

RENO MATTRESS GALMAC COATED

The Reno mattress is a structure made of hexagonal double twisted wire mesh, with mechanical characteristics higher than the ones suggested from EN 10223-3 (Figs. 1, 2). Reno mattresses are filled with stones at the project site to form flexible and permeable, monolithic structures such as river bank protection and channel linings for erosion control.

The steel wire used to manufacture the mattress is coated with Galmac, a Zn-5%Al alloy. The standard combinations of mesh and wire are shown in Tab. 2.

In order to reinforce the structure, all mesh panel edges are selvaged with a wire having a greater diameter (Tab. 3).

Reno mattresses are divided into uniformly partitioned cells by internal diaphragms.

Dimensions and sizes of Reno mattresses are shown in Tab. 1.

Wire

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

- Tensile strength:** the wire used for the manufacture of Reno mattresses and the lacing wire, shall have a tensile strength between 380-550 N/mm² exceeding, in order to increase the tensile resistance of the finished products, what is suggested from EN 10223-3. Wire tolerances (Tab. 4) are in accordance with EN 10218 (Class T1).
- Elongation:** Elongation shall not be less than 10%, according to EN 10223-3. Test must be carried out on a sample at least 25 cm long.
- Galmac coating:** minimum quantities of Galmac shown at Tab.4 meet the requirements of EN 10244-2 (Table 2 and Class A).
- 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.
- Outwearing accelerated aging test in SO₂** (28 cycles) in accordance with EN ISO 6988.

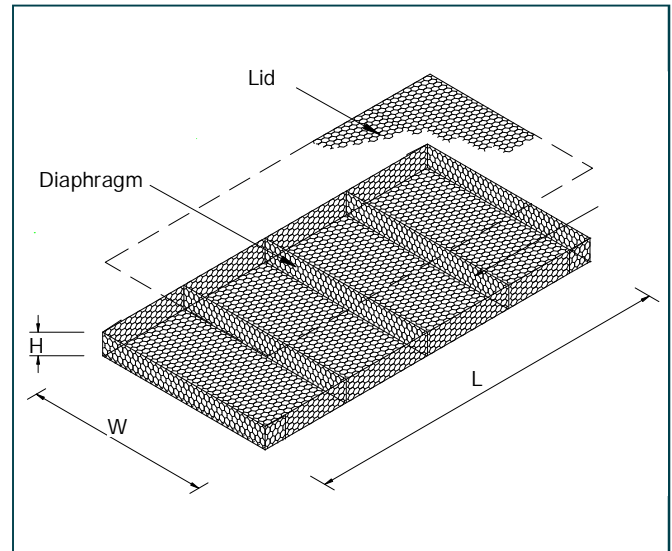


Figure 1

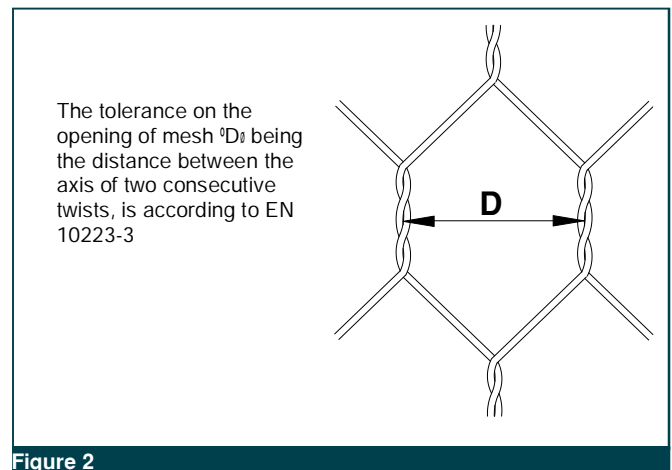


Figure 2



Example of Reno mattresses



n° 226/001

1. Table of sizes for Reno mattresses

L=Length (m)	W=Width (m)	H=Height (m)	Mesh type
3	2	0.17-0.23-0.30	6x8
4	2	0.17-0.23-0.30	6x8
5	2	0.17-0.23-0.30	6x8
6	2	0.17-0.23-0.30	6x8

All sizes and dimensions are nominal.
Tolerances of $\pm 3\%$ of the width, length, and ± 2.5 cm of the height shall be permitted.

Lacing Operations

Lacing operations can be made by using the tools shown in Fig.5. Galmac coated steel rings having the following specification can be used instead of lacing wire (Figs. 3, 4):

~ diameter: 3.00 mm

~ tensile strength: 170 kg/mm²

Spacing of the rings must not exceed 200 mm (Fig.3)

Quantity Request

When requesting a quote, please specify:

~ size of units (length x width x height, see Fig.1),

~ type of mesh,

~ type of coating

EXAMPLE: No. 100 Reno mattress 4x2x0.23 m - Mesh type 6x8

- Wire diam. 2.2 mm $\frac{1}{4}$ Galmac coated

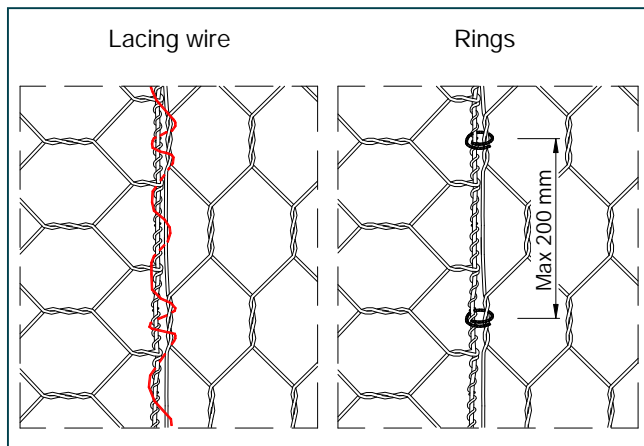


Figure 3

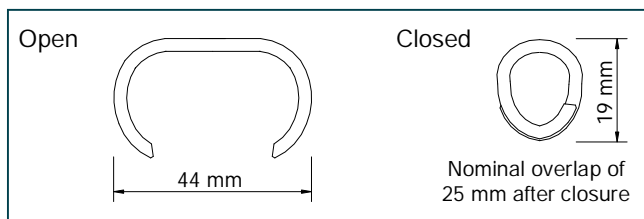


Figure 4

2. Standard Mesh-Wire

Type	D (mm)	Tolerance	Wire Dia (mm)
6x8	60	+16%/-4%	2.20

3. Standard wire diameters

	Mesh Wire	Selvedge Wire	Lacing Wire
6x8 Mesh Type	\varnothing mm	2.20	2.70

4. Table of wire tolerances and coating

Wire diameter	mm	2.00	2.20	2.70
Wire tolerance	(\pm) \varnothing mm	0.05	0.06	0.06
Min. Q.ty Galmac	gr/m ²	215	230	245

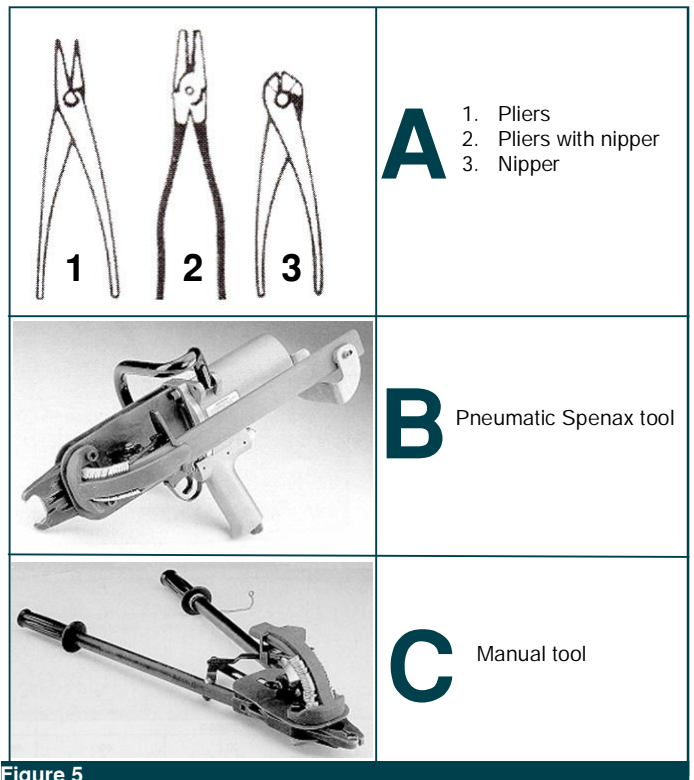


Figure 5