

GABIONS GALVANIZED

Gabions are baskets made of Mesh 8 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 zinc coated soft temper steel. A PVC coating is then applied to provide added protection for use in polluted environments where soils or water are acidic: in salt or fresh water, or wherever the risk of corrosion is present. The PVC coating has a nominal thickness of 0.50 mm. 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 selvedged with a wire having a greater diameter (Table 3). Dimensions and sizes of PVC coated gabions are shown in Table 1. The material is supplied from an ISO 9001 certified factory.

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 350-500 MPa according to EN 10223-3. Wire tolerances (Table 3) are in accordance with EN10223-3.
2. **Elongation:** Elongation shall not be less than 10%, in accordance with EN10016-1 and EN 10016-2.
3. **Zinc coating:** minimum quantities of zinc shown at Table 3 meet the requirements of EN10244-2 Class A.
4. **Adhesion of zinc:** the adhesion of the zinc 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 A641-97.

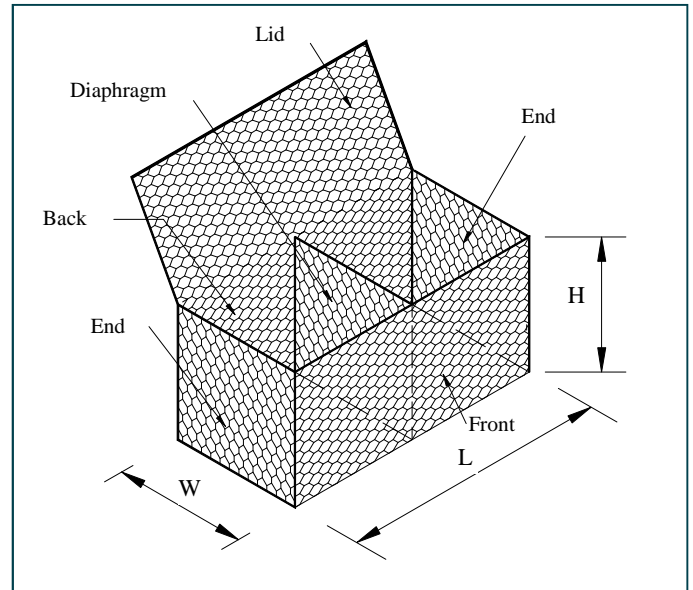


Figure 1

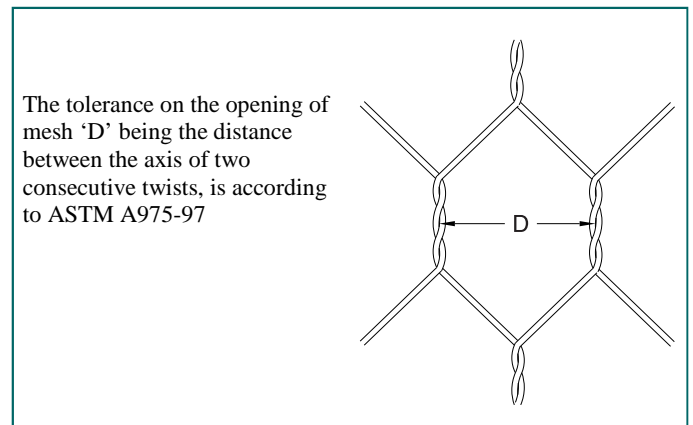
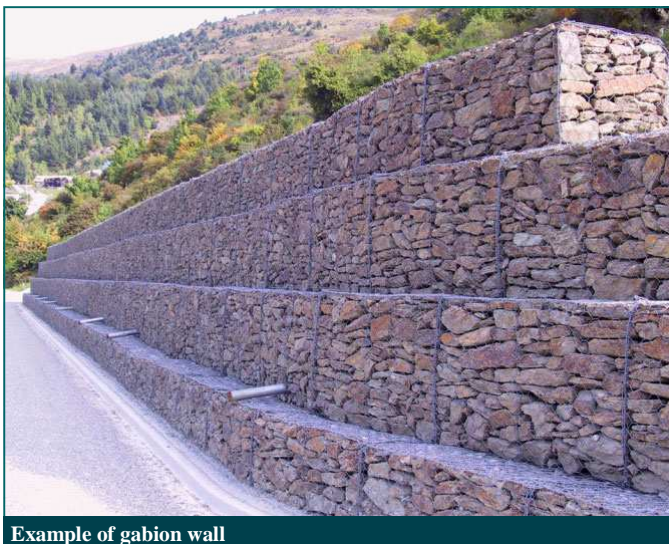


Figure 2



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	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 $\pm 5\%$ of the width, height, and length of the gabions shall be permitted.

2. Standard Mesh-Wire

Type	D (mm)	Tolerance	Wire diameter (mm)
Mesh8	82	$\pm 10\%$	2.4, 2.7, 3.05

3. Standard wire diameters

		Lacing Wire	Mesh Wire	Selvedge Wire
Mesh Diameter	\emptyset mm	2.2	2.7/3.05	3.4/3.9
Wire Tolerance	(\pm) \emptyset mm	0.06	0.06/0.07	0.07
Minimum Quantity of Zinc	gr/m ²	230	245/255	265

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 (Fig.4):

Heavily galvanized steel rings for zinc coated products

- diameter: 3.00 mm, ASTM A313, Type 302, Class I
- tensile strength: 1530-1745 MPa, ASTM A313-92.

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 gabions 2x1x1m - Mesh type 8 - Wire diam. 2.7/3.7 mm - Galvanized

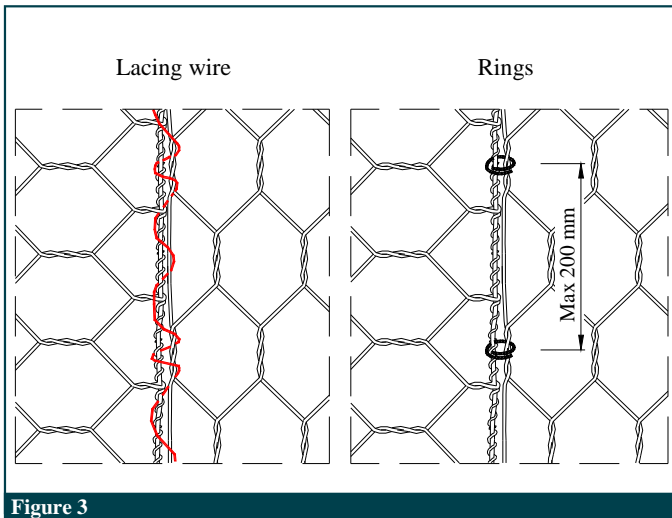


Figure 3

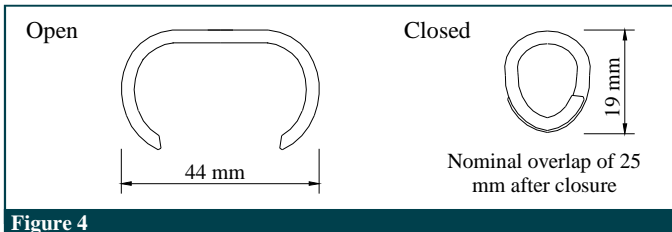


Figure 4

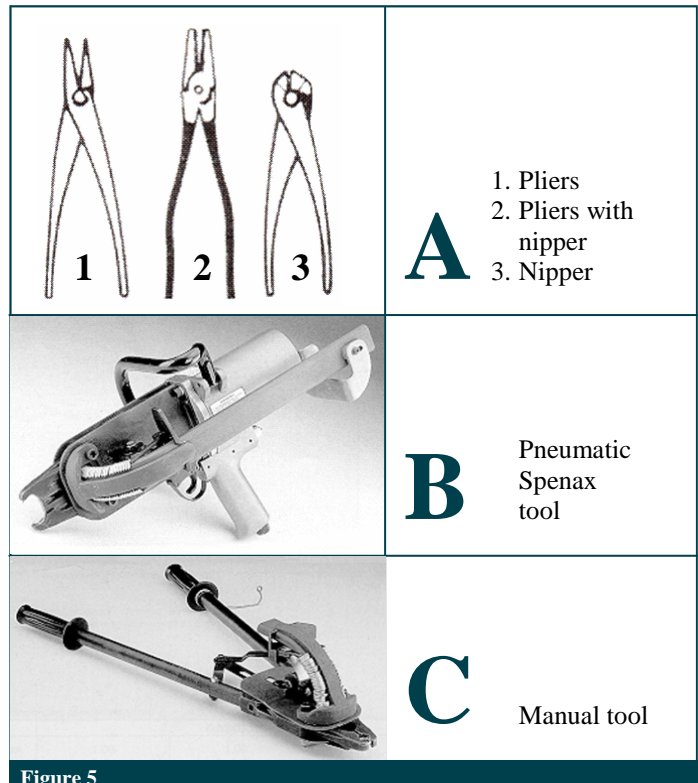


Figure 5

A

1. Pliers
2. Pliers with nipper
3. Nipper

B

Pneumatic Spenax tool

C

Manual tool