

## GABIONS GALMAC COATED

Gabions are baskets manufactured from double twisted hexagonal woven steel wire mesh 8x10 type made of Galmac (Zn - Al 5% alloy) coated steel wire, produced in compliance with CPR - Construction Product Regulation 305/2011, and UNI EN 10223-3:2013, having EC marking in compliance with ETA-09/0414.

The management and production system is certified in compliance with standards ISO 9001 and ISO 14001 (related to the environmental management system).

Gabions are used for the following purposes: retaining structures, river works, erosion control, noise barriers, architectural works.

Gabions are filled with stones at the project site to form flexible, permeable, monolithic structures such as retaining walls, channel linings and weirs for erosion control projects.

In order to reinforce the structure, all mesh panel edges are selvedged with a wire having a greater diameter (Table 3). Dimensions and sizes of Galmac coated gabions are shown in Table 1.

### Steel wire mesh

The nominal tensile strength of the wire mesh shall be as per Table 2; test carried out as per EN 10223-3:2013.

The punch strength of the wire mesh shall be as per table 2; test carried out as per UNI 11437.

### Wire

The wire used in the production of the unit is coated with Galmac class A (Zn-Al 5% eutectic alloy).

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

- Tensile strength:** the wire used to manufacture Gabions shall have a tensile strength between 350-550 N/mm<sup>2</sup> as per EN10223-3:2013. Wire tolerances (Table 3) are in accordance with EN10218 (Class T1).
- Elongation:** Elongation shall not be less than 8%, according to EN10223-3:2013.
- Galmac coating:** minimum quantities of Galmac shown at Table 3 meet the requirements of EN10244-2 (Table 2-Class A).
- Adhesion of Galmac:** the adhesion of the Galmac coating must be in accordance with EN 10244.
- Outwearing accelerated aging test** in a general condensation of moisture containing sulfur dioxide (28 cycles) in accordance with EN ISO 6988 the mesh shall not show more than 5% of red rust.  
When subjected to the neutral salt spray test (ISO 9227) after 1000 hours of exposure the mesh shall not show more than 5% of DBR (Dark Brown Rust).

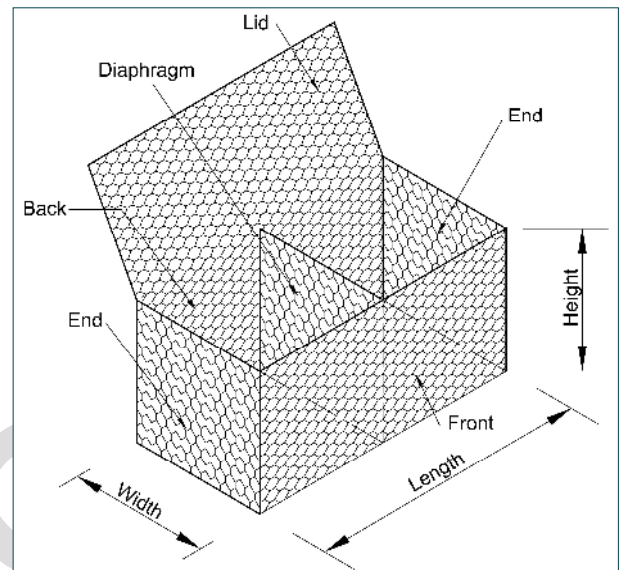


Figure 1

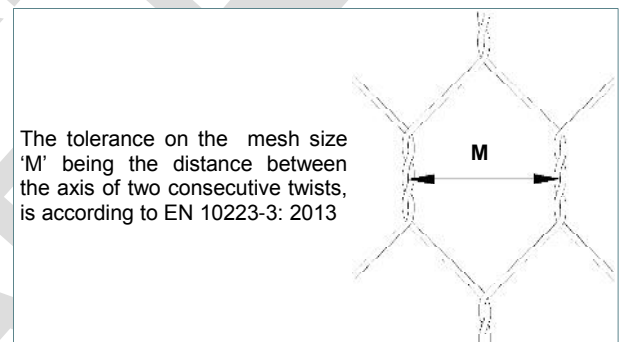


Figure 2



Example of gabion wall

**Table 1: Sizes of gabions**

Length (m)	Width (m)	Height (m)	# of cells
2	1	0.5	2
3	1	0.5	3
4	1	0.5	4
1.5	1	1	1
2	1	1	2
3	1	1	3
4	1	1	4

All sizes and dimensions are nominal.  
Tolerances of  $\pm 5\%$  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:  $>1720$  MPa
- Pull-apart strength  $> 2.0$  kN

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

### Quantity Request

When requesting a quotation, please specify:

- size of units (length x width x height, see Table 1)
- type of mesh
- type of coating and diaphragms

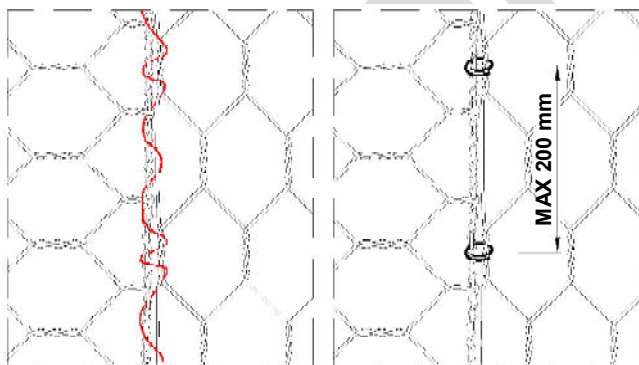
EXAMPLE: No. 100 gabions 2x1x1m - Mesh type 8x10 - Wire diam. 2.70 mm - Galmac coated - with diaphragms.

**Table 2: Standard Mesh-Wire**

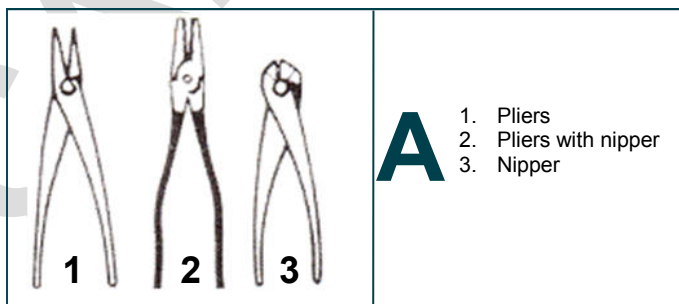
Type	M (mm)	Tolerance (mm)	Wire Diameter (mm)	Mesh Tensile Strength (kN/m)	Punch Strength (kN)
6x8	60	-0/+8	2.7	55	82
8x10	80	-0/+10	2.7 3.0	50 60	67 82

### 3. Standard wire diameter

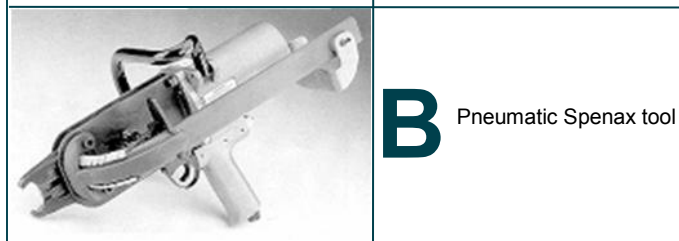
		Mesh wire	Selvedge wire	Lacing wire
Internal diameter 8x10	$\varnothing$ mm	2.7 3.0	3.4 3.9	2.2 2.4
Wire tolerance	( $\pm$ ) $\varnothing$ mm	0.06 (2.7) 0.07 (3.0)	0.07	0.06
Min. quantity of coating	gr/m <sup>2</sup>	245 (2.7) 255 (3.0)	265 (3.4) 275 (3.9)	230



**Figure 3: Lacing wire and Rings**



- A**
1. Pliers
  2. Pliers with nipper
  3. Nipper

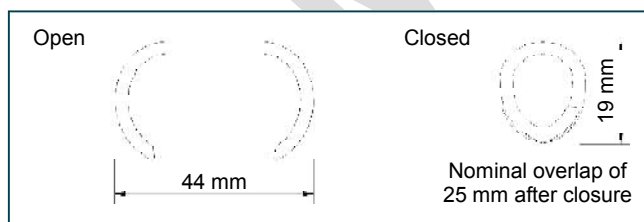


- B** Pneumatic Spenax tool



- C** Manual tool

**Figure 5**



**Figure 4**

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Bureau Veritas Certified Quality System Company with  
Accredia's and UKAS' s accreditation.