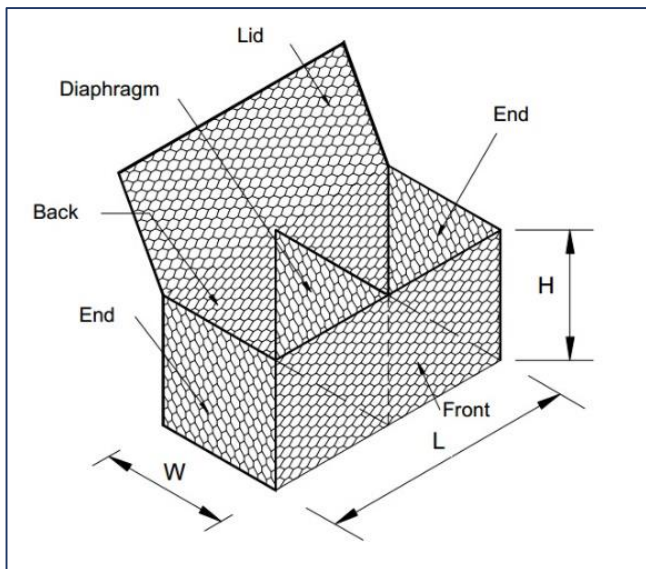


Gabions are baskets made of Mesh 8 double twisted steel woven wire mesh, as per ASTM A975-97 (Figs. 1, 2). Gabions are filled with stones at the project site to form flexible, permeable, monolithic structures such as retaining walls, channel linings, and weirs for erosion control projects.

The steel wire used in the manufacture of the gabion is coated with Galfan, a Zinc-5% Aluminium Mischmetal alloy. 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, and a minimum thickness of 0.40 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.



**Figure 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 maximum tensile strength of 75,000 psi (515 MPa) as per ASTM A856-03, soft temper steel. 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.

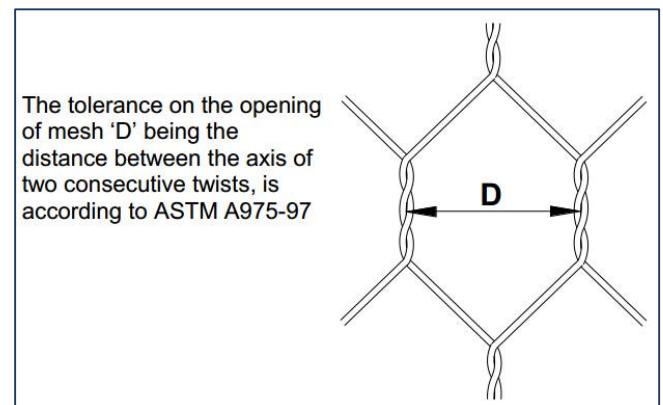
3. Galfan coating: minimum quantities of Galfan shown at Table 3 meet the requirements of ASTM A856-03.

4. Adhesion of Galfan: the adhesion of the Galfan 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.

## P.V.C. (Polyvinyl Chloride) Coating

The technical characteristics and the resistance of the PVC to aging should meet the relevant standards. The main values for the PVC material are as follows:

- The initial property of the PVC coating shall be in compliance with ASTM A975-97 section 8.2.
- Prior to UV and abrasion degradation, the PVC polymer coating shall have a projected minimum durability of 60 years when tested in accordance with UL 746B Polymeric Material-Long Term Property Evaluation for heat aging test.



**Figure 2**

# ZHUODA GABION

Table 1-Sizes for Gabions

L (m)	W (m)	H (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.

### Quantity Request

When requesting a quotation, please specify:

- No. of units,
- Size of units (length x width x height, see Table 1 ),
- Mesh type,
- Type of coating.

EXAMPLE: No. 100 gabions 2x1x1 m - Mesh type 8x10 - Wire diam. 2.70/3.70 mm - Galfan + PVC coated.

### 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):

Stainless steel rings for PVC 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)

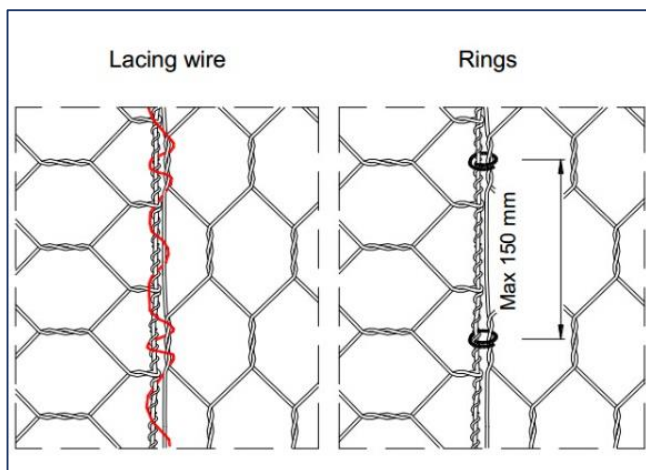


Figure 3

Table 2-Standard Mesh Wire

Mesh Type	D (mm)	Mesh Tolerance	Internal Wire Dia. (mm)	External Wire Dia. (mm)
8x10	83	$\pm 10\%$	2.70	3.70

Table 3-Standard Wire Diameters

	Mesh Wire	Selvedge Wire	Lacing Wire
PVC Mesh Diameter $\phi$ mm	2.70/3.70	3.40/4.40	2.20/3.20
Wire Tolerance ( $\pm$ ) $\phi$ mm	0.10	0.10	0.10
Min. Qty. of Galfan g/m2	244	259	214

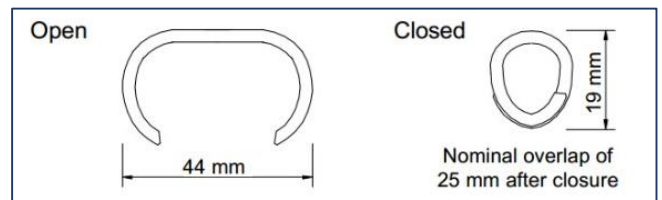


Figure 4



Figure 5

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