

GABIONS

GALMAC COATED(95%Zinc+5%Aluminium Mischmetal Alloy)

Gabions are baskets made of 8x10 double twisted steel woven wire mesh, as per ASTM A975-97 (Figs. 1, 2). 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.

The steel wire used in the manufacture of the gabion is heavily Galmac coated soft temper steel. The standard specifications of mesh-wire are shown in Table 2.

The gabion is divided into cells by means of diaphragms positioned at approximately 1m centers (Fig.1). In order to reinforce the structure, all mesh panel edges are selvaged with a wire having a greater diameter (Table 3). Dimensions and sizes of Galfan coated gabions are shown in Table 1.

Wire

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 372-470 according to ASTM A856-03. Wire tolerances (Table 3) are in accordance with ASTM A856-03.
- 2. Elongation:** Elongation shall not be less than 12%, in accordance with ASTM A370-97. Test must be carried out on a sample at least 12 in. (30 cm) long.
- 3. Galmac coating:** minimum quantities of Galmac shown at Table 3 meet the requirements of ASTM A856-03.
- 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, in accordance with ASTM A856-03.

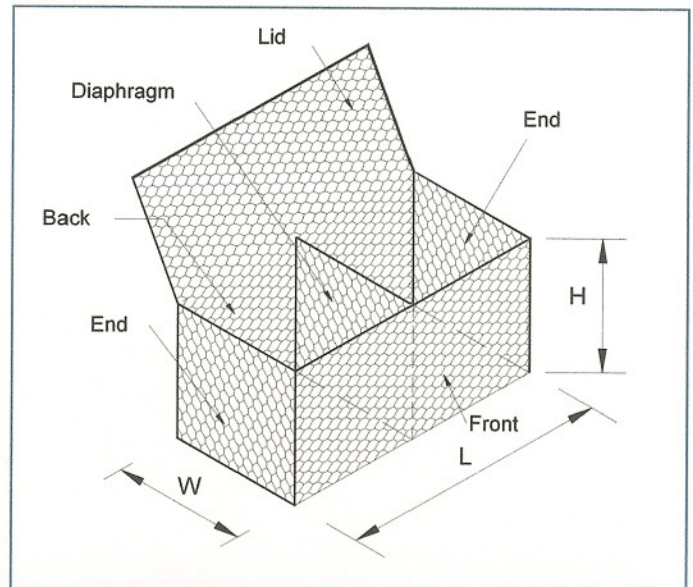


Figure 1

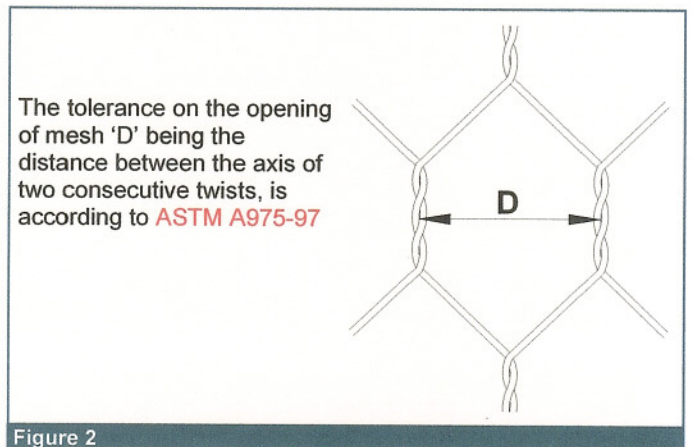
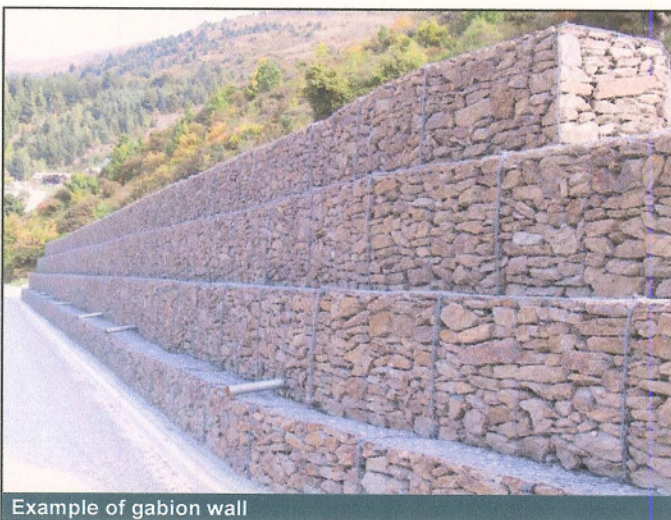


Figure 2



Example of gabion wall



Example of gabion wall

1. Table of sizes for gabions

L=Length (m)	W=Width (m)	H=Height (m)	# of cells
2	0.5	0.5	2
2	1	0.5	2
4	1	0.5	4
2	1.5	1	1
2	1	1	2
4	1	1	4

All sizes and dimensions are nominal.
Tolerances of $\pm 5\%$ of the width, height, and length of the gabions shall be permitted.

Lacing Operations

Lacing operations can be made by using the tools shown in Fig.5. Steel rings having the following specification can be used instead of lacing wire (Fig.4):

Heavily galvanized steel rings for Galmac coated products

- diameter: 3.05 mm, **ASTM A313, Type 302, Class I**
- tensile strength: 1530-1745 MPa, **ASTM A313-92.**

Spacing of the rings must not exceed 150 mm (Fig.3)

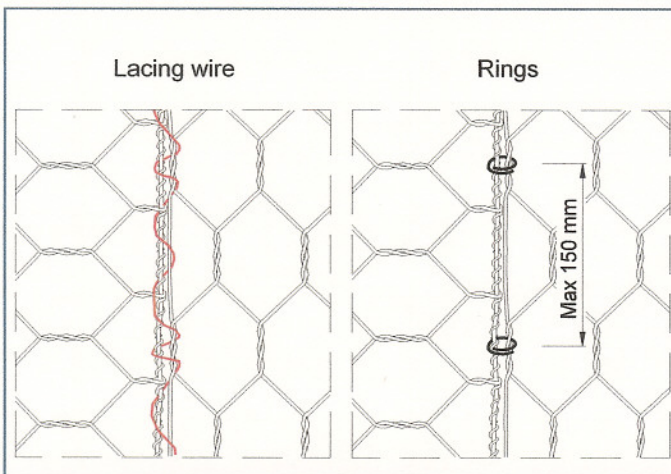


Figure 3

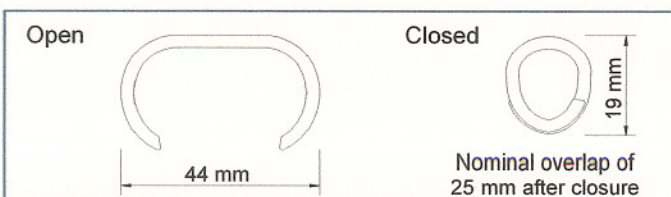


Figure 4

2. Standard Mesh-Wire

Type	D (mm)	Tolerance	Wire Dia (mm)
8x10/ GALMAC	83	$\pm 10\%$	2.70

3. Standard wire diameters

	Lacing	Mesh	Selvedge
Mesh Diameter \varnothing mm	2.20	2.70	3.40
Wire Tolerance (\pm) \varnothing mm	0.10	0.10	0.10
Min. Quantity of Galmac gr/m ²	214	244	259

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 gabions 2x1x1m - Mesh type 8x10 - Wire diam. 2.70 mm - Galmac coated.

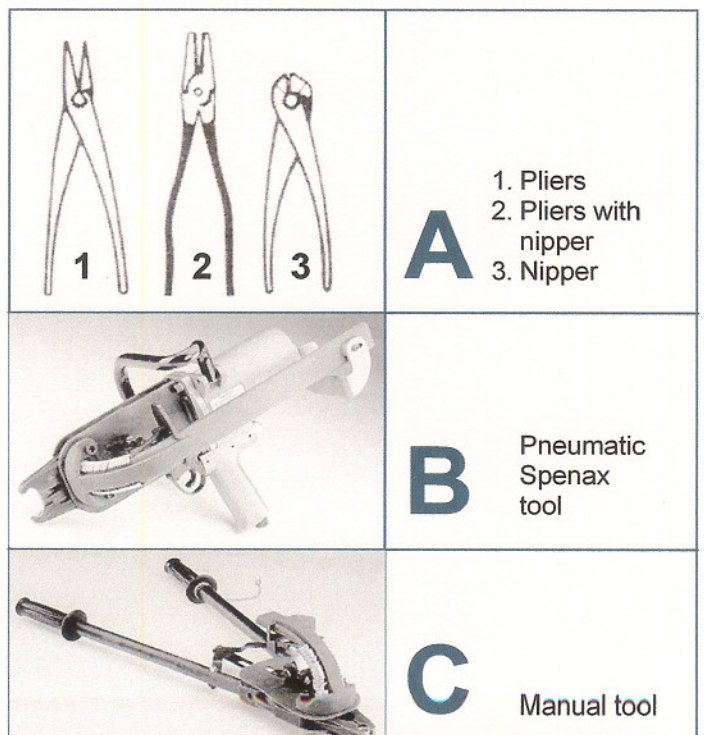


Figure 5

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

- B**
- Pneumatic Spenax tool

- C**
- Manual tool