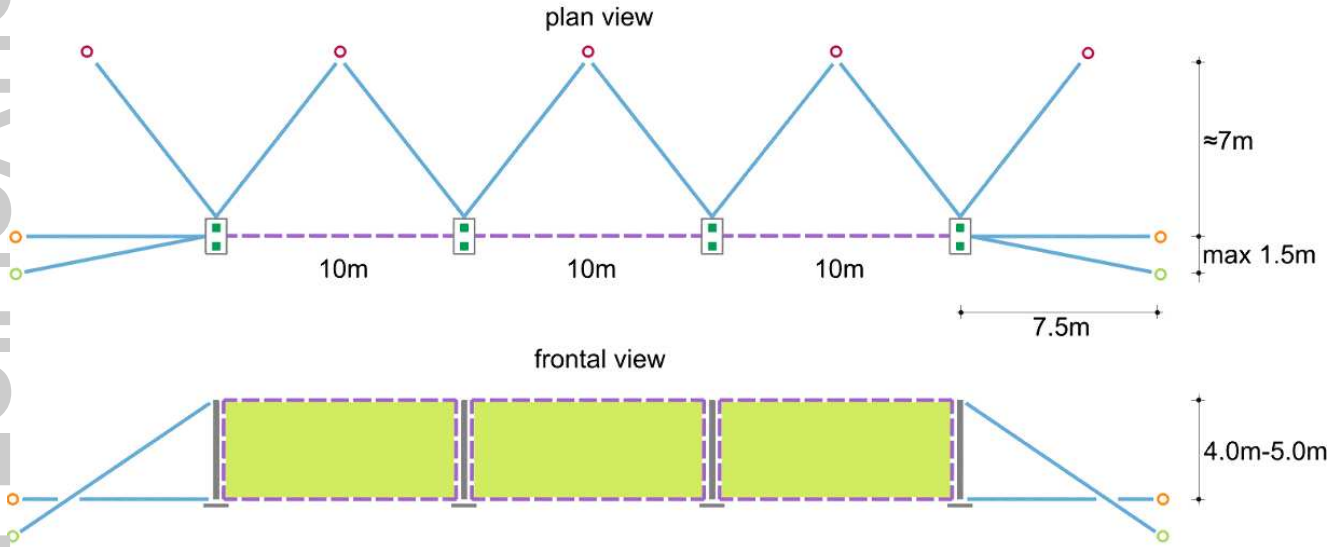


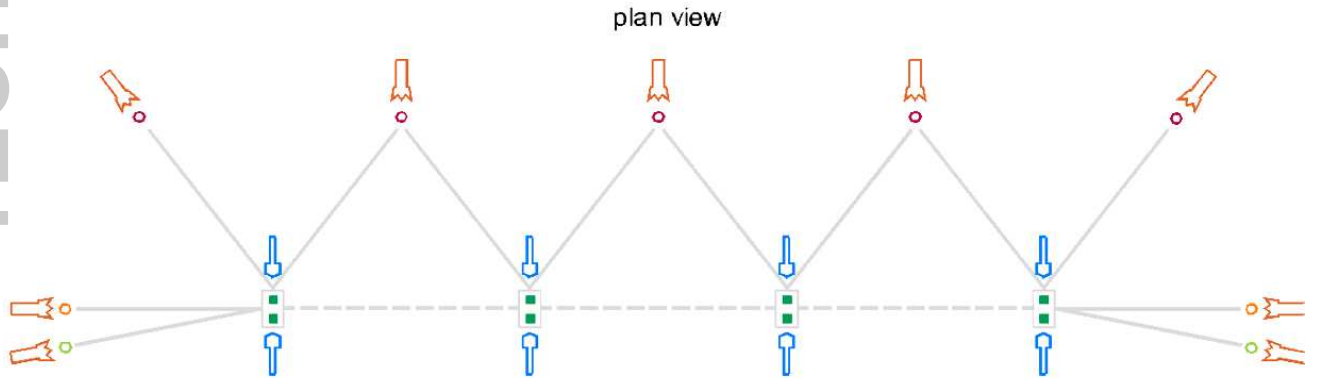
GEOMETRY



Legend

- Upslope anchors Ø.18mm
- Bottom lateral anchors Ø18mm
- Top lateral anchors Ø18mm
- ◆ Thread Bolt GEWI Ø28mm
- Zinc coated steel base plate S235JR
- Zinc coated steel post HEA160
- Retaining ropes Ø20mm-24mm
- Ring net panel (4 points of connection)

DRILLINGS AND ANCHORS



Technical specifications of foundations

Positions		○ Upslope anchors	○ Upper lateral anchors	○ Bottom lateral anchors	■ Thread Bolt			
Typologies		Wire rope Ø.18		Wire rope Ø.18	Ø.28mm BS1500			
Drilling diameter		↘ 90mm	↘ 120mm	↘ 90mm	↘ 120mm	↘ 51mm		
Length	Loose soil	4.0m	3.0m	5.5m	4.5m	5.5m	4.5m	2.5m
	Fractured rock	3.5m	3.0m	4.5m	4.0m	5.0m	4.0m	1.5m
	Rock	3.5m	3.0m	4.5m	4.0m	4.0m	4.0m	1.5m

↘ Down The Hole Hammers Ø.90mm-120mm ↘ Pneumatic Rock Drills Ø.51mm

2000 kJ Rockfall Protection System - Technical Specifications	
Type	2000 kJ ETAG 027
Energy Class*	5 (2000kJ)
Nominal Heights	4 / 4.5 / 5 m
Post Spacing	10 m
Category* (residual height)	A (>50% nominal height)
Interception structure	
Net Type	Ring Net with 4 connecting points
Weight	5.12 kg/mq
Zinc coating**	EN 10264-2 di classe A
Ø wire	3.5 mm
Ø wire strand	10.5 mm
Ø single ring	350 mm
Posts	
Type	HEA 160
Material	Steel S235JR
Weight	30.4 kg/m
Zinc coating***	EN ISO 1461
Ground Plates	
Type	Two-bores plate
Dimensions	500x300x12 mm
Material	Steel S235JR
Zinc coating***	EN ISO 1461
Bearing and Retaining Ropes	
Ø rope	from 20 to 24 mm
Type	AM+6x19 wires - 1770 N/mm ²
Safety Standard	EN12385-4
Zinc coating	EN 10264-2 class B
Dissipators	
Type	friction plate / rope Ø 24 mm
Energy Dissipation	from 200 to 250 kJ
Clamps and Shackles	
Clamps type	EN13411-5
Shackles type	High Resistance Bow Shackle
Zinc coating	EN ISO 4042
Wire Rope Anchors	
Ø upslope ropes	18 mm
Ø lateral ropes	18 mm
Rope type	1x19 or 1x37 / 1560 N/mm ²
Rope security standard	EN 12385-10
Zinc coating	EN 10264-2 class A
Ground Plate Anchors	
Type	Thread Bolt Ø 28 mm
Number of micropiles for each plate	2
Material	BSt500 500 N/mm ²
Certified Performance*	
SEL Energy 1 st Test	671 kJ
Residual Height - SEL 1 st Test	2.82 m
SEL Energy 2 nd Test	663 kJ
Residual Height - SEL 2 nd Test	2.13 m
MEL Energy	
Residual Height - MEL	2.23 m
Maximum Elongation	8.14 m
Forces acting on foundations	
Peak load on lower lateral anchors	265.40 kN
Peak load on upper lateral anchors	257.70 kN
Peak load on upslope anchors	187.70 kN
Peak compression load on ground plates	125.90 kN
Peak horizontal load on ground plates	149.30 kN

rev. 1.5 - 22/02/2010

* conforming to ETAG 027

** alternatives are Zn, Zn+Al, Zn+Al+vernice

*** alternatives are Zn, Zn+vernice