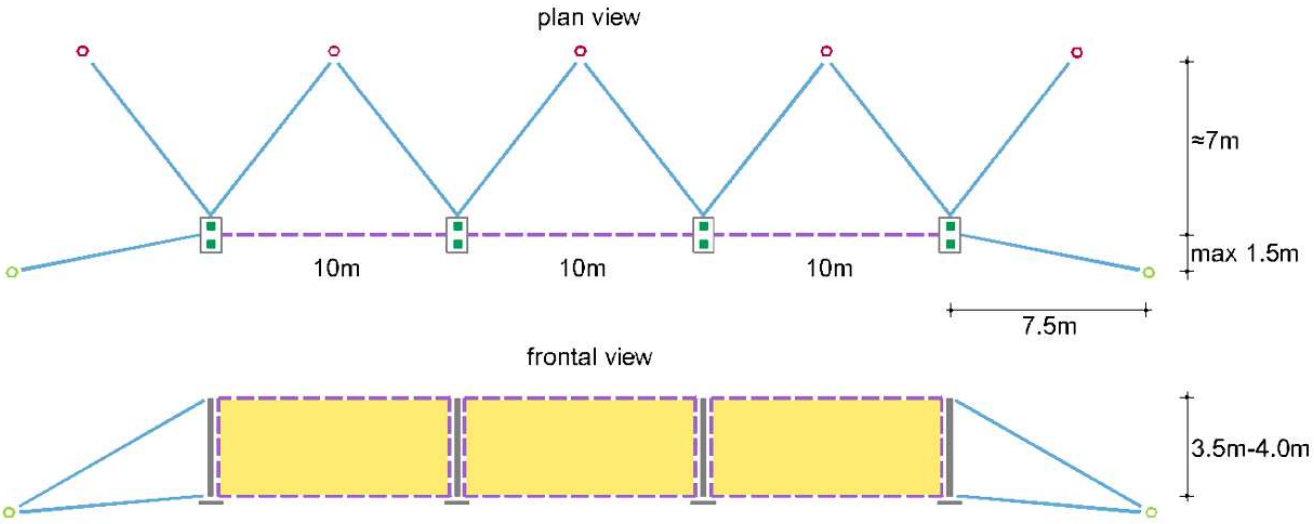
rockfalldefence

TECHNICAL SPECIFICATIONS

1000 kJ

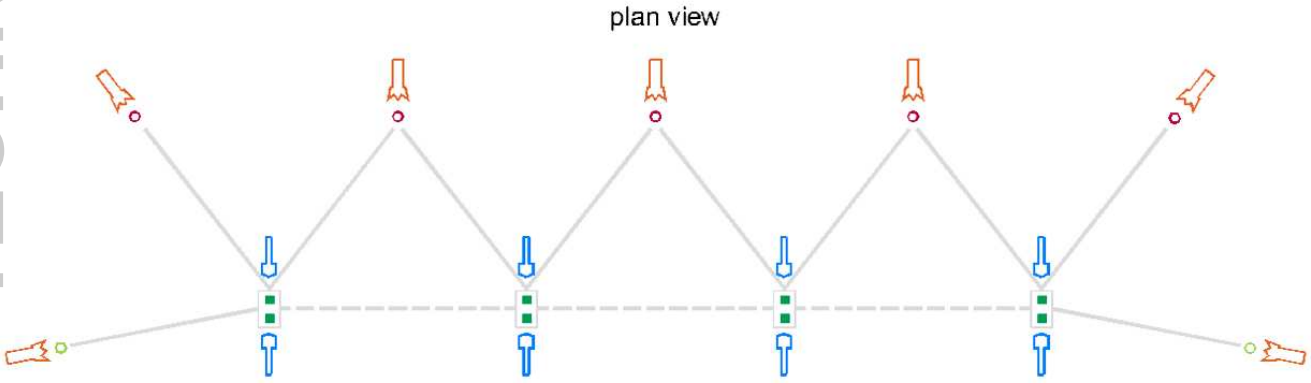
GEOMETRY



Legend

- Upslope anchors Ø.16mm
- Lateral anchors Ø.18mm
- Thread Bolt Ø.28mm
- Zinc coated steel base plate S235JR
- Zinc coated steel post HEA140
- Retaining ropes Ø.16mm-18mm
- Ring net panel (4 points of connection)

DRILLINGS AND ANCHORS



Technical specifications of foundations

Positions		Upslope Anchors		Lateral Anchors		Thread Bolt
Typologies		Wire rope Ø.16		Wire rope Ø.18		Ø.28mm BSt500
Drilling diameter		90mm	120mm	90mm	120mm	51mm
Length	Loose soil	4.0m	3.0m	6.0m	4.5m	2.5m
	Fractured rock	3.0m	3.0m	4.5m	4.0m	2.0m
	Rock	3.0m	3.0m	4.0m	4.0m	1.5m

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

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TECHNICAL SPECIFICATIONS

1000 kJ

1000 kJ Rockfall Protection System - Technical Specifications	
Type	**1000 kJ ETAG 027**
Energy Class*	3 (1000kJ)
Nominal Heights	3.5 / 4 m
Post Spacing	10 m
Category* (residual height)	A (>50% nominal height)
Interception structure	
Net Type	Ring Net with 4 connecting points
Weight	3.78 kg/m^2
Zinc coating**	EN 10264-2 class A
Ø wire	3 mm
Ø wire strand	9 mm
Ø single ring	350 mm
Posts	
Type	HEA 140
Material	Steel S235JR
Weight	24.7 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 16 to 18 mm
Type	AM+6x19 fili - 1770 N/mm^2
Safety Standard	EN12385-4
Zinc coating	EN 10264-2 class B
Dissipators	
Type	friction plate / rope Ø 18 mm
Energy Dissipation	from 100 to 300 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	16 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/mmq
Certified Performance*	
SEL Energy 1st Test	360 kJ
Residual Height - SEL 1st Test	2.45 m
SEL Energy 2nd Test	331 kJ
Residual Height - SEL 2nd Test	1.93 m
MEL Energy	**1166 kJ**
Residual Height - MEL	1.76 m
Maximum Elongation	8.38 m
Forces acting on foundations	
Peak load on lateral anchors	287.90 kN
Peak load on upslope anchors	171.80 kN
Peak compression load on ground plates	120.00 kN
Peak horizontal load on ground plates	144.00 kN

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* conforming to ETAG 027

** alternatives are Zn. Zn+Al. Zn+Al+painting

*** alternatives are Zn. Zn+painting