

## CURING **PERFORMANCE.** TOGETHER

We are an international producer of high-performance ground support products for the mining, construction and energy industries.

Our products are engineered to provide safety, efficiency and certainty to your operations wherever you are.

We can provide you with tailored solution offerings for a variety of applications whatever it takes.

We can help you increase project performance and overcome application challenges through a flexible product portfolio with a wide range of differing characteristics, wherever you go.



# NEXT GENERATION BOLTING.

We are the leading innovator in total solutions for rock bolting. Our rock bolting solutions reduce manual handling requirements and improve installation efficiency.

One Step Bolting technology combines leading-edge and high-quality, high-strength products to make rock bolting safer, faster and more efficient.

We combined the advantages of our self-drilling anchor (SDA) bolts and our high-performance, injectable, twocomponent bulk resin grouts to create a unique offering for the mining and construction environments.

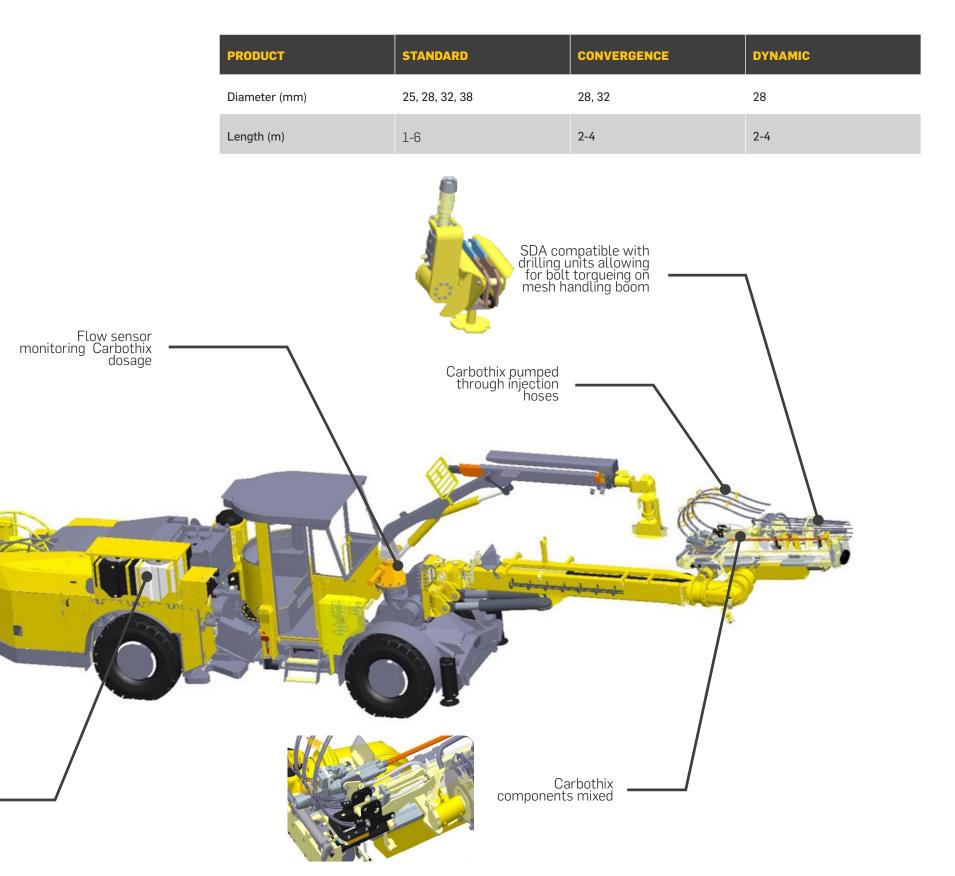
This technology reduces manual material handling and improves overall installation efficiency.

The immediate bonding of the resin makes it possible to load the bolts without leaving the borehole, dramatically increasing bolting speed and worker safety.

You can source the complete package from us, minimising operational delays, simplifying supplier interface and reducing project costs.

### **CONVERGENT AND DYNAMIC BOLTING**

Our high quality standard SDA and convergence bolts are available in various lengths that can be extended, using extension couplings. Our bolts can also be used in combination, to meet rock support design requirements.



## ONE SUPPLIER. THE ULT MATE SOLUTION.

Managing project risks comes at high cost. Our One Step Bolting technology brings you product certainty, reduces project costs and improves your safety on site.

We are the only provider on the market that offers the complete solution for your underground challenges.

We leverage our SDA bolts and Carbothix technologies, ensuring the highest safety and efficiency in the mining and tunnelling environments.

Dynamic, convergent and variable rock conditions, such as fractured and loose rock, are easily overcome without incidence.

One Step Bolting technology enables you for full automation of the bolting cycle, reducing worker exposure to harmful and hazardous situations and decreasing installation time in the excavated areas.

> Rig on-board resin tanks holding Minova two component Carbothix resin

## OUR ONE STEP PRODUCTS.

Our engineers and chemists work hard to develop the right solution for you.

## **SDA BOLTING TECHNOLOGY**

Our SDA bolting technology is designed to improve installation times and to address hole collapses when used in fractured ground. It is a flexible system that features a load-bearing hollow bar/bolt that is encapsulated by a grout body.

The bar/bolt is used as the drill rod, transferring the energy during drilling. Flushing may be achieved with air, water or simultaneously improving productivity by using the single pass drilling and grouting method.

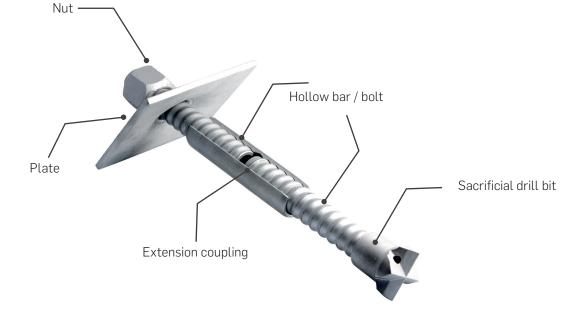
The SDA bolts are manufactured from high quality seamless or welded tubes that have either left or right-handed thread types, ('R'=Rope thread or 'T'= Trapezoidal thread).

Minova SDA bars/bolts:

- Fit standard installation equipment and carousels
- Optimise access area, even in limited head space
- Can be supplied with coatings to address corrosive rock behaviour
- Work in variable rock types and conditions
- Address structural features such as: breaks, fissures or fractures and presence of laminations
- Attach easily to drill rigs for improved automation and reduced manual handling



## "CARBOTHIX INCREASES SAFETY, IMPROVES EFFICIENCY, AND DECREASES MATERIAL WASTE"





#### CARBOTHIX

We manufacture a wide range of grout solutions for rock bolting applications.

Carbothix is our flagship silicate resin increasing safety, significantly improving efficiency, and decreasing material waste.

Carbothix is a two-component silicate resin that instantly thickens and cures when pumping is stopped.

Compared to traditional grouts, which need 24-48 hours to harden, bars/bolts can be loaded in minutes with Carbothix. Unlike polyurethane grouts, Carbothix works in the presence of water, allowing for flexible utilisation.

Our formulations of Carbothix allow for use in various ambient temperatures and moisture conditions found underground, giving you the flexibility that you need.

Benefits of using Carbothix:

- Immediate loading capacity
- Improved operator safety
- Full encapsulation of anchors
- Consolidates fractured boreholes
- Reduces material waste
- Consistent grout quality
- Resistant to water



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