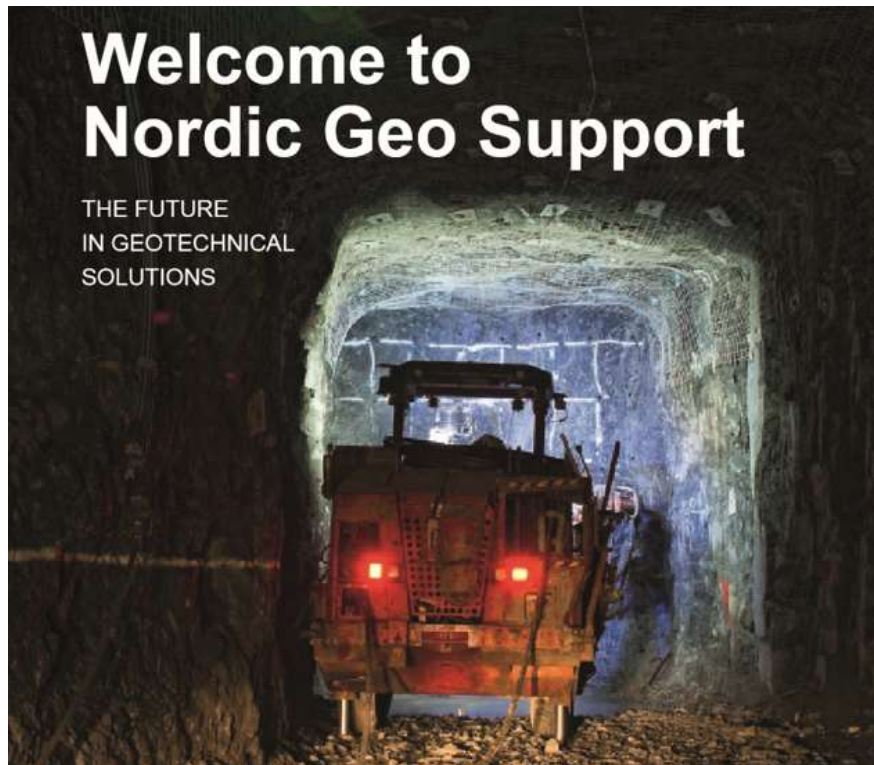




Nordic Geo Support

Products for a Sustainable World

About us

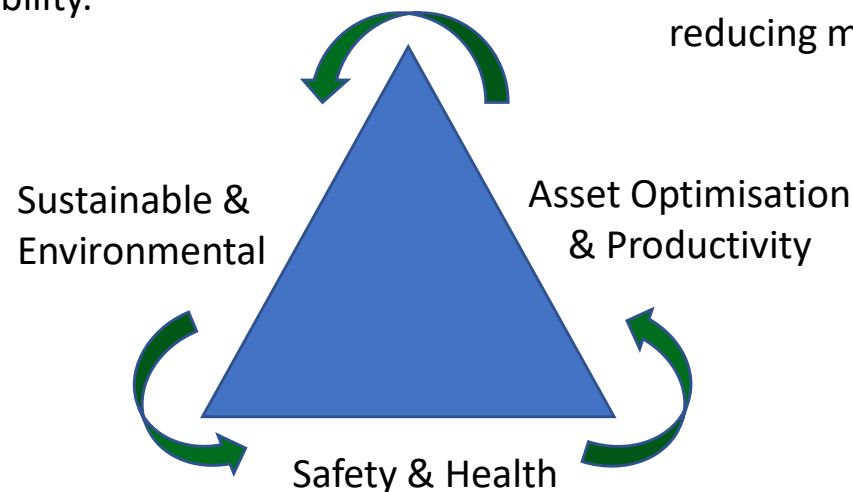


- Originating from the Nordics with leading edge technical solutions for global customers.
- We specialise in innovative products with an emphasis on improving sustainability for mining, tunnelling and construction industries.
- Partnering with leading technology companies globally for improving our world's future.
- Nord Geo Support and its partners are focusing on bringing the production of technology closer to customer, reducing the global CO₂ footprint and reliance on global supply chains.

Reducing Project Impacts

Sustainability & Environmental: Solutions that drastically reduce CO₂ emissions in manufacture and transport and energy usage as well as offering longer life cycles and reusability.

Asset Optimisation & Productivity: Solutions that are faster, more efficient, easier to use and reusable, optimising advance rates and ore recovery as well as reducing maintenance costs.



Safety & Health: Solutions that remove humans and equipment from unsecured ground, faster ground securing, ensuring stability and consolidation, reduce manual operations and weight in manual handling.

Business Snapshot



Increasing focus by miners on Rapid Development

Increasing focus by miners on cost control

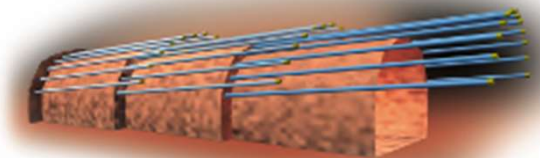


Continued focus by miners on safety

Production mining – continued need for support infrastructure expansion.

Need to get services to the face as fast as possible

Less environmental impact – smaller footprints.



NordicGEO Friction Bolt HS

Optimising bolt performance



Background

- Many mines and tunnels use friction bolts and stabilisers for immediate rock support
- Seen as a single pass the friction bolts are rammed into the undersized pre-drilled hole as an interference fit. The bolts follow the contour of the hole
- The temporary nature of the immediate support limits performance and life of the bolt. Requiring replacement and maintenance
- Improved load characteristics and optimal bolt life through innovative thixotropic grout socks that are drenched before installation with the split friction bolt..



| | Standard Friction Bolt | Nordic GEO Friction Bolt HS |
|---|------------------------|-----------------------------|
| Nominal Hole Diameter | 45mm | 45mm |
| Failure strength of steel | 18 ton | 18 ton |
| Pull out resistance Ton/meter embedded in rock | 4 ton / meter | 10 to 12 ton / meter |
| Maximum Pull out resistance Ton/meter embedded in rock | 4 ton / meter | 15 ton / meter |
| Safety Factor at Failure | 0,877 | >2,094 |

Value Propositions

- Fast and easy installation
- Easier to install than resin capsules bolts
- Optimised load capacity
- Optimised life of friction bolt
- Full length of embedded steel is utilised
- Capable of holding 3 to 4 times the rock mass compared to a standard friction bolt / stabiliser
- Less required maintenance
- Improved performance/cost ratio

NordicGEO Friction Bolt HDG

Reduce replacement costs, improve safety and productivity



Background

- Many mines and tunnels use friction bolts and stabilisers for immediate rock support
- Seen as a single pass the friction bolts is rammed into the undersized pre-drilled hole as an interference fit. The bolts follows the contour of the hole
- The temporary nature of the immediate support limits performance and life of the bolt. Requiring replacement and maintenance
- Improved life through the galvanisation of the split friction bolt..



Facts

| Facts | |
|-------------|--|
| Users: | Underground mines and tunnels |
| References: | Global |
| Focus | Longer life, safety |
| Impact | Medium: Reduces maintenance costs, particularly in aggressive ground zones.. |

Value Propositions

- Fast and easy installation
- Increased life of standard friction bolt
- Full length of embedded steel is utilised
- Lower required maintenance and replacement



NordicGEO Friction Bolt SS

Optimised bolt life in highly aggressive ground conditions



Background

- Many mines and tunnels use friction bolts and stabilisers for immediate rock support
- Seen as a single pass the friction bolts is rammed into the undersized pre-drilled hole as an interference fit. The bolts follows the contour of the hole
- The temporary nature of the immediate support limits performance and life of the bolt. Requiring replacement and maintenance
- Longest life for friction bolts in aggressive ground conditions.



Corrosion on standard bolting



Stainless Steel Friction Bolts

| Facts | |
|-------------|--|
| Users: | Underground mines and tunnels |
| References: | Nordic Geo Support Africa |
| Focus | Longer life, safety |
| Impact | Medium: Reduces maintenance costs, particularly in aggressive ground zones.. |

Value Propositions

- Fast and easy installation
- Optimal life of standard friction bolt
- Full length of embedded steel is utilised
- Ideal for aggressive ground conditions.
- Lowest required maintenance and replacement

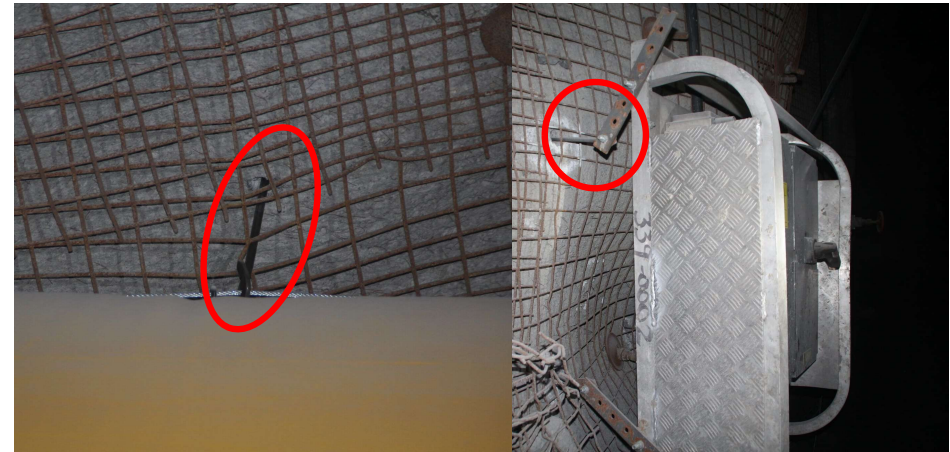
Re-usable Service Hangers

Reduced costs and improve productivity



Background

- Traditionally service hangers are grouted into position as a single use item, waiting time to load the hook reduced installation times
- Depending on the environment service hangers can easily corrode reducing their weight bearing performance
- New technologies offer fast to install methods, optimized protection to corrosion from aggressive ground conditions
- Blast hook also available, reducing steel impact on downstream operations (crushers, mills and conveyers).



Facts

Origin: Sweden

| | |
|-------------|--|
| Users: | Underground mines, tunnels and other construction areas. |
| References: | Scandinavian mines and construction sites. |
| Focus | Environment and sustainability |
| Impact | Good: Speed to install and load bolt, reusable, reduction in operational cost, reduction of waste. |

Value Propositions

- Re-usable
- Quick to install for immediate services support
- Expansion shell is plastic so no corrosion
- Can be delivered in galvanised form for highly aggressive conditions
- Design can be changed to customer needs

Blast Hooks Cleaner ore recovery, reduced downstream maintenance

- The all plastic design means that crushers and conveyers have less exposure to wear and tear
- further reducing operating costs.
- Reduction of ore contamination from steel