



DESCRIPTION

The Self Drilling Dynamic Bolt – Nordic type is intended to be used in hard rock and more competent ground under high stress with evidence of rock bursts as well as in areas with softer ground conditions where there is risk falling roof and where is difficult to install conventional rock bolts.

This bolt is made of smooth seamless ductile tube slightly stronger than the Nevada bolt. The Nordic bolt has the same length on each end with a R32 ISO thread. The thread length is 200 mm on each side and the bolt is reversible and can be used in any direction. The bolt is designed to be extended multiple times, using the standard R32 SDA coupler. For this feature, there are three different lengths available: 2500 mm, 2000 mm and 1500 mm and these can be combined to obtain the desired length of the installed bolt.

Smooth section of the bolt works in the same principle as our standard D-Bolt®, where this smooth part is deforming without constraints and absorbs the energy.

The Self Drilling Dynamic Bolt can be used with cementitious grout and or pumpable resin grout. TamPur RBG is the preferred grout for the Nordic bolt.

Bolts can be drilled with typical top hammer underground drilling rigs and or even manually using pusher leg drills capable to drill with R32 drill steel.

Drill bits and couplers are both operational and functional elements of the system. After installation and grouting of bolt couplings and drill bit work as anchor points. Drill bits and couplers, so as plates and nuts (eventually centralizers) are standard for common SDA. Please see the SDA TDS – R32 section for details.

KEY BENEFITS

- › Ease of installation
- › Able to be extended
- › Ability to be injected under pressure
- › Can be used as bolts as well as bear loading deformable injection lance for strata consolidation and reinforcement

TYPICAL APPLICATIONS

- › Squeezing ground, broken, fractured and fissured rock where typical bolts are difficult to install. Alternative to cable bolts to a certain extent.
- › Bear loading deformable injection lance for strata consolidation and reinforcement

FUNCTIONALITY

Nordic type SDDB reinforces the rock mass by constraining the dilation between the anchor points. When the rock mass dilates, the anchor points assume the load and the smooth sections between the anchor points stretch. The load on the smooth sections increases quickly with a small increase in the dilation, until the yield load is reached. Once reaching the yield load, the smooth sections undergo plastic elongation until failure. Nordic type SDDB absorbs the dilation energy by utilizing the strength and deformation capacities of the bolt material. The smooth sections of the bolt provide localized and independent reinforcement to the surrounding rock mass.

TECHNICAL DATA

SDDB – Nordic Type	
Ultimate Load (kN) theoretical / typical	> 250 kN / ≥ 270 kN
Yield Load (kN) theoretical / typical	> 160kN / ≥ 180 kN
Weight (kg/m)	÷ 3.0kg
Elongation (A 200 mm)	≥ 15%

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Self-Drilling Dynamic Bolt (SDDB®)

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ROCK REINFORCEMENT

TECHNICAL DATA SHEET

Nordic Type - Rock Reinforcement Bolt (US Patent 9,845,678 B2)

DIMENSIONS / PACKING / THREADS

Bolts are 1500; 2000 or 2500 mm long with 1100; 1600 or 2100 mm smooth section and R32 ISO threads 200 mm long at either side. Other lengths on request.

Bolts are supplied in bundles. Bundles can be either 50 or 100 bolts per bundle.

ACCESSORIES

Standard R32 accessories from SDA (Self Drilling Anchors) Bits, Couplers, Plates and Nuts. – see TDS for SDA.

INSTALLATION

Nordic Bolt is installed with Roto-Percussive drilling method using typical drilling jumbos and bolters and can be installed with hand held pusher leg drills and stopers.

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