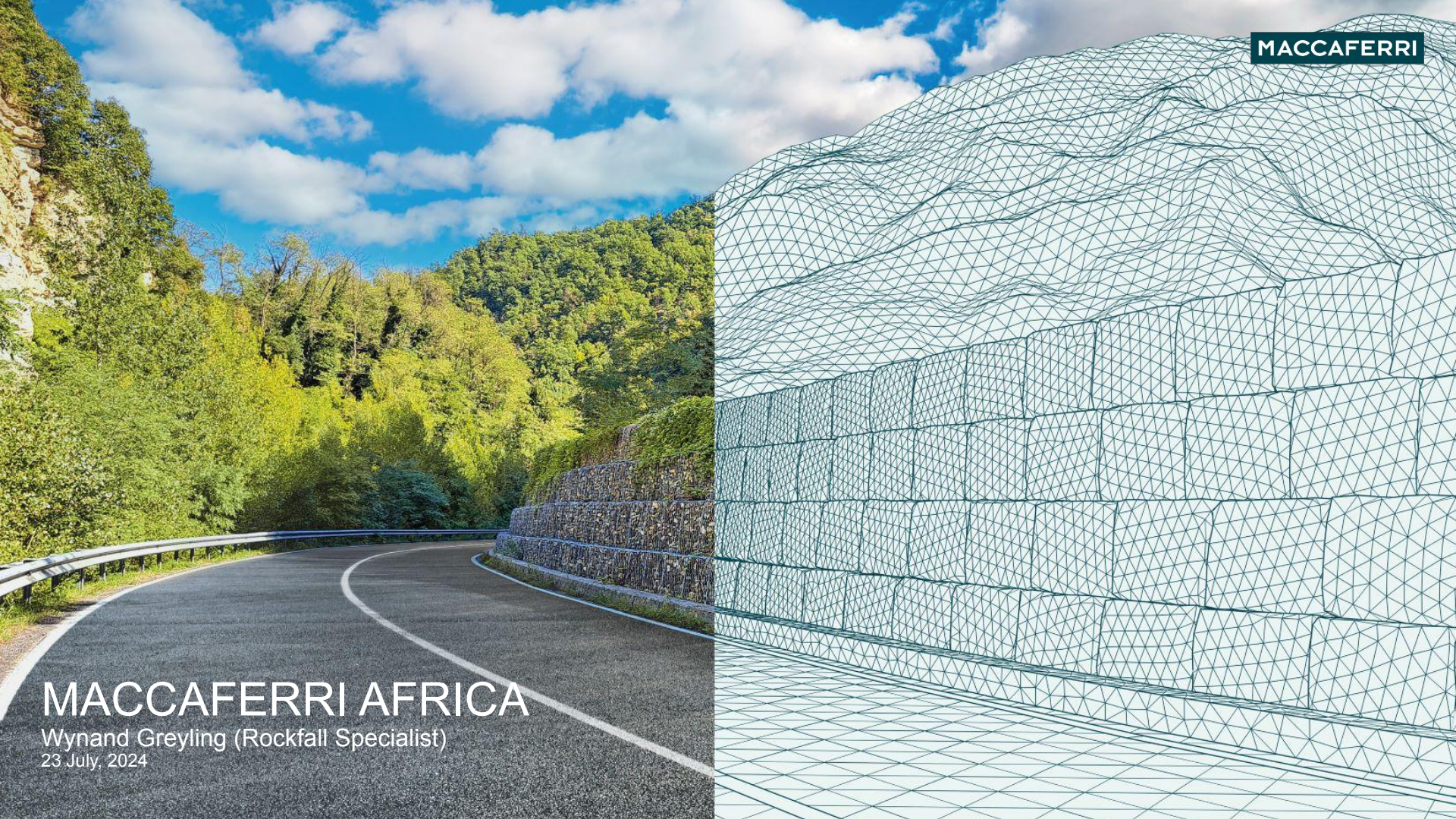


MACCAFERRI AFRICA

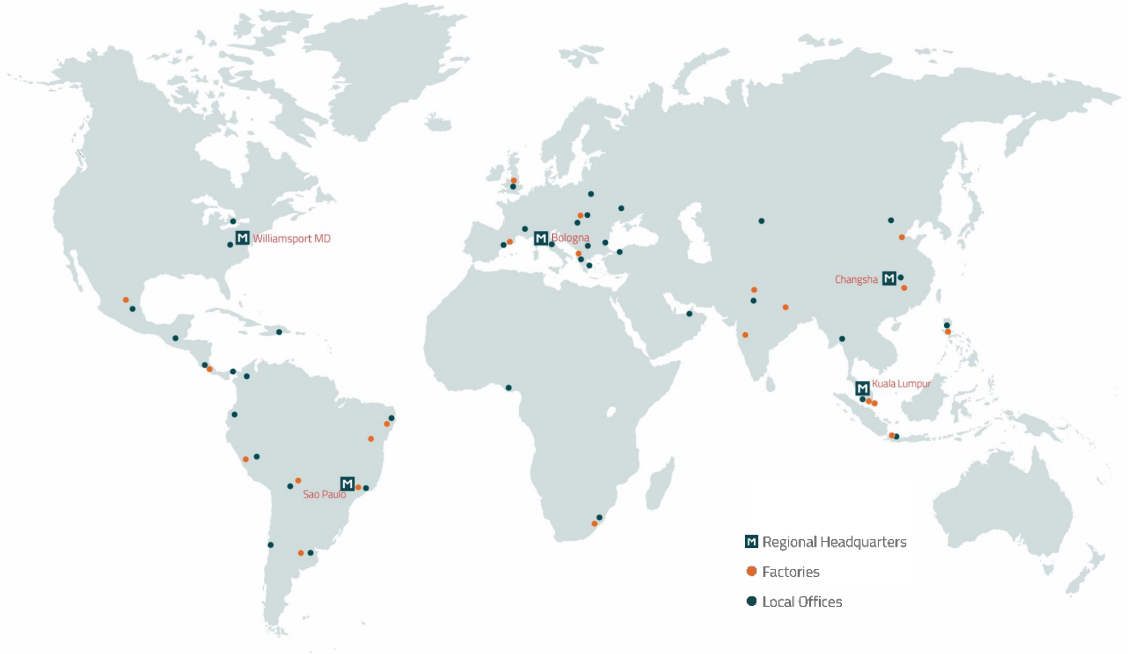
Wynand Greyling (Rockfall Specialist)

23 July, 2024

WHO WE ARE

For over 140 years we are a **leading international provider of advanced solutions to the civil, geotechnical and environmental construction markets**. We deliver innovative, long-lasting and environmentally friendly solutions, from retaining walls to hydraulic works and from rockfall mitigation systems to soil reinforcement.

OUR GLOBAL FOOTPRINT



Sales in **130+** countries

Revenues **600+** M€

3,000+ employees

20+ factories

70+ subsidiaries

HISTORY OF MACCAFERRI

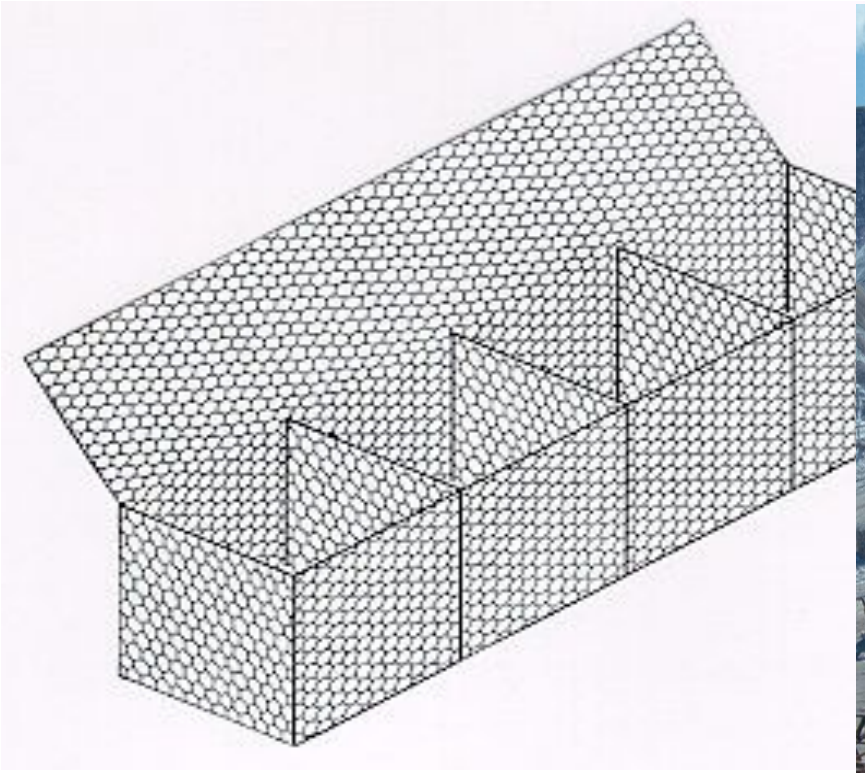
HISTORY OF MACCAFERRI

- **1879**. Maccaferri was established in 1879 in Bologna in Italy. Production of wrought iron items.

- **1894**. Invention of the FAMOUS gabion by Maccaferri.

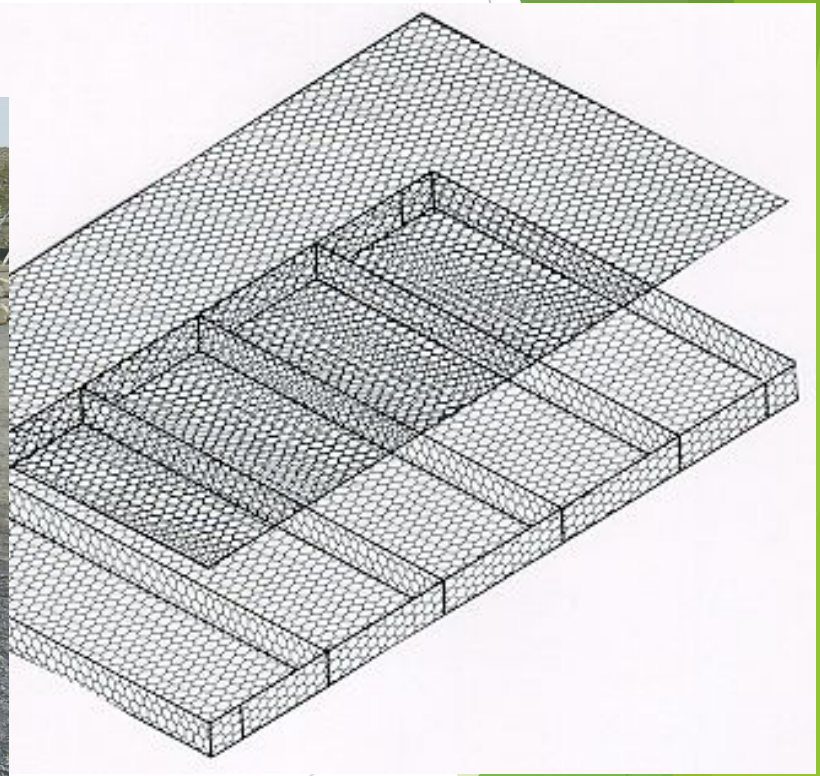
MACCAFERRI

- **1907**. DEVELOPMENT of the BOX SHAPE GABION with DOUBLE TWISTED MESH.



MACCAFERRI

- **1956**. DEVLOPMENT of the RENOMATTRESS & PVC COATING.



MACCAFERRI

- 1996. DEVELOPMENT of the Terramesh systems and GALFAN coated wire.

MACCAFERRI

- 2000 – 2010. DEVELOPMENT of MSEW (Mechanical Stabilized Earth Walls).

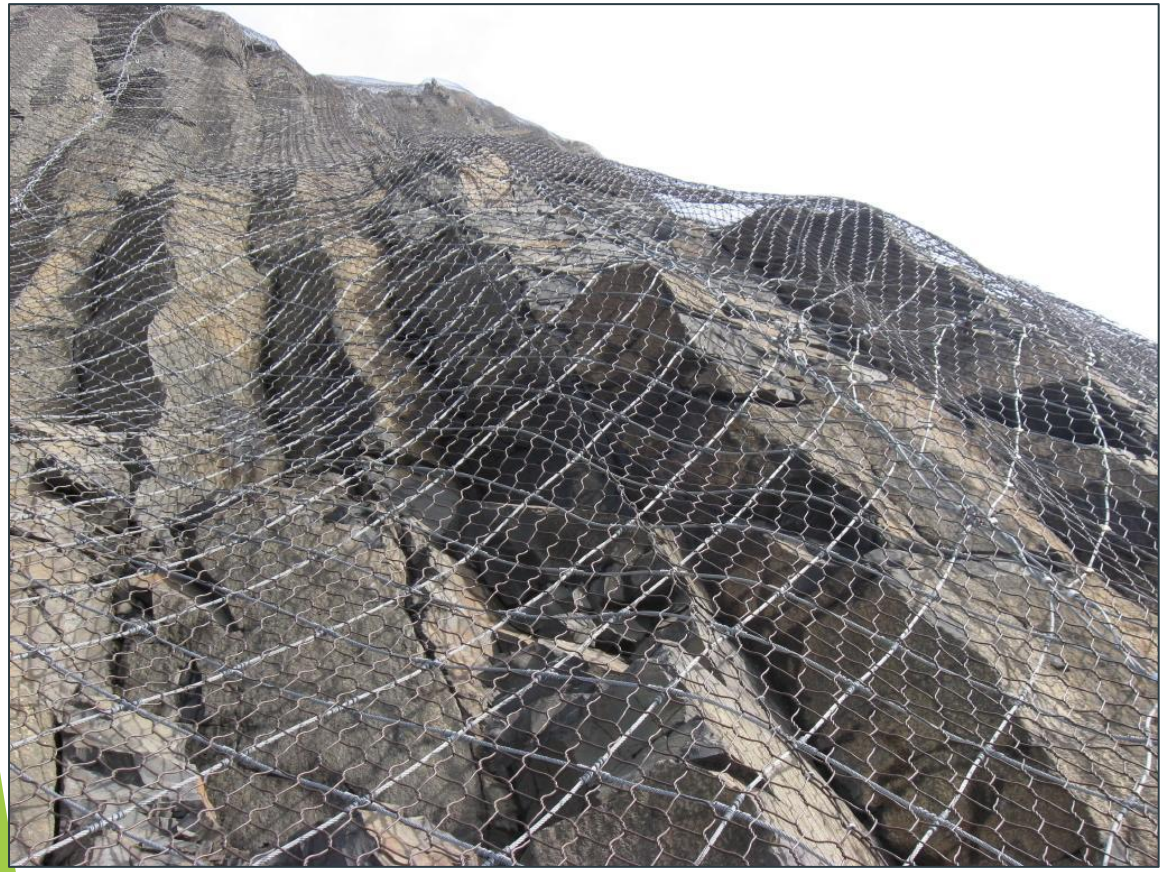
MACCAFERRI

- Introduction of Geosynthetics.

MACCAFERRI

- ROCKFALL. ROCKFALL / DEBRIS FLOW BARRIERS.

- ROCKFALL. Draping / Meshing.



2025

SO WHATS NEXT

UNDERGROUND MESH / BLAST ON MESH

- Photos of mesh before drop testing

UNDERGROUND MESH / BLAST ON MESH

- Testing facilities

UNDERGROUND MESH / BLAST ON MESH

MACCAFERRI

- We have recently completed all testing for our proposed underground mesh / blast on mesh.
- Testing methodology:
  - **STANDARD TESTING (DAILY TESTING PERFORMED AT OUR LABORATORY AT FACTORY)**
  - 1. Tensile testing of all wire.
  - 2. Tensile testing of SWR.
  - 3. Longitudinal Tensile testing of mesh strips, 1m width.
  - 4. Transverse Tensile testing of mesh strips, 1m width.
  - 5. Punching on the mesh.
  - 6. Corrosion testing on wire.

SPECIALISED TESTING - DROP TEST (Dynamic Testing)

- 7. 2 Ton drop test at height 100mm above the mesh.
- 8. 466 kg drop test at heights 100mm, 300mm, 500mm and 1000mm above the mesh.

UNDERGROUND MESH / BLAST ON MESH

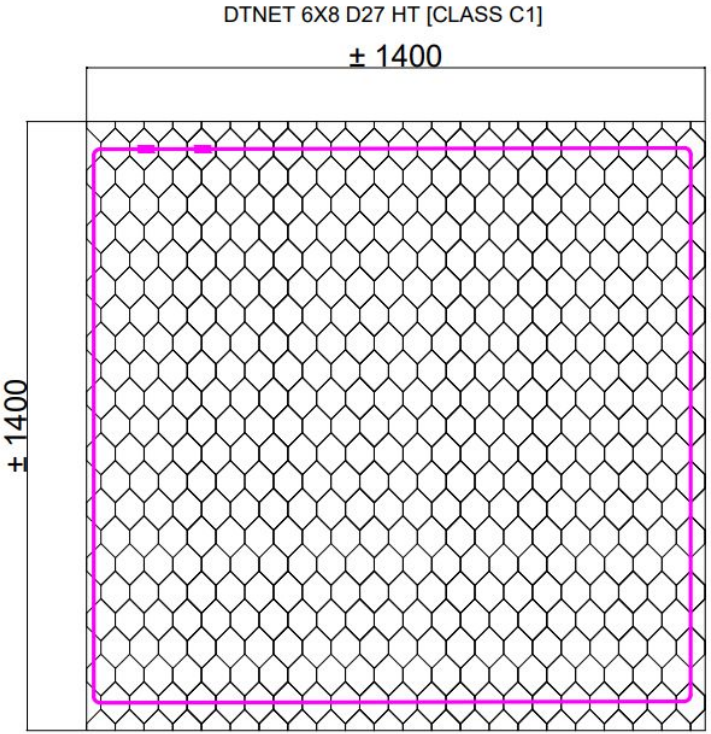
- **Third Party Testing:**
  - University of Bologna in Italy
  - CSIR in South Africa

MACCAFERRI MESH TESTED AND RESULTS

CLASS C1 – 265mm Sag

- No Damage on net after drop test

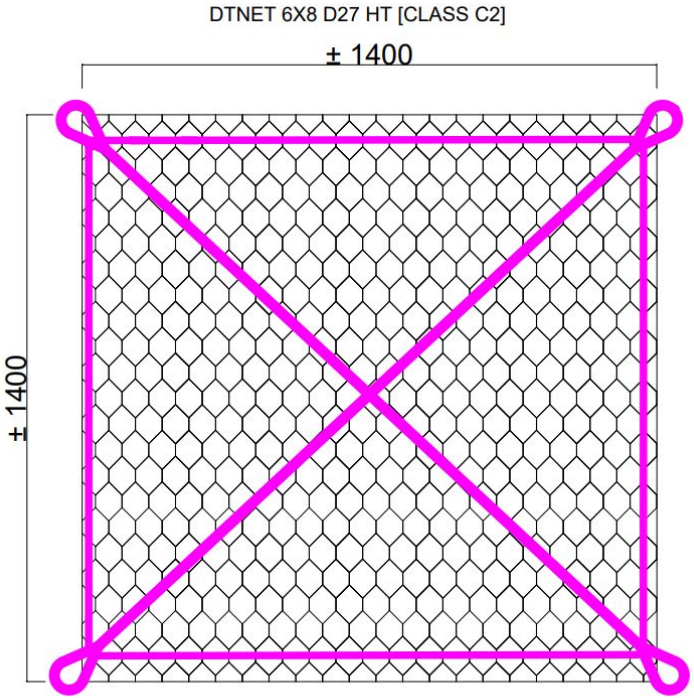
Product Description	Panel/sqm	Kg/sqm	Panel/Kg
DTNET GL 6x8 D2.2 HT 1.4x8 (Class C1)	11,2	2,25	25,20



CLASS C – 245mm Sag

- No Damage on net after drop test.

Product Description	Panel/sqm	Kg/sqm	Panel/Kg
DTNET GL 6x8 D2.2 HT 1.4x7 (Class C2) - Perimeter and Diagonal Rope	9,8	2,61	25,58

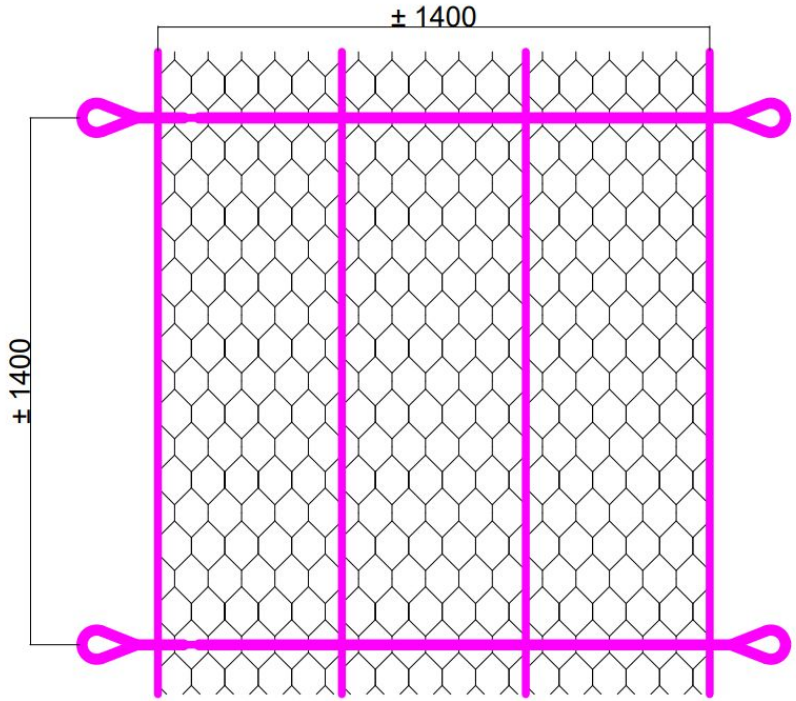


CLASS B – 300mm Sag

- No Danage on the net after drop test.

Product Description	Panel/sqm	Kg/sqm	Panel/Kg
STG HR 50 GLA 8127 HT 1.4x8	11,2	2,1	23,52

STG HR50 8127 D27 HT [CLASS "B"]

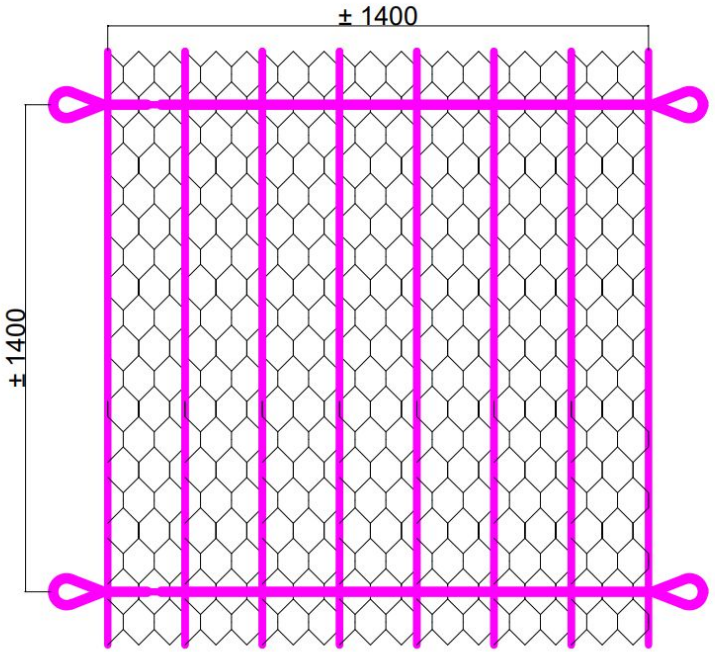


CLASS A1 – 300mm Sag

- No Damage on the net after drop test.

Product Description	Panel/sqm	Kg/sqm	Panel/Kg
STG HR 20 GLA 8127 HT 1.4 x 6 (Class A2)	8,4	3,08	25,87

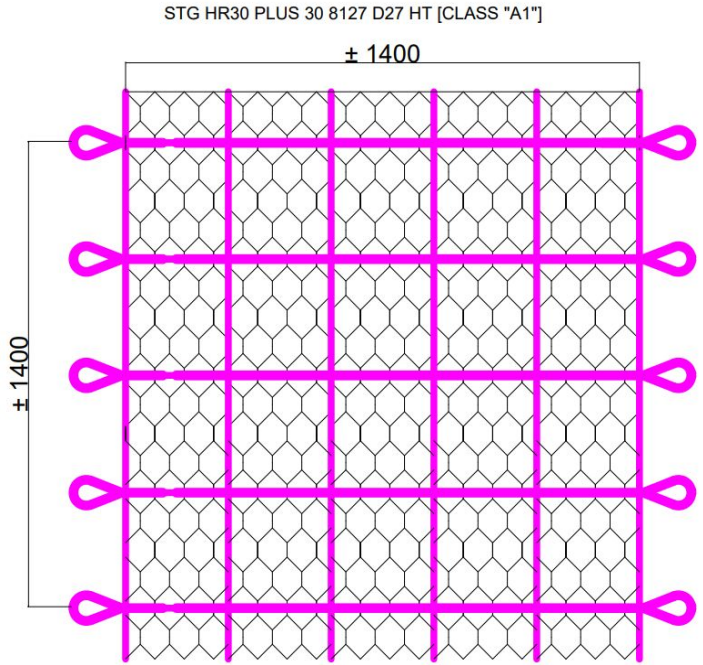
STG HR20 8127 D27 HT [CLASS "A2"]



CLASS A – 280mm Sag

- No Damage on the nest after drop test.

Product Description	Panel/sqm	Kg/sqm	Panel/Kg
STG HR Plus 30 GLA 8127 HT 1.4x4.5 (Class A1)	6,3	3,83	24,13



CONCLUSION

- SAG between 250 – 300mm.
- No damage on the net after each drop test.
- All mesh samples passed.