

HIGH STRENGTH ROCKFALL PROTECTION NETTING GALFAN COATED

High strength double twist steel wire mesh is designed with a wire diameter of 3.4mm in order to be installed when the rock mass presents very critical stability conditions, as a drapery system to prevent rocks and debris from falling onto roads and railways.

The mesh consists of galfan coated double twisted steel woven wire with mechanical characteristics higher than the ones suggested from EN10223-3. The steel wire used in the manufacture of the mesh is heavily galvanized with Galfan, a Zn-5%Al-MM (mischmetal) alloy.

Due to the characteristics of the double twist, the steel wire mesh can withstand the force of falling rocks without unraveling in the event of wire breakage.

The standard specifications for the wire-mesh are shown in Tables 2, 3, 4.

Wire

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

- 1. Tensile strength:** the wire used for the manufacture of rockfall protection shall have a tensile strength between 380-550 N/mm² exceeding, in order to increase the tensile resistance of the finished products, what is suggested from EN10223-3. Wire tolerances (Table 4) are in accordance with EN10218 (Class T1).
- 2. Elongation:** Elongation shall not be less than 10%, according to EN10223-3. Test must be carried out on a sample at least 25 cm long.
- 3. Galfan coating:** minimum quantities of galfan shown at Table 4 meet the requirements of EN10244-2 (Table 2 and Class A).
- 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 EN10223-3.
- 5. Outwearing accelerated aging test in SO₂** (28 cycles) in accordance with EN ISO 6988.

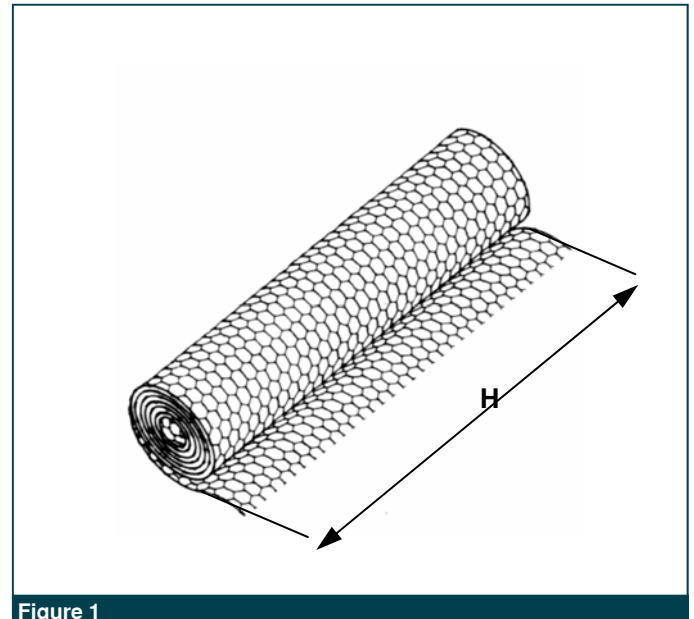


Figure 1

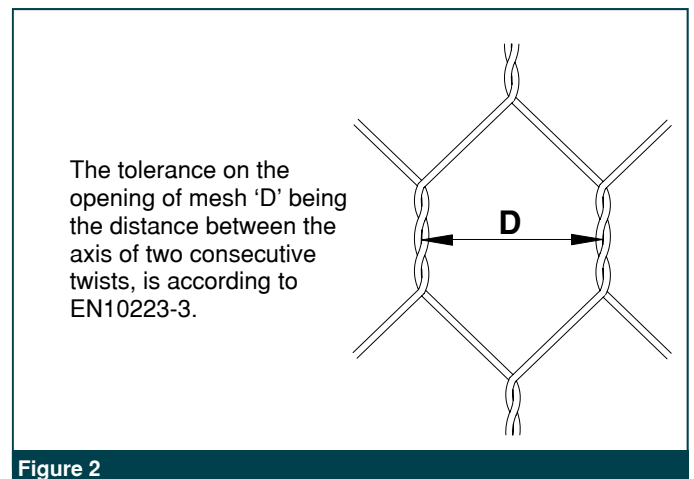


Figure 2



Example of Rockfall protection netting



Example of High strength Rockfall protection netting

1. Table of sizes for gabions

L=Length (m)	H=Height (m)
25	1, 2, 3, 4
50	1, 2, 3, 4

All sizes and dimensions are nominal.
Tolerances of 0/+1 m of the length, and $\pm D$ of the height shall be permitted

Lacing Operations

Lacing operations (Fig.3) can be made by using Galfan coated steel rings having the following specification :

- diameter: 3.00 mm
- tensile strength: 170 kg/mm².

Spacing of the rings must not exceed 200 mm (Fig. 4)

Quantity Request: when requesting a quote,

- size of rolls (length x height, see Fig.1),
- type of mesh,
- type of coating

EXAMPLE: No.100 rolls Length=25m, Height=4m - Mesh type 8x10 - Wire diam. 2.70 mm - Galfan coated

2 e 3. Standard Mesh Wire

Mesh			Ø Filo (mm)	
Type	D (mm)	Tolerance	Mesh	Selvedge
8x10	80	+16% - 4%	3.40	4.40

4. Table of wire tolerances and coating

Wire diameter	mm	3.40	4.40
Wire tolerance	(\pm) \varnothing mm	0.07	0.07
Min.Q.ty Galfan	gr/m ²	265	280

Lateral lacing with Steel Rings

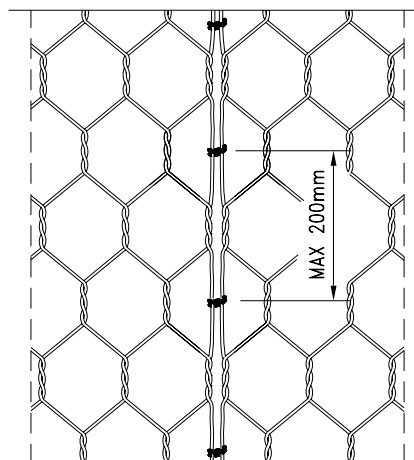
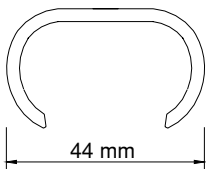
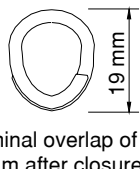


Figure 3

Open

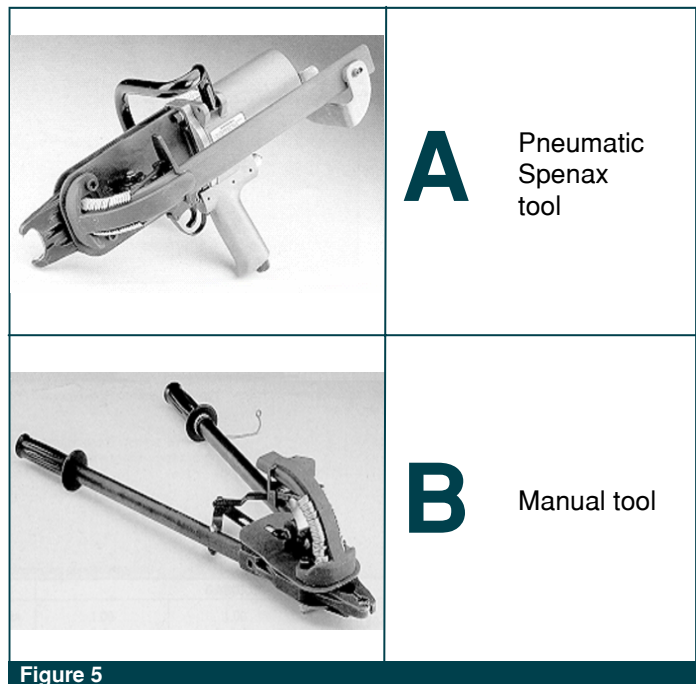


Closed



Nominal overlap of 25 mm after closure

Figure 4



A Pneumatic Spenax tool

B Manual tool

Figure 5

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