GEOBRUGG® ▲
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Safety is our nature

MINAX® 80/4 mesh made of high-tensile steel wire

THE MOST ECONOMICAL
DYNAMIC SURFACE SUPPORT

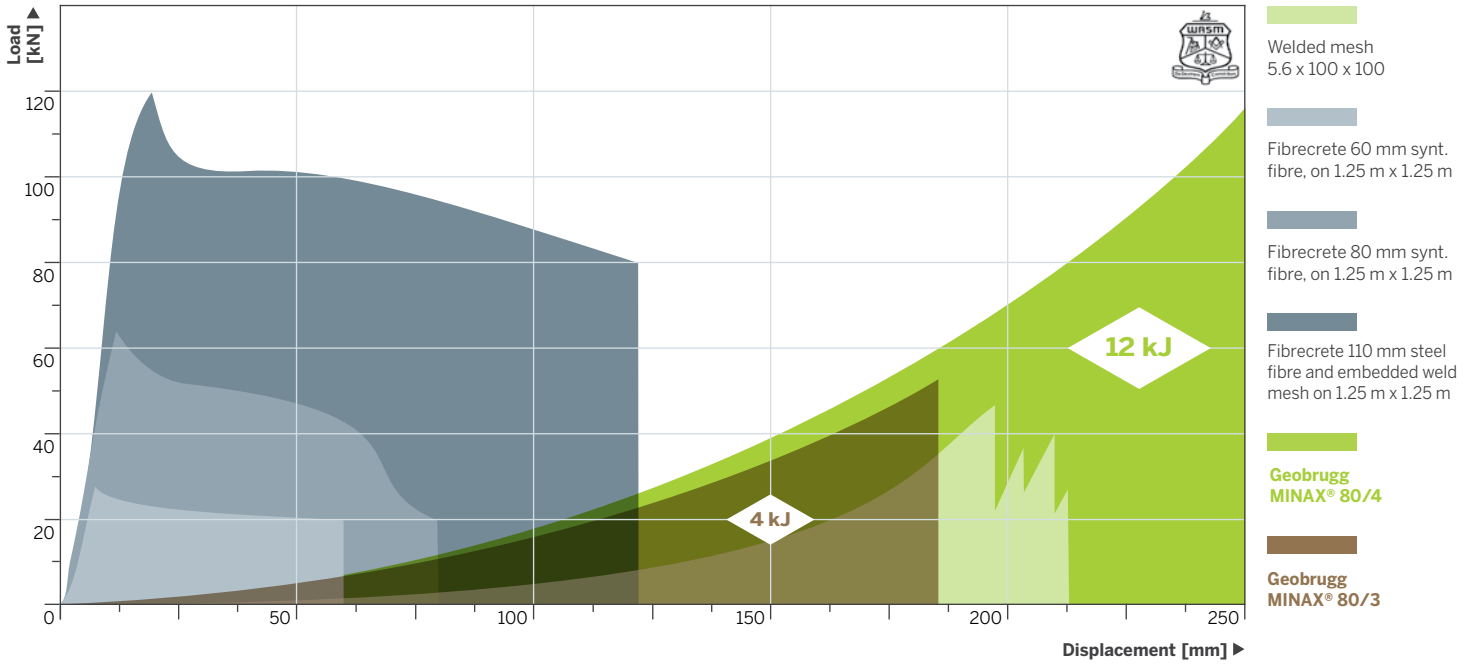# FOR THE MOST VALUABLE ASSET IN LIFE: OUR SAFETY.

Minax® 80/4 mesh provides surface support in rockburst conditions or squeezing ground offering both an efficient installation and reliable protection with the most competitive cost-performance ratio. It was developed to withstand high static loads and absorb dynamic impacts. In addition our mesh offers significantly higher static and dynamic capacity compared to mild steel mesh or shotcrete.

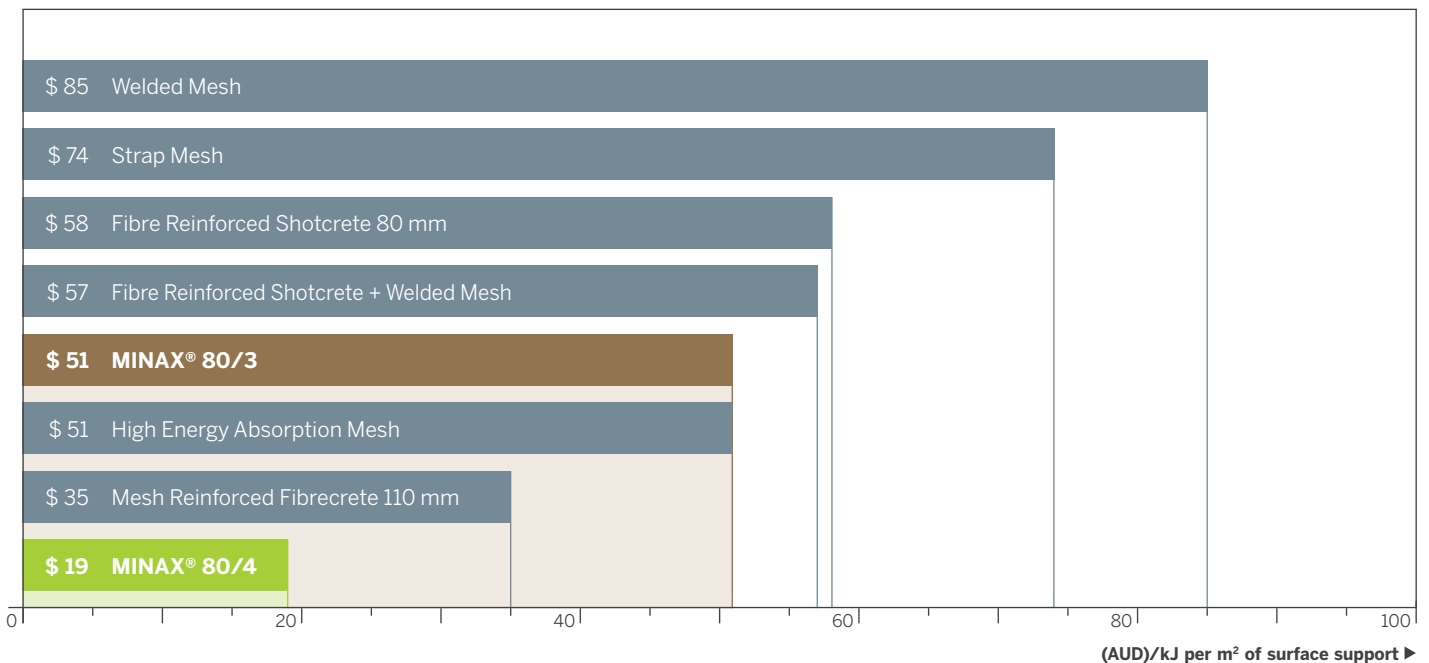# MINAX® 80/4 MESH – MADE TO WITHSTAND HIGHEST LOADS.

Results of quasi-static tests made by the Western Australian School of Mines (WASM):
MINAX® mesh with a wire tensile strength of 1770 N/mm^2 can carry very high static and dynamic loads (graph based on WASM results).

Performance: More load with MINAX® 80/4 mesh

Load [kN] ▲

Displacement [mm] ▶

12 kJ

4 kJ

Welded mesh
5.6 x 100 x 100

Fibrecrete 60 mm synt.
fibre, on 1.25 m x 1.25 m

Fibrecrete 80 mm synt.
fibre, on 1.25 m x 1.25 m

Fibrecrete 110 mm steel
fibre and embedded weld
mesh on 1.25 m x 1.25 m

**Geobrugg
MINAX® 80/4**

**Geobrugg
MINAX® 80/3**

Total installation costs (AUD) for 1 kJ energy capacity

Cost	Material
$ 85	Welded Mesh
$ 74	Strap Mesh
$ 58	Fibre Reinforced Shotcrete 80 mm
$ 57	Fibre Reinforced Shotcrete + Welded Mesh
$ 51	**MINAX® 80/3**
$ 51	High Energy Absorption Mesh
$ 35	Mesh Reinforced Fibrecrete 110 mm
$ 19	**MINAX® 80/4**

(AUD)/kJ per m² of surface support ▶

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MINAX® 80/4 BRINGS TOP RESULTS – DUE TO BEST COMPONENTS.

Less overlap, increased bolt spacing, greater savings

Knotted ends at the edges of the mesh allow minimized overlapping on the rock surface.
This leads to a highly effective installation saving both on mesh and time.

Cross-section example

3 m

11 m

1.2 m

3 m

Welded mesh

3 m

11 m

1.2 m

1.5 m

• 4 sheets overlap
• 6 more bolts used

MINAX® 80/4

3 m

1.5 m

1.5 m

• 20% less mesh
• Fewer bolts needed
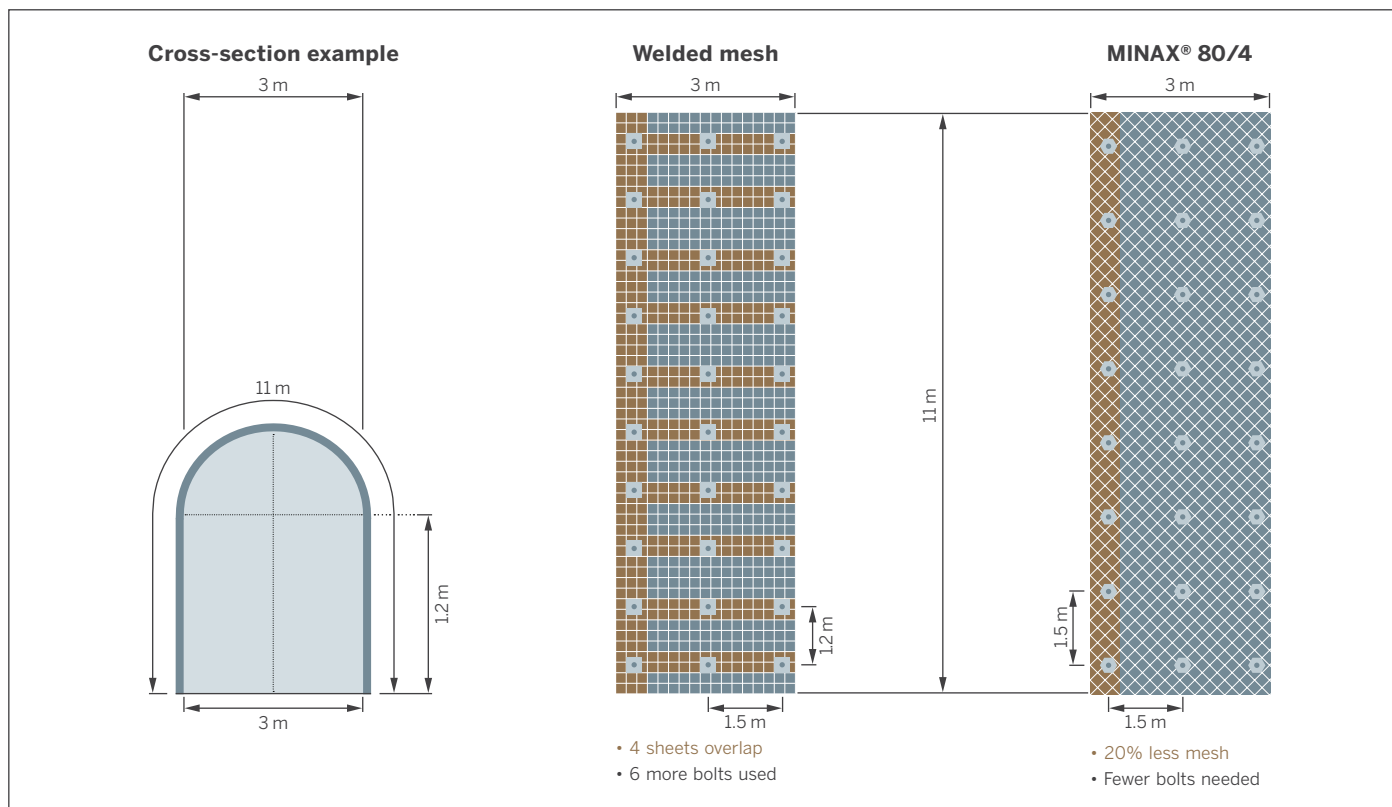
Additional components for the MINAX® 80/4 mesh

G-Plate®
For optimal load transmission from the rock bolts to the MINAX® mesh. The special spike plate grabs the mesh in 6 positions assuring optimal load transfer, also during blasting works.

T3 connection clips
For a tool-less connection the T3 clip connects the mesh when necessary, ensuring 100% load transfer.

MESHA® installation handler
For a fully mechanized installation of Geobrugg mesh in one working process. The MESHA® can be retrofitted to any development jumbo or bolting machine, without losing a boom for drilling.

QUALITY YOU CAN RELY ON.

Foundation for our solutions is steel wire with a high tensile strength of minimum 1770 N/mm². Compared to mild steel wire our high-tensile wire offers at least three times higher tensile strength. It is characterized by high mechanical resistance, very high energy absorption capability and long life. Designed specifically for the underground mining industry, MINAX® 80/4 offers unparalleled quality through performance, that is synonymous with the Geobrugg name worldwide. We provide MINAX® 80/4 with tailor made corrosion protection solution taking into account your specific mining conditions.

The MINAX® 80/4 mesh provides the following features:

High-tensile steel wire
For high load capacity: Both static and dynamic capacities (e.g. while blasting) are higher compared to other surface support meshes/nets.

Balanced stiffness
Very high load capacities (both static and dynamic) with optimal deformations, not endangering tunnel clearance.

Rhomboidal chain-link structure
For easy handling and storing: Manual and mechanized installation by unrolling with any mechanized technology.

Low weight
For fast installation: Very light relative to its strength due to the high-tensile wire. This makes manual or mechanical installation very easy and improves the occupational health and safety.

Knotted ends
For maximum stability at the edges: Profit from minimized overlapping, optimized number of rock bolts and no sharp edges.

Cutting edge corrosion protection
Whether hot dip galvanized, ULRACOATING®, SUPERCOATING®, stainless steel, PET coated wire or more: After our analysis of the environmental conditions in your mine, we offer the corrosion protection solution, according to your specific needs.

ALWAYS READY
FOR YOUR REQUEST.

What makes our systems particularly economical, is Geobrugg's global network – and therefore the local availability of our products. With close proximity to our customers we produce meshes on four continents with precisely controllable state-of-the-art technology. This not only allows top quality at a very attractive price, but also reduces the logistic expenditure, enables short delivery times and provides flexibility to adjust the level of capacity to the customers' needs.

Geobrugg headquarters in Romanshorn, Switzerland: MINAX® 80/4 mesh rolls on stock.

TECHNICAL DATA:

SPECIFICATION	MINAX® 80/4 MESH
Mesh shape	Rhomboid
Mesh opening	80 mm (+/- 3 %)
Mesh geometry	102 x 177 mm (+/- 3 %)
No. of meshes transversal	9.8 pcs/m
No. of meshes longitudinal	5.6 pcs/m

STEEL WIRE	
Wire diameter	4 mm
Total height of mesh three-dimensional	15 mm (+/- 1 mm)
Tensile strength of steel	min. 1770 N/mm^2
Material	High-tensile steel wire
Tensile strength of a wire	22 kN

LOAD CAPACITY	
Punching load 300 x 300 mm plate	105 kN (according to WASM tests)
Tensile strength of mesh longitudinal	190 kN/m

MESH ROLLS	
Mesh edges	Mesh ends knotted
Roll width	1.5 m – 3.5 m
Roll length	As per site requirement
Total surface per roll	Various
Weight per m^2	2.6 kg/m^2

CORROSION PROTECTION	
Composition	According to mine specific environment
Coating weight	According to EN 10264-2

Small deviations from mesh geometry and other modifications are subject to change without notice.

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More information is available on our website:
www.geobrugg.com/mining

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Your local Geobrugg specialist:
www.geobrugg.com/contacts