature +20°C; relative humidity 60%).

Preparing the surfaces

Before applying REVOGRID reinforcement mesh, the substrate must be carefully prepared.

The masonry must be clean and free of plaster, dust and loose materials.

Plasters must be removed with hand or mechanical tools until the solid underlying masonry is reached.

Any cavities or lesions must be repaired with specific Volteco mortars.

If necessary, use stone, brick or tuff similar to the original materials to fill in the gaps.

Remove dirt, dust and any processing residues that may affect the adhesion of the mortar to the substrate (possibly with a pressure washer).

Application

Proceed with the positioning of the REVOGRID mesh, making sure that it is placed halfway up the thickness of the plaster that has been installed.

The mesh must be installed precisely, ensuring that it is flat and stable on the surfaces.

To ensure structural continuity over the entire area, overlap the rolls of REVOGRID by at least 15 cm.

At edges and corners, use REVOGRID CORNER angular elements, paying particular attention to their correct alignment.

Having completed the positioning of the mesh and angular elements, identify the anchoring points for the REVOGRID CONNECTOR-L connectors.

At the identified points, drill the housing holes and thoroughly clean the cavities with a blower, removing any residue to ensure the effectiveness of the anchoring.

Next, install the connectors using BI FIX 300 chemical anchor, following the design instructions to achieve secure and compliant fixing.

After completing the installation of the connectors, proceed with the application of the plaster, respecting the thicknesses defined by the project.

During this phase, it is essential to avoid the formation of voids behind the mesh, ensuring accurate compaction to achieve a homogenous and continuous coating.

It is recommended to follow the technical specifications of the chosen mortar and to observe the recommended

thicknesses indicated in the relevant data sheets.




References available at www.volteco.com

PACKAGING AND STORAGE

REVOGRID is available in rolls of 48 m^2; height 1.60 m, length 30 m

REVOGRID CORNER is available in packs of 20; height 1.60 m and sides 25 cm each.

WARNINGS - IMPORTANT NOTES

Fill all of the gaps between mesh and wall thoroughly with mortar to ensure maximum compactness and adhesion.

PHYSICAL AND TECHNICAL SPECIFICATIONS

REVOGRID

Feature	Value	Standard

Format	1,60 x 30 m	-
Mesh dimension	66 x 66 mm	-
Bar diameter	3 mm	-
Weight	450 g/m²	-
Fibre type	Continuous filament glass fibre	-
Type of sizing	Epoxy resin	-
Weaving	Bi-directional	-
Tensile modulus, mean value (*)	40 GPa	EAD 340392-00-0104
Tensile strength, characteristic value (*)	730 Mpa	EAD 340392-00-0104
Mean tensile load per single bar (*)	5,8 KN	EAD 340392-00-0104
Mean tensile load per length unit (*)	87 KN/m	EAD 340392-00-0104
Strain at failure, characteristic value (*)	1,95%	EAD 340392-00-0104

(*) Minimum value between warp and weft

REVOGRID CORNER

Feature	Value	Standard
Format	1,60 x 0,25 x 0,25 m	-
Mesh dimension	66 x 66 mm	-
Bar diameter	3 mm	-
Profile weight	332 g	-
Fibre type	Continuous filament glass fibre	-
Type of sizing	Epoxy resin	-
Weaving	Bi-directional	-
Single strand nominal diameter (warp and weft)	3 mm	CNR-DT 203/2006
Mean tensile load per single bar (T)(warp and weft)	3,63 KN	EAD 340392-00-0104
Characteristic tensile load per single bar (T) (warp and weft)	3,02 KN	EAD 340392-00-0104
Mean tensile load per single bar (Fu,mc)	2,56 KN	EAD 340392-00-0104
Characteristic tensile load per single bar (Fu,mc)	2,13 KN	EAD 340392-00-0104

The quoted data are obtained in a laboratory at +20°C and 60% RH.

Product conforming to the provisions of the "Guideline for the identification, qualification and acceptance control of preformed mesh systems made of fibre-reinforced polymer matrix composite materials to be used for the structural consolidation of existing buildings using the CRM (Composite Reinforced Mortar) technique" referred to in Article 1 of the Decree of the President of the Superior Council of Public Works no. 292 of 29/05/2019.

REVOGRID and REVOGRID CORNER are components of the REVOGRID SYSTEM, a CRM (Composite Reinforced Mortar) system that is ETA 25/0119 certified and complies with the requirements of EAD 340392-00-0104.

WATCH VIDEOS AND INSIGHTS

Safety Data Sheets | Declaration of performance | Specifications | Technical diagrams and | EPD Declaration | YouTube Video

DOPs

SAFETY

Refer to the related Safety Data Sheet.

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LEGAL NOTES

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