

BRUGG
Geobrugg 



SAFETY IS OUR NATURE

We combine experience with innovation

SINCE 1951 SAFETY IS OUR TOP PRIORITY

As an engineering expert and technology leader, we develop protection systems made of high-tensile steel wire that set standards worldwide. Our solutions are flexible, durable and easy to install - for maximum safety with minimum effort.

SAFETY IN ACTION

Whether standard systems or customized solutions, our high-tensile steel wire nets and matching services monitor and protect against natural hazards and coastal erosion.

They ensure safety in mining and tunneling as well as on motorsports tracks, in industry, and in test facilities.

SOLUTIONS	Natural hazards – roads, railways, infrastructure	Mining	Motorsports – Racing and test tracks	Industrial & Maritime Infrastructure	Coastal areas	Further information on page
Rockfall protection	x	x				6
Barriers remote monitoring	x	x				17
Slope stabilization	x	x				6
Debris flow & shallow landslide protection	x	x				7
Avalanche prevention	x	x				7
Road fencing	x	x				7
Motorsport solutions	x		x			12
Snapback protection				x		14
Impact protection				x		14
Surface support for mining / tunnels		x				10
Coastal erosion protection					x	8
Services: Design support	x	x	x	x	x	16
Services: Installation instructions and final inspection	x	x	x	x	x	17
Services: System maintenance and monitoring	x	x	x	x	x	17

[Learn more](#)



INNOVATION WITH EXPERIENCE

We set standards – for safety built to last.

DRIVEN BY PURPOSE

TESTED UNDER REAL CONDITIONS

We focus on maximum safety: our protection systems are tested at full scale under real conditions, including crash and tear tests, in accordance with the world's strictest standards – proven in practice when it matters most.



MAXIMUM STABILITY WITH LESS MATERIAL

We use the latest technology: thanks to high-tensile steel wire with a tensile strength of over 1770 N/mm², our systems offer maximum stability while using fewer resources.



ONE-ON-ONE CONSULTATION FOR SAFE SOLUTIONS

We take safety personally: we offer individual advice and develop solutions that are perfectly tailored to your requirements.

INNOVATION THANKS TO GLOBAL RESEARCH

We continuously develop and optimize our protection systems to make the world a safer place. Together with leading universities and institutions, we set new standards.

MILESTONES OF OUR RESEARCH



1951

Foundation stone for our protection systems: first avalanche barriers made of wire ropes

1962

Carrying out the first rockfall impact tests

1999

Development of the TECCO® system: The first slope stabilization system with a free anchor grid



2001

First world record with 3000 kJ: After years of experience with rockfall field tests



2003

Rockburst tests confirm: MINAX mesh sets new standards in securing mining tunnels.

2005

Principles for the planning and calculation of debris flow barriers protection systems

2008

First motorsport protection systems tested. In 2018 our systems were certified to FIA standard.



2016

First coastal protection installation. Research into stainless steel that can resist demanding seawater environments.

2017

Prototype of the current monitoring system GeobruGG GUARD

2022

Development of snapback protection for ports



2023

Start of the BIM (Building Information Modeling) research project smartROCK for digital geotechnics

2025

World record and certification: RXE rockfall barrier 12500 kJ

[Learn more](#)



NATURAL HAZARDS

Dynamic challenges require intelligent protection systems.

For over six decades, we have been developing protection systems to control rockfall, erosion, avalanches, and debris flows.

What began as avalanche protection has grown into comprehensive approaches to natural hazard mitigation. From planning to final inspection, we rely on proven solutions, geotechnical analysis, and full-scale field testing.



ROCKFALL PROTECTION

With our portfolio of rockfall protection solutions, we offer the right barrier for every challenge. Whether it's limited space, complex hazards or high energy

impacts - our systems offer reliable protection. They are easy to install, can be repaired for years and are reliable, even under extreme conditions.



[Learn more](#)



SLOPE STABILIZATION

Our safety systems efficiently stabilize slopes, regardless of whether they consist of rock or loose soil. They blend seamlessly into the environment and enable cost-effective installation.



[Learn more](#)



DEBRIS FLOW & SHALLOW LANDSLIDE PROTECTION

Before debris flows become a threat, flexible barriers reliably capture solid material such as rocks and driftwood. They secure both narrow and wide channels.

Our landslide barriers retain mud masses and also provide protection against rockfall – all tested at full scale under real conditions.

[Learn more](#)



AVALANCHE PREVENTION

Snow nets prevent avalanches directly in the starting zone. Our systems are light-weight and easy to install, and they also provide protection against rockfall up to 500 kJ during snow-free periods.

[Learn more](#)



ROAD FENCING

Our mobile road safety fence offers reliable protection for people and infrastructure – whether at construction sites, roadblocks, or public events. Fast to install and flexible in use.

[Learn more](#)



COASTAL PROTECTION

Effective protection against coastal erosion and underwater hazards

More and more people are living near the coast. Increasingly extreme weather events and rising sea levels make protecting infrastructure from these dangers more important than ever.

These hazards require targeted protective measures. We have developed highly efficient protection systems for this purpose. They adapt flexibly to local conditions and offer solutions such as scour protection, sediment control and coastal protection. They can also be combined with proven methods such as

rock armour (riprap), sandbags or precast concrete blocks - for coastal protection that stands up when it counts.

[Learn more](#)



COASTAL EROSION PROTECTION

The sophisticated and adaptable solution to permanently protect coasts from erosion. A high-tensile, marine-grade stainless-steel mesh, tensioning hardware, a geo-textile layer, and regional rock ensure stability. In contrast to solid rock armour,

our solution is characterized by durability, robustness, stability, and a high degree of reliability. Furthermore, it can be greened at the top of the slope to blend into the surroundings.



MOBILE EROSION PROTECTION

This mobile, flexible system enables rapid erosion protection – even in remote coastal areas. Pre-assembled on safe ground, filled with local rock, and pretensioned,

it can be placed using a mobile crane or barge – without major site preparation or intervention. The ideal solution for sensitive, hard-to-reach coastal zones.



SAFETY UNDER WATER

Especially developed for underwater use, the durable system protects water infrastructure such as harbor walls, bridge piers, pipelines and data cable from scouring and damage.

Compact, flexible cells made of high-tensile stainless-steel mesh and local rock adapt to the seabed and provide an ideal habitat for marine fauna and flora.

MINING

More safety, more efficiency - for open-pit and underground mining

Whether underground or open-pit mining, access roads or tunnels - we offer comprehensive protection systems for all problems.

Our systems protect against rockfall, rock and landslides as well as fall-of-ground or heavy rockburst conditions. They are flexible, efficient and proven - for maximum

protection of people and infrastructure. Reliable safety when it counts.

[Learn more](#)



UNDERGROUND MINING

Our high-tensile steel mesh MINAX® has proven itself in underground mining worldwide and provides reliable protection against fall-of-ground or dynamic rockburst events. Thanks to its low

weight and customized dimensions, it is easy to install - even in challenging areas.



OPEN-PIT MINING

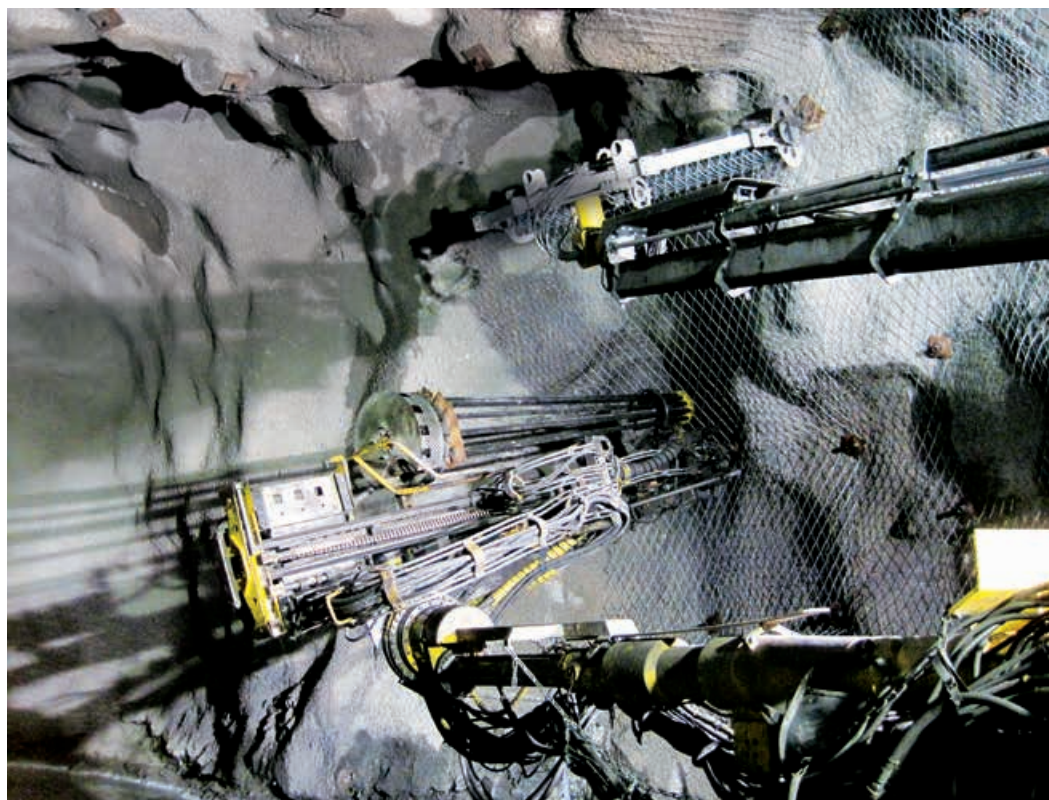
Rockfall, landslides and slope instability endanger people and infrastructure in open-pit mining. We offer tried-and-tested protection systems and support our customers with analysis, design, instal-

lation and acceptance - worldwide. We also develop individual solutions precisely according to local requirements. For safety that lasts - even under extreme conditions.



Dimensioning
TOOLS

Geobrugg
GUARD



MOTOR-SPORT

Adrenaline and safety combined - we protect spectators, drivers and crews on race tracks worldwide.

We have been setting new standards in racetrack protection since 2008. As the world's leading supplier of FIA-approved safety fences and barriers, we protect more than 50 racetracks.

Our innovative safety fence systems protect spectators and staff from debris, offer the best visibility for viewers and can be installed quickly - for permanent race tracks and temporary city courses.



[Learn more](#)



FIA DEBRIS FENCE

Our FIA-homologated fences provide maximum protection without compromising racing excitement. Extensively tested, they ensure the highest level of safety. The optimized post spacing (6 m)

improves spectator visibility, reduces post collision risks, and lowers environmental impact thanks to fewer foundations and less material.



MOBILE FIA DEBRIS FENCE

Mobile safety fences offer safety for city circuits or flexible track layouts - ideal where space is limited. For all systems, we support our customers right from the

start with expert advice to find the optimum safety solution.



PIT WALL

Our pit wall protects the pit crew while ensuring an unobstructed view. The system combines a pit wall with a pit wall fence on top. Alternatively, we offer a

version that can be mounted on existing structures – for safe and well-designed motorsport solutions.



SMART DETAILED SOLUTIONS

We offer more than just protection - the details make the difference. Marshal posts, gates, camera openings and digi flag fixations fit seamlessly into the sys-

tem and guarantee safety and comfort at critical points.

IMPACT PROTECTION

Protection against dynamic impacts, primarily in industry - from feasibility studies and engineering up to installation.

Whether in chemical plants, test stands or storage facilities - our high-tensile steel wire nets and cages protect people and infrastructure from flying debris, shrapnel or other objects with high impact forces.

We develop customized solutions, from fall protection on buildings and bridges to protection systems for test stands or concrete plants. Our team of expert engineers, structural engineers, and designers plan every project with precision

to ensure reliable safety in demanding environments worldwide and in urban areas.

[Learn more](#)



SNAPBACK PROTECTION

For port and ship crews, snapping mooring lines that recoil at speeds of up to 900 km/h pose a deadly risk. In unique large-scale tests, we have realistically investigated this phenomenon for the

first time in collaboration with a partner company. We offer the world's first tested solution to significantly reduce the risks of mooring line snapback.

[Learn more](#)



EXPLOSION PROTECTION

Our systems protect production facilities and personnel from debris and shrapnel. One example is steel structures equipped

with high-tensile steel wire mesh. These solutions have already proven effective in chemical plants and industrial facilities.



EXPERTS IN ENGINEERING

We develop custom-fit protection systems for complex requirements. For example, we created a tailored solution for timber loading operations in Switzerland and secured the SBB maintenance

center in Biasca against rockfall (picture above).

Our strength: we integrate our systems into existing infrastructure and adapt them to individual needs.

OUR SERVICES AT A GLANCE

Every hazard situation is unique – our commitment is to deliver the right solution, whether standard or custom-made.

1



Consulting - experts in engineering

Our experts will help you find the right solution.

- › Alternative solutions
- › Advantages and disadvantages
- › Cost-benefit ratio
- › Training courses and workshops



2



Planning support

We plan your custom solution from A to Z.

- › Site inspection and assessment
- › Risk evaluation and analysis
- › Solution design, e.g. using our dimensioning tools
- › Tailor-made solution

TOOLS

ATTERO®, RUVOLUM®, SPIDER®, DEBFLOW®, SHALLSLIDE®, WAVEWISE®

[Learn more](#)



3



Production

We manufacture efficiently and cost-conscious.

- > Tailored production
- > Individual delivery planning
- > Cost-efficient and on-time delivery



4



Realization

We realize your solution on site:

- > Specific adjustments
- > Assembly instructions on site

5



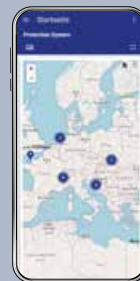
Final inspection

Our experts thoroughly check the new protection solution.

- > Project inspection
- > Final inspection and acceptance



Geobrigg
GUARD



6



Structure maintenance and monitoring

To ensure your protection systems perform efficiently in the long term.

- > Local point of contact
- > CONSYS expert training course
- > Inspection
- > Laboratory analyses
- > Spare parts
- > Upgrades of older systems
- > Remote monitoring with Geobrigg GUARD

[Learn more](#)



SUSTAINABILITY THAT MATTERS

We follow a holistic strategy that takes all three pillars of sustainability into account – environmental, social, and responsible corporate governance (ESG). Our environmental efforts focus on reducing resource consumption and minimizing emissions.



SUSTAINABLE THROUGH INNOVATION

Thanks to their intelligent design and durable corrosion protection, our solutions made from high-tensile steel wire offer maximum safety with a minimal environmental footprint.

Resource-efficient

The steel wire with over 1770 N/mm² tensile strength enables up to 70% material savings compared to conventional systems.

Durable

Our corrosion protection lasts for generations, reduces maintenance costs and extends the service life of the systems.



Repairable

Thanks to modular design and the selective replacement of components, structures can be used more efficiently, reducing the need for new builds.

Sustainable life cycle management

Professional inspection and maintenance extend the service life of structures and save resources - supported by our training courses and the CONSIG course for experts (more on this under "Services").

Landscape-friendly integration

The natural environment is largely preserved. Thanks to their lightweight construction, the systems fit effortlessly into the landscape and only minimally detract from the overall picture.

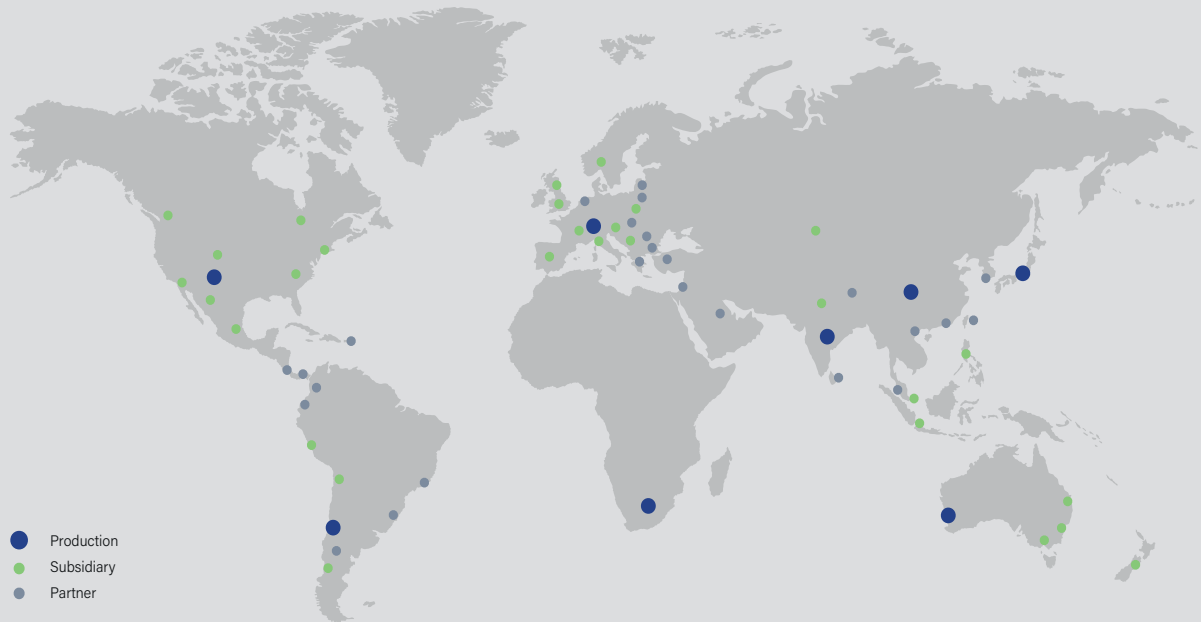


[Learn more](#)



WORLDWIDE CLOSE TO YOU

Geobrugg is an independent company within the BRUGG Group with subsidiaries and qualified partners in over 50 countries.



Globally present – personal support on site.
Find your local contact online.

[geobrugg.com/contacts](https://www.geobrugg.com/contacts)

