REINFORCED PLASTER – CRM MASONRY SYSTEM

HELICAL CONNECTOR

Helical stainless steel bar for anchors, connections, and dry restitching in CRM systems and reinforced plasters

FIELDS OF APPLICATION

- Forming transverse connections for strengthening existing brick, tufa, and irregular stone masonry.
- Static and seismic improvement and upgrading to existing loadbearing masonry buildings.
- Creating connections for the **RUREGOLD CRM system** (Composite Reinforced Mortar) consisting of **G-MESH 400** or **G-MESH 490** alkali-resistant fibreglass meshes anrange of structural plaster mortars.
- Creating dry restitchings in loadbearing masonry.
- Creating dry anchors in loadbearing masonry and masonry with disconnected faces.

PROPERTIES AND ADVANTAGES OF THE SYSTEM

- The helical stainless steel bar is suitable for use with existing masonry, in any environmental conditions.
- High mechanical shear and tensile strength.
- Highly hardened and tempered stainless steel.
- Strongly compatible with masonry.
- Installation without the use of resins and/or grouting mortars.
- Also ideal for historic and monumental buildings.
- Reversible.
- Easy to install.
- Practical to use.

METHOD OF USE AND INSTALLATION - CRM SYSTEM

1. **After preparing the support (see technical data sheet** for meshes of type **G-MESH 400** and **G-MESH 490**), drill holes in the wall in the number and arrangement indicated by the designer and the Director of Works (on average 4/5 connections per square metre).
2. Using a **hammer drill** of the length and diameter required by the project, and **carefully assessing the characteristics of the existing support**, drill the hole into the wall. For **brick and tufa** walls **a 6 mm hole** is recommended, whilst for **stone supports an 8 mm hole** is recommended.
3. Using a **hammer drill** fitted with the specific **HELICAL GUIDE** adapter fitted to the mandrel using an SDS-Plus connection, in percussion mode (and possibly not rotating), insert the **HELICAL CONNECTOR** to the depth required by the project.
4. During insertion the **HELICAL CONNECTOR** creates an incision similar to a constant pitch thread, which enables it to be clamped to the support into which it is inserted.
5. The insertion phase can be interrupted and resumed later without affecting the final result.
6. In the case of a face-to-face installation, the **HELICAL CONNECTOR** should be long enough to make a 90° bend of about 10 cm on both sides and to wrap the **G-MESH GUSSET**.
7. In the case of a one-side-only installation system that does not pass all the way through the masonry, the **HELICAL CONNECTOR** should be long enough to make a 90 ° bend of about 10 cm and only wrap the **G-MESH GUSSET** from the side into which it was inserted.

TECHNICAL CHARACTERISTICS

Properties of HELICAL CONNECTOR	Highly hardened and tempered stainless steel.
Material density	7850 kg/m^3
Ultimate tensile strength	>16 kN
Ultimate shear strength	>8 kN
Young's modulus of elasticity of the bar	>160 GPa
Ultimate strain	0.56 %
Equivalent sectional area of the bar	14,9 mm
Nominal diameter	9 mm
Lengths	200, 400, 500, 600, 1000 mm
Packaging	Available in packs of 25 pcs. - per pc. upon request
Application temperature	From +5°C to +35°C
CE marking	BS EN 845-1: 2013, ANNEX ZA.1

WARNINGS

- The product must be kept dry and unopened, in its original packaging.
- The surface must be protected from weather.

For further technical information, contact Ruregold Technical Support on +39 02.48011962 – info@ruregold.it.

SPECIFICATION ITEM

Supply and installation of special highly hardened and tempered stainless steel element for transversal connection within loadbearing walls, type Ruregold **HELICAL CONNECTOR**, nominal diameter 9 mm.
In order to distribute the stress concentrations at the junctions in the connection system of Ruregold CRM (Composite Reinforced Mortar) strengthening, the helical connector is used in combination with Ruregold **G-MESH GUSSET** made from preformed 80x80 Ruregold **G-MESH 490** square mesh, equivalent weight 490 g/m^2; or preformed 80x120 mm Ruregold **G-MESH 400** rectangular mesh, equivalent weight 400 g/m^2; the Ruregold **G-MESH ANGLE** corner element; and Ruregold **MX-RW High Performance**, **MX-15 Plaster**, or **MX-CP Lime** structural mortars.
Installation is carried out dry using a pilot perforation and an appropriate **HELICAL GUIDE** adapter fitted to the mandrel using an SDS connection. The helical connector is ideal for consoldating and structurally strengthening existing brick, tufa, and irregular stone walls, and for making dry restitchings and anchors in masonry. Preparation of the surfaces and installation of the system must follow the manufacturer's instructions.

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RUREGOLD
INNOVATION & SAFETY FOR BUILDING

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