TERRAMESH® SYSTEM
GALMAC & POLIMAC® COATED

Terramesh® System is a modular system used for soil reinforcement made of pre-assembled units fabricated with double twisted wire mesh 8x10 made of Galmac (Zn-Al5% alloy) and **PoliMac**® coated steel wire.
The facing section of the unit is formed by connecting the back panel and the diaphragm to the main unit, thus creating the rectangular shaped cells used for stone confinement.
Terramesh® System units are supplied in standard lengths, requiring no cuts on site.
The management and production system is certified in compliance with ISO 9001.
Dimensions, tolerances, and sizes are shown in Table 1.

Steel wire mesh
The nominal tensile strength of the wire mesh shall be as per Table 2; test done as per EN 10223-3:2013.
The punch strength of the wire mesh shall be as per table 2; test done as per UNI 11437.
When the mesh is tested at 50% of the nominal tensile strength in accordance to EN 10223-3:2013, the wires will not show cracks in the organic coating within the double twists region.

Wire
The steel wire used in the manufacture of the unit is galvanized with Galmac, a Zn-5%Al alloy.
A **PoliMac**® coating with a nominal thickness of 0.50 mm is then applied to provide added protection for use in hydraulic works, polluted environments or wherever the risk of corrosion is present. The standard specifications of mesh-wire are shown in Tables 2 and 3. All tests on wire must be performed prior to manufacturing the mesh.

1. **Tensile strength:** the wire used for the manufacture of gabions shall have a tensile strength between 350-550 N/mm^2 as per EN 10223-3:2013. Wire tolerances (Table 4) are in accordance with EN 10218 (Class T1).
2. **Elongation:** Elongation at fracture shall not be less than 8%, on a gauge length of 250 mm as per EN 10223-3: 2013.
3. **Galmac coating:** minimum quantities of Galmac (Table 4) meet the requirements of EN 10244-2 (Table 2 - 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, according to EN 10244.
5. **Outwearing accelerated aging test:** when subjected to test in sulphur dioxide environment (EN ISO 6988) after 28 cycles of discontinuous test the mesh shall not show more than 5% of DBR (Dark Brown Rust).

A = Diaphragm made with double twisted hexagonal mesh
B = Main Terramesh® System unit of double twisted hexagonal mesh

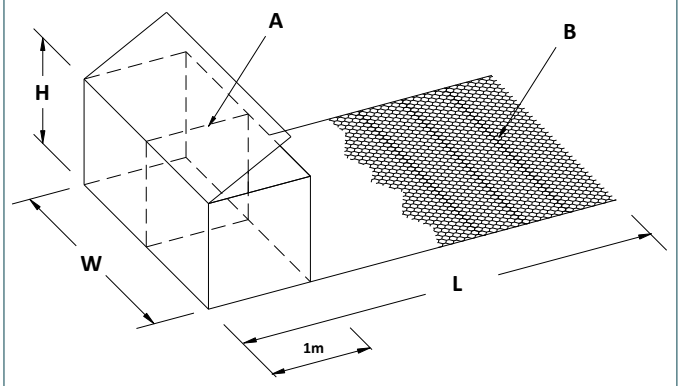

Figure 1

The tolerance on the mesh size 'M' being the distance between the axis of two consecutive twists, is according to EN 10223-3: 2013

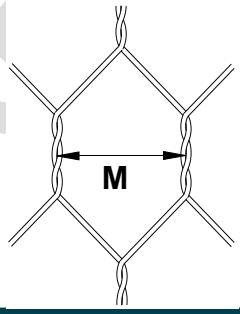

Figure 2

PoliMac® coating
The technical characteristics and the ageing resistance of the PoliMac® coating comply with EN 10245-1.
Colour: grey RAL 7012.
Resistance to UV radiation: the tensile strength and elongation at break of the base compound after 2500 hours of exposure to QUV-A (ISO 4892-3 mode 1) do not change more than 25% from the initial test results.
Chemical resistance: the PoliMac® resist the chemical agents in concentrations that are representative of soil and water normally found in civil works.
Outwearing accelerated ageing test in salt spray: when the PoliMac® coated wire mesh is subjected to the neutral salt spray test (ISO 9227) after 6000 hours of exposure the mesh does not show more than 5% of DBR (Dark Brown Rust).
Resistance to abrasion: the PoliMac® coating does not expose metal wire when tested in accordance with procedure described in par. 4.1.2.1 of EN 60229:2008, after 100,000 cycles with a vertical force of the steel angle of 20N.

Table 1: Sizes of Terramesh ®System

L=Length (m)	W=Width (m)	H=Height (m)
3	2	1.0/0.5
4	2	1.0/0.5
5	2	1.0/0.5
6	2	1.0/0.5

All sizes and dimensions are nominal.
Tolerances of ±5% of the weight, height and length of the Terramesh System shall be permitted (EN 10223-3:2013)

Lacing Operations

Lacing operations can be made by using the tools shown in Fig.5. Stainless steel rings having the following specification can be used instead of lacing wire (Figs. 3, 4):
• diameter: 3.00 mm
• tensile strength: >1700 - 1900N
Spacing of the rings must not exceed 200 mm (Fig.3)

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Quantity Request

When requesting a quote, please specify:
• size and type of units (length, width, height), see Fig.1,
• type of mesh and wire coating,
EXAMPLE: No.100 Terramesh® System 4x2x1m - Mesh type 8x10 - Wire 2.7 - Galmac & **PoliMac**® coated

Table 2: Standard mesh-wire

Type	M (mm)	Tolerance (mm)	Wire Ø Int/Ext (mm)	Mesh Tensile Strength (kN/m)	Punch Strength (kN)
8x10	80	-0/+10	2.70/3.70	50	67

Table 3: Standard wire diameters

	Mesh Wire (mm)	Selvedge Wire (mm)
Terramesh System	Int.2.7/Ext.3.7	Int.3.4/Ext.4.4

Table 4: Wire tolerances and coatings

Wire diameter	mm	2.20	2.70	3.40
Wire diameter tolerance	(±) mm	0.06	0.06	0.07
Minimum Galmac quantity	g/m^2	230	245	265

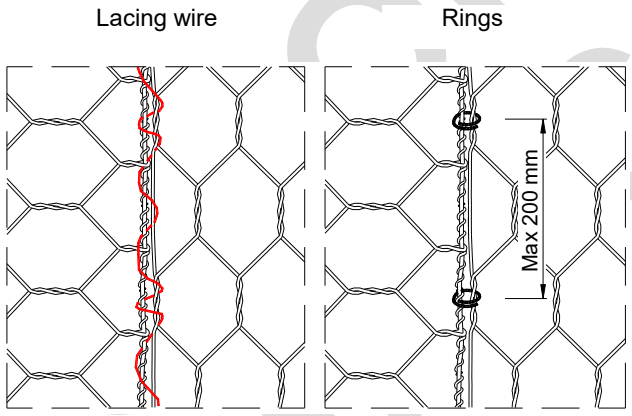

Figure 3

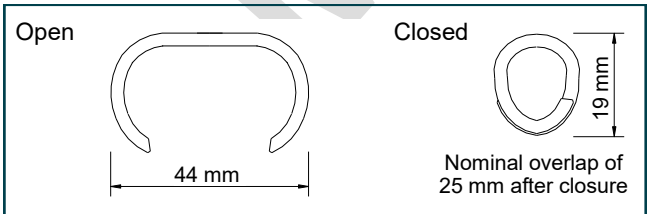

Figure 4

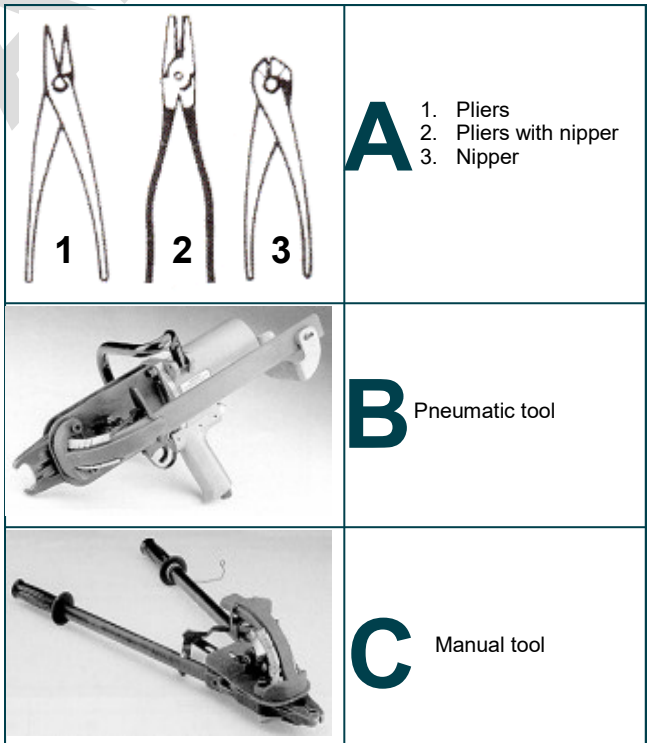

Figure 5

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