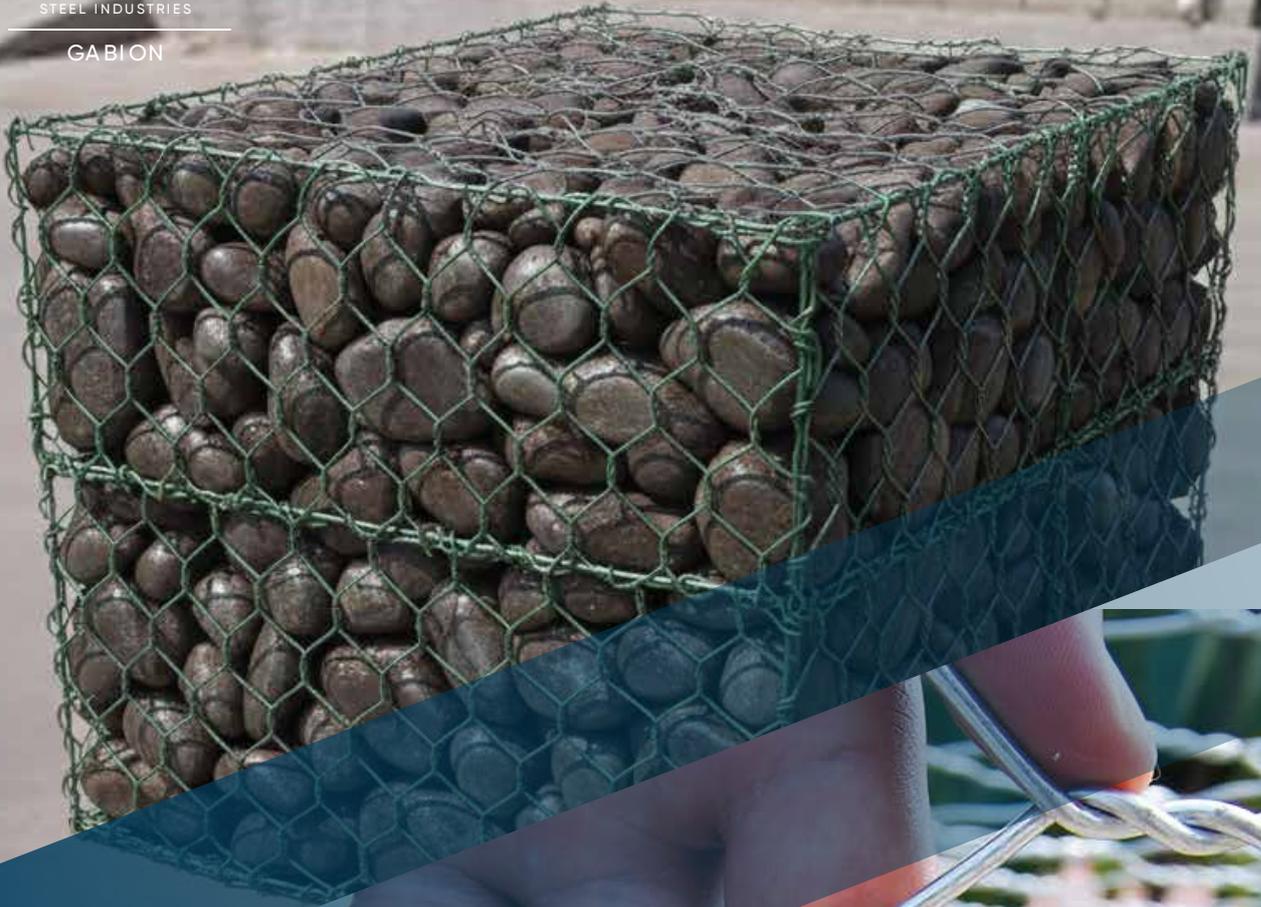




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STEEL INDUSTRIES

GABION



Double Twisted Wire Mesh

G A B I O N B O X



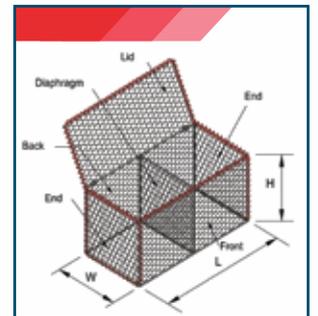
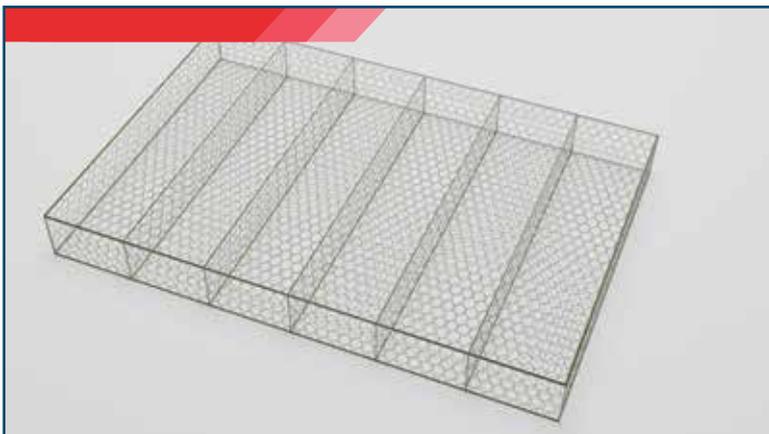
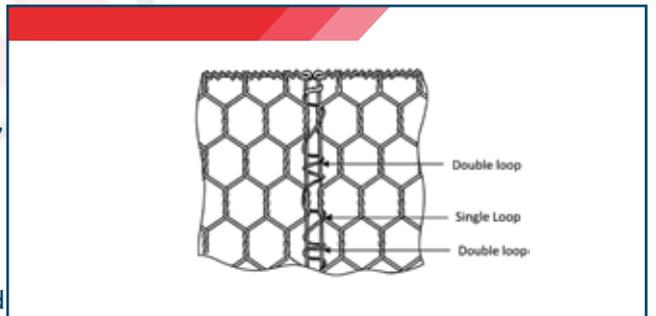
Double Twisted Wire Mesh

A double-twisted wire mesh gabion is a flexible, cage-like structure manufactured from steel wires that are woven together using a continuous double-twist process. This weaving method creates a stable grid pattern with uniform, hexagonal openings. These woven panels are assembled into containers and filled with stones or other materials for structural or decorative applications. Unlike rigid welded mesh, the double-twisted design is highly flexible, allowing the structure to adapt to ground movement and settle without losing integrity while remaining a permeable, monolithic structure for channel linings or retaining walls.



Gabion Box

A Gabion Box is a flexible cage or container made from double-twisted wire mesh, typically filled with materials such as rocks, stones, or concrete. Hitech Steel Industries provides these for use in civil engineering and landscaping projects, including slope stabilization, erosion control, and the construction of retaining walls. The primary function of the double-twisted Gabion box is to provide essential structural support and enhance stability. They are designed to blend with natural environments by facilitating water drainage and supporting vegetation growth over time.



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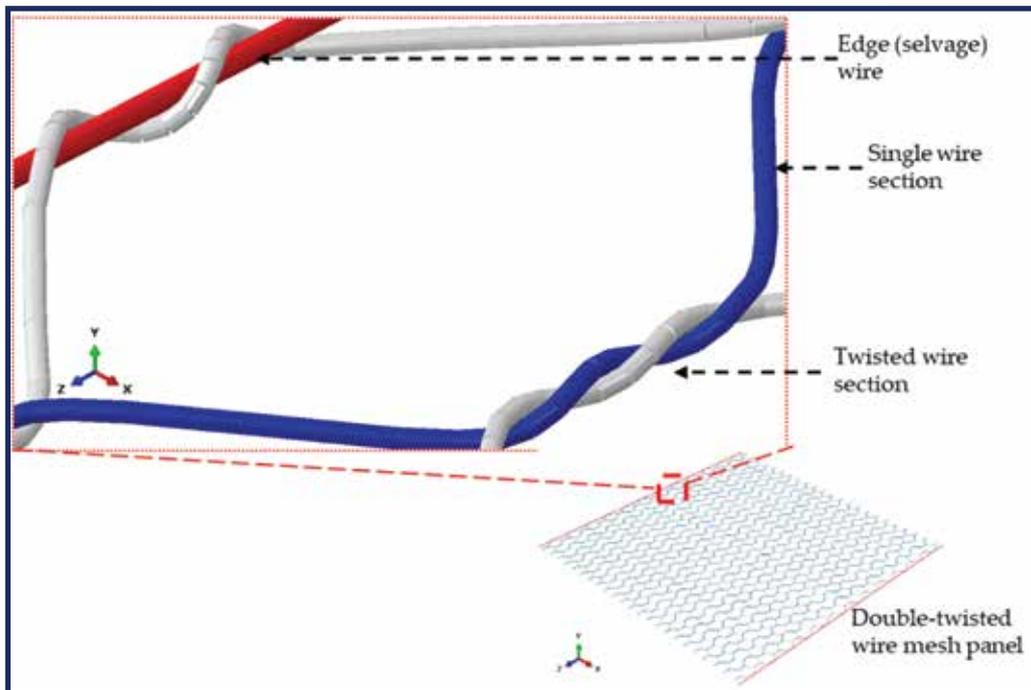
The design and manufacturing of Gabion boxes using welded mesh are governed by two key standards:

ASTM A974: This standard emphasizes the specifications and coating parameters for Gabions, particularly focusing on coating types and their application.

BS EN 10223-8:2013: This standard provides more flexibility, offering clients a wider range of options for Gabion design. It outlines the minimum wire diameter requirements based on the Gabion type and specifies coating parameters according to environmental conditions.

Specifications:

ASTM 975			
Characteristics	Gabion-Metallic	Gabion-PVC	Gabion-Mattress
Mesh Type	80 x 100	80 x 100	60 x 80
Mesh Opening	83 x 114	83 x 114	64 x 83
Wire Diameter	3.05	2.7	2.2
Selvedge Wire (mm)	3.8	3.4	2.7
Lacing Wire (mm)	2.2	2.2	2.2
Fastener	3mm	3mm	3mm
Stiffener	2.2/3.8	2.2/3.8	2.2/3.8
Coating	Style 1 (Zinc), Style 2 (Zn-5%ALMM), Style 4 (Aluminium)	Style 3 (PVC over Zinc)	Style 1 - Style 4



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BE EN 10223-3:2013

Mesh Size	Wire Diameter (mm)	Type of Product
50 x 70	2.0	Mesh in Roll
60x80	2.0	Mesh in Roll/ Mattress
	2.2	
	2.4	Mesh in Roll
	2.7	Mesh in Roll/ Gabions
80x100	2.2	Retaining Structure
	2.4	Mesh in Roll/ Gabions
	2.7	Retaining Structure Gabions
	3	Mesh in Roll/ Gabions
	3.4	Mesh in Roll/ Gabions
100x120	2.7	Mesh in Roll



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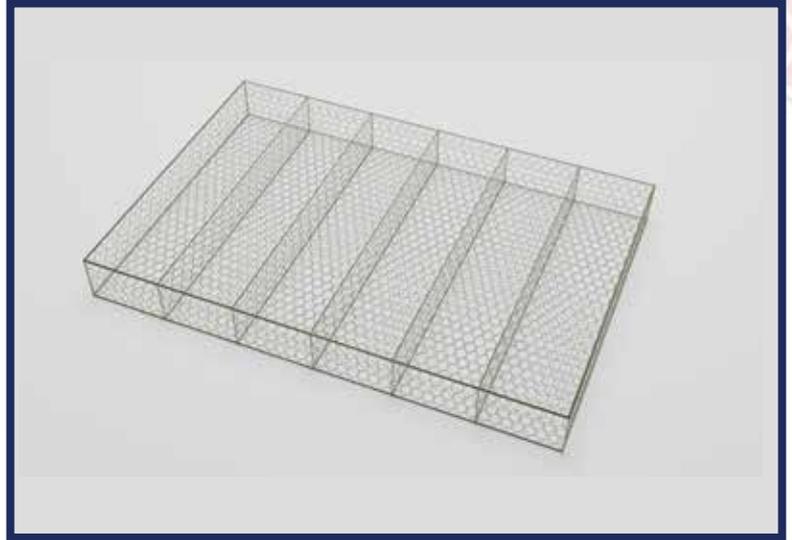




Gabion Mattresses

Definition

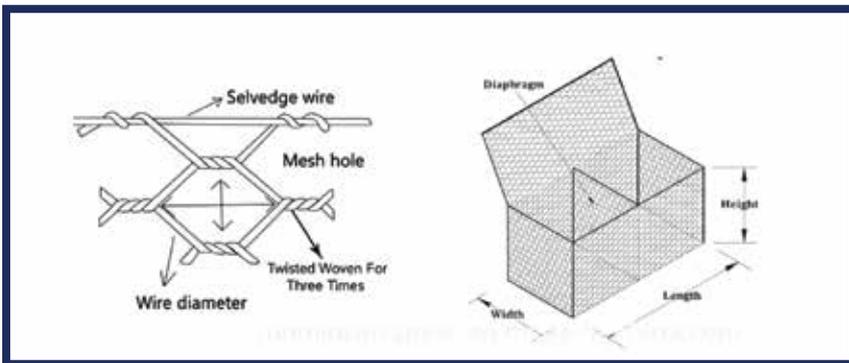
Gabion mattresses, also known as Reno mattresses, are flexible, wire mesh structures filled with stone, used for erosion control, slope stabilization, and channel linings. They can be made from welded wire mesh. Double-twisted mesh offers flexibility, allowing ground adaptation, while welded mesh provides a rigid structure with a flat profile. Both types are corrosion-resistant and promote vegetation growth for long-term erosion protection.



Wire Specifications

Wire Diameter to Selvedge Wire Diameter

Mesh Wire Diameter (mm)	Sledge Wire Diameter(mm)
2	2.4
2.2	2.7
2.4	3
2.7	3.4
3.0	3.9
3.4	4.4
3.9	4.9



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Accessories

Accessories	Wire Diameter(mm)
Lacing	2.2
Fastner	3
Bracing Tie	2.2/3.0

Available Types

ASTM 975

In the construction and engineering sectors, the durability and performance of gabion products are enhanced through specialized coatings. These coatings not only improve resistance to environmental stressors such as corrosion, UV exposure, and salt spray but also ensure the structural integrity of products under various loading conditions. The following tables detail coating parameters by product type as defined by two major standards—ASTM A975 and BS EN 10223-3

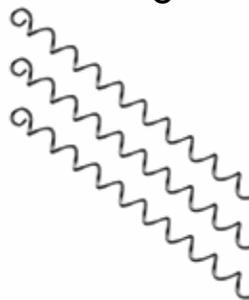
The ASTM standard emphasizes parameters like coating mass and tensile strength for gabion boxes and mattresses.

Coating	Style	Standard
Galvanized	Style 1	ASTM 641 Class 3
Zn-5% Al	Style 2	ASTM A856 Class 3
PVC	Style 3	ASTM 975 (0.5mm Thickness)
Al	Style 4	ASTM A809

Bracing Tie



Lacing



Fastners



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