

MAC.RO. SYSTEM - STEELGRID HR

THE NEW ROCKFALL NETTING SYSTEM

The **STEELGRID** mesh is the new woven geocomposite made by interwoven steel wire and ropes inserted in place of the conventional selvedge wire, during hexagonal double twisted wire mesh production.

This product is especially useful for high strength simple re-vestment drapery applications and **for all challenges in rockfall protection**.

The **NEW STEELGRID HR** (high resistance) is provided with 8mm diameter straight steel ropes, inserted longitudinally in the woven mesh at a variable distance as per table 1:

TYPE	ELONGATION	NOMINAL LONGITUDINAL TENSILE STRENGTH
	%	(kN/m)
HR 30	Max 7	170
HR 50	Max 7	120
HR 100	Max 6	80

The steelgrid geocomposite is particularly suitable for rockfall protection as a drapery system for surface or soil veneer slope stability. It has the big advantage of connecting the longitudinal ropes to the top anchor rope: the weaving of the ropes inside the steel mesh increases the lining's strength, resulting in a more effective anchoring ability.

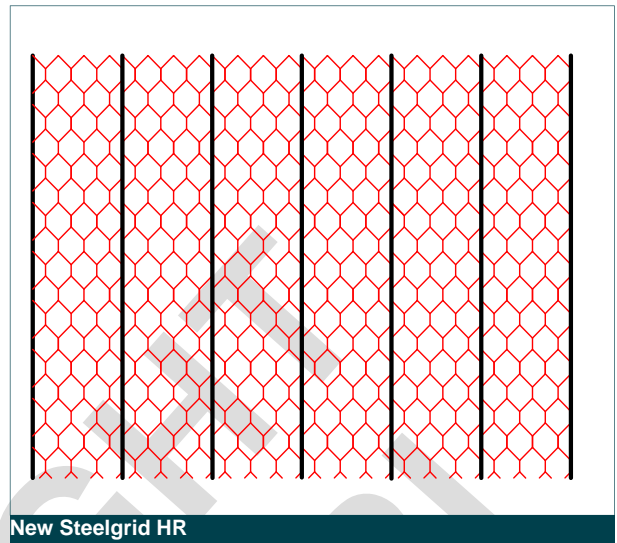
The steel wire used in the manufacture of the double twisted wire mesh, as well as the steel rope, is heavily galvanized with Galmac, a Zn-5%Al alloy.

The double twist prevents unraveling of the mesh should any accidental wire rupture occur.

Steel Wire for hexagonal wire mesh

All tests on wire must be performed prior to manufacturing the mesh.

- 1. Tensile strength:** the wire used for the manufacture of mesh shall have a tensile strength between 380-550N/mm² exceeding, in order to increase the tensile resistance of the finished products, what is suggested from EN 10223-3. Wire tolerances (Table 2) are in accordance with EN 10218 (Class T1).
- 2. Elongation:** Elongation shall not be less than 9%, exceeding, in order to increase the tensile resistance of the finished products, what is suggested from EN 10223-3 .
- 3. Galmac coating:** minimum quantities of Galmac shown at Table 2 meet the requirements of EN 10244-2 (Table 2 and Class A).
- 4. Adhesion of Galmac:** the adhesion of the Galmac coating to the wire shall be such that, when the wire is wrapped six turns around a mandrel having four times the diameter of the wire, it does not flake or crack when rubbing it with the bare fingers.



n° 226/001

Table 1 - Standard tipologies

NEW STEELGRID Type	Nominal width (m)	Nominal length (m)	Nominal longitudinal rope spacing (m)
HR 30	2.10/2.95	25 or 40	0.30
HR 50	2.25/3.15		0.50
HR 100	2.00/3.05		1.00

All sizes and dimensions are nominal. Tolerances of $\pm 3\%$ of the length, $\pm 5\%$ of the height, $\pm 8\%$ of rope spacing shall be permitted.

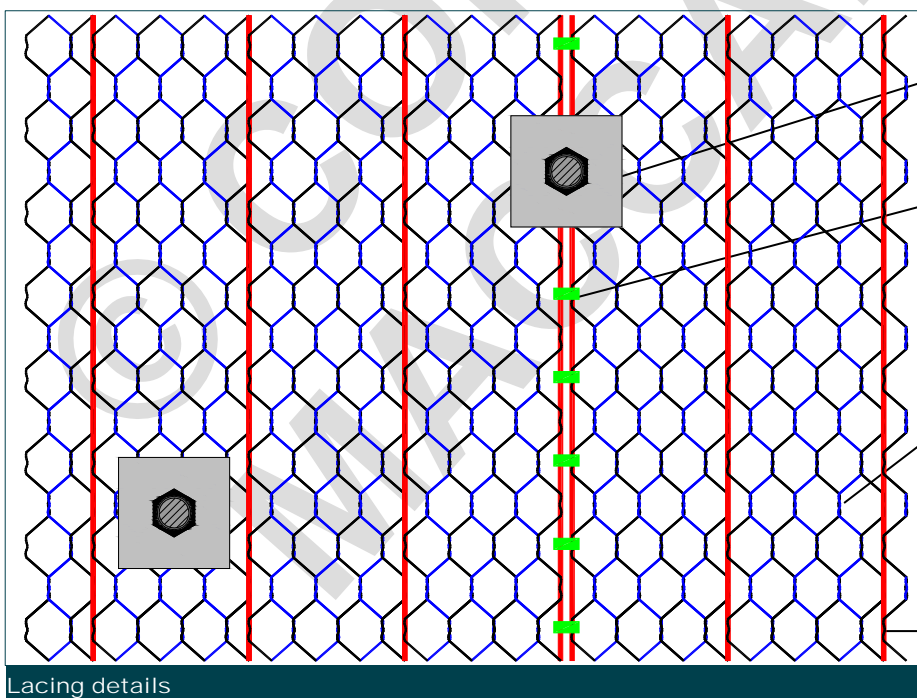
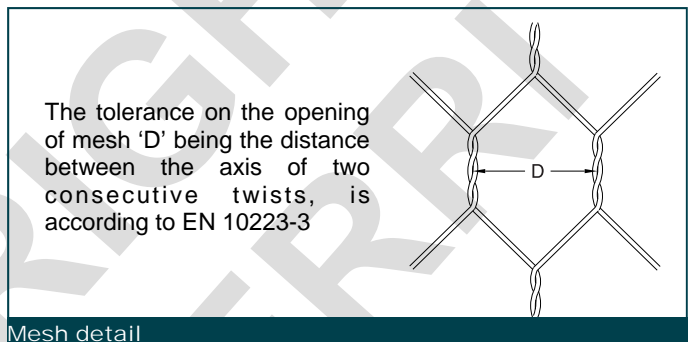
Steel Ropes:

Galmac coating	UNI EN 10264-2, (tab2 cl.B)
Diameter (mm)	$\varnothing = 8$
Steel Wire Ropes type 6x7+WC	EN 12385-4
Nominal Tensile Strength at breaking	1770 N/mm ²
Nominal breaking load of the rope	40.3 kN

Table 2 - Standard Mesh-Wire

Mesh Type	D (mm)	\varnothing Wire (mm)
8x10	80	2.70

Mesh wire	\varnothing mm	2.70
Wire tolerances	(\pm) \varnothing mm	0.06
Galmac minimum quantity	gr/m ²	245
Longitudinal Rope	\varnothing mm	8.00



ANCHORAGE PLATE

CONNECTION WITH LAPLINK

DOUBLE TWISTED WIRE MESH TYPE 8X10 DIAMETER 2.7 mm WITH GALMAC COATING (EN 10223-3, EN 10218, EN 10244 CLASS A)

STEEL WIRE ROPE WITH DIAMETER 8 mm

Lacing details

WARNING: Install the product in accordance with National Security Requirements! If the job is done with suspension or security ropes, personal protective equipment against fall risk must be connected with anchor points in agreement with EN 795.

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