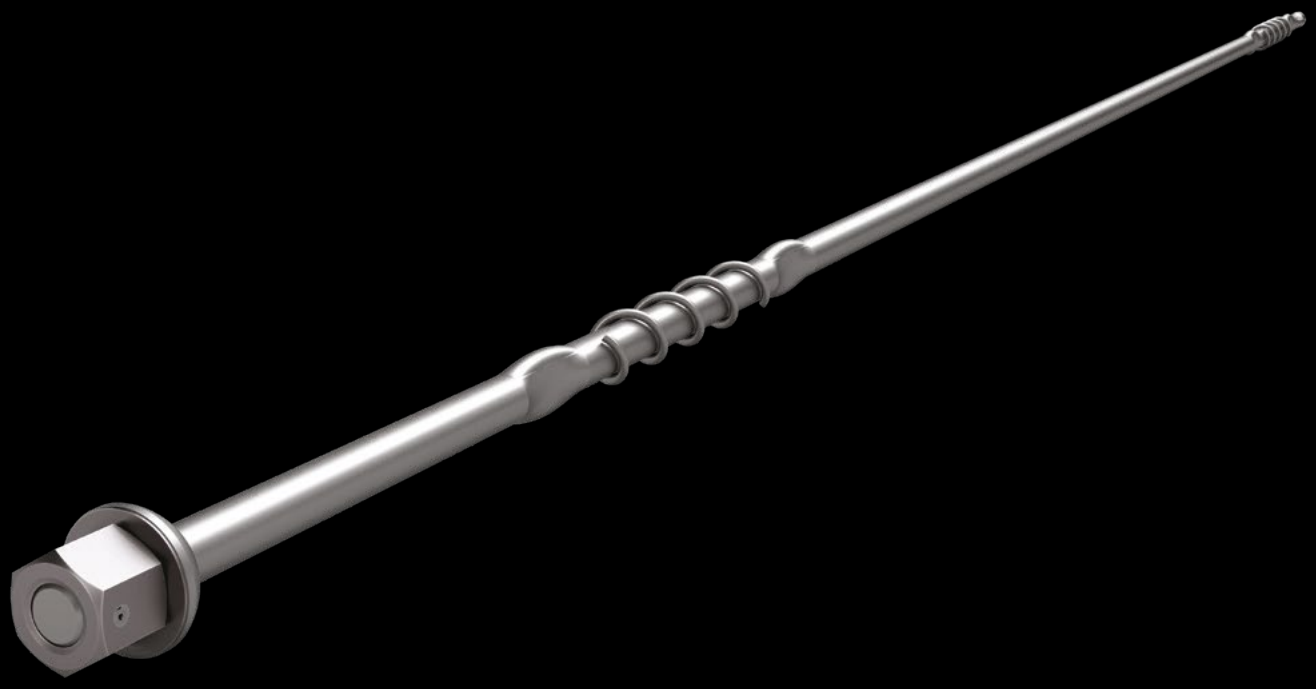
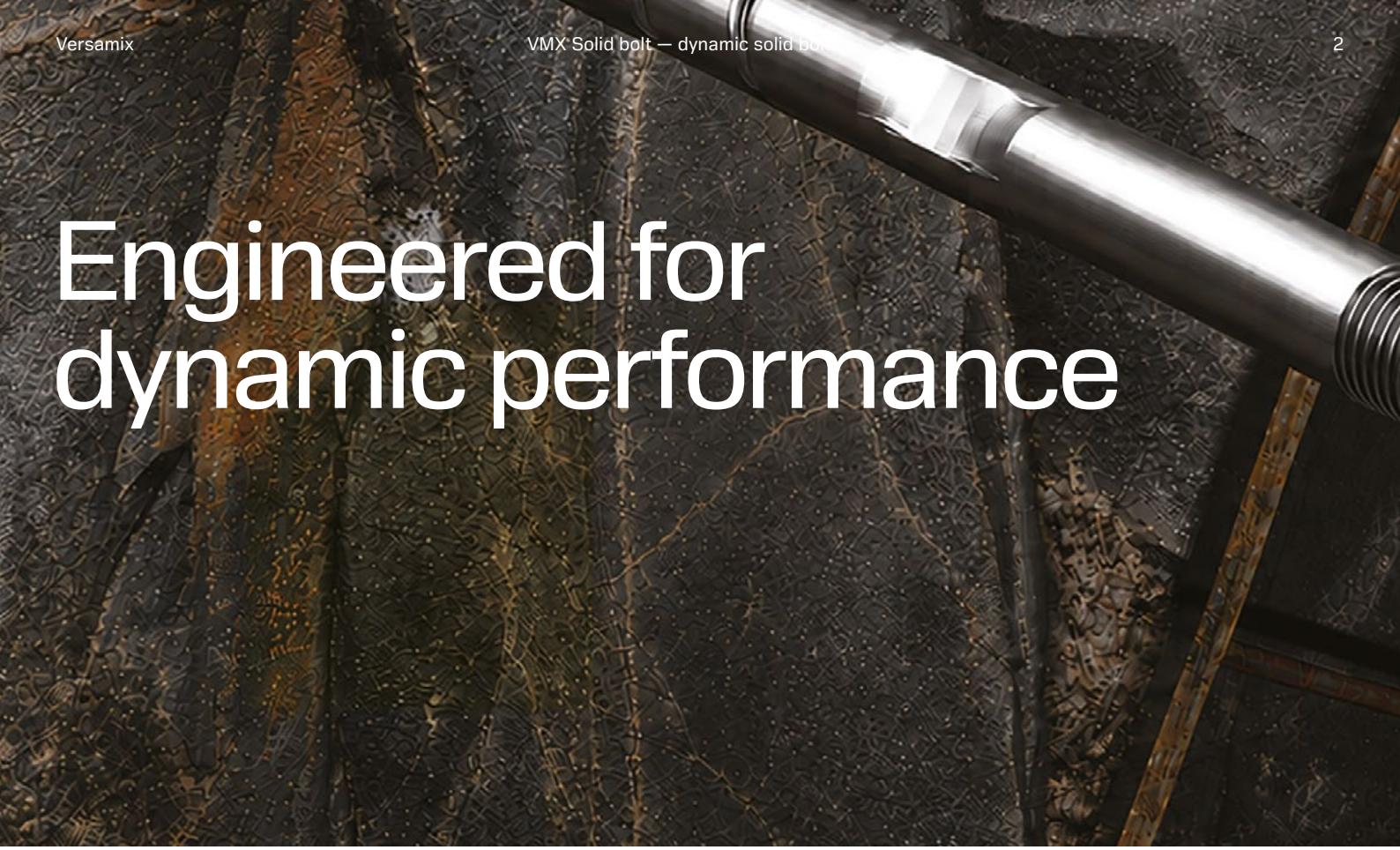
Versamix



SANDVIK

Dynamic resin bolt engineered for squeezing and dynamic ground conditions



Engineered for dynamic performance

Versamix combines optimized anchoring performance with controlled energy absorption in one highly robust all-steel support system.

Features

Versamix has been developed to provide reliable underground support performance in squeezing and dynamic ground conditions. Its innovative mixing spring and paddle system improves resin mixing, retention, and load transfer during installation, helping deliver stable anchoring performance in demanding mining environments.

Manufactured with a smooth mid region and a controlled elongation zone, Versamix enables stable energy absorption under dynamic loading while maintaining installation efficiency using standard resin capsules and tooling.

Centralized resin mixing
The resin mixing device centralizes the bolt in the borehole, enabling more even distribution of the chemical anchor around the bolt.

Engineered resin flow
Paddle geometry assists resin movement with top and bottom end anchoring of the installed system.

Controlled dynamic elongation
Based on a 2.4 m bolt a smooth 1400 mm mid-section enables controlled elongation without requiring a debonding sheath.

Dynamic capacity >50 kJ
Stable dynamic performance with displacement capability up to 200 mm.*

*Factors of safety must be applied.



50 kJ

Stable energy absorption performance

Benefits

Optimized resin retention
Dual spring design assists resin retention and anchoring integrity.

Excellent resin mixing features
Archimedes screw-style resin movement improves encapsulation. Optimized for resin mixing, rentention and anchoring.

Robust all-steel design
Designed for squeezing and dynamic ground conditions.

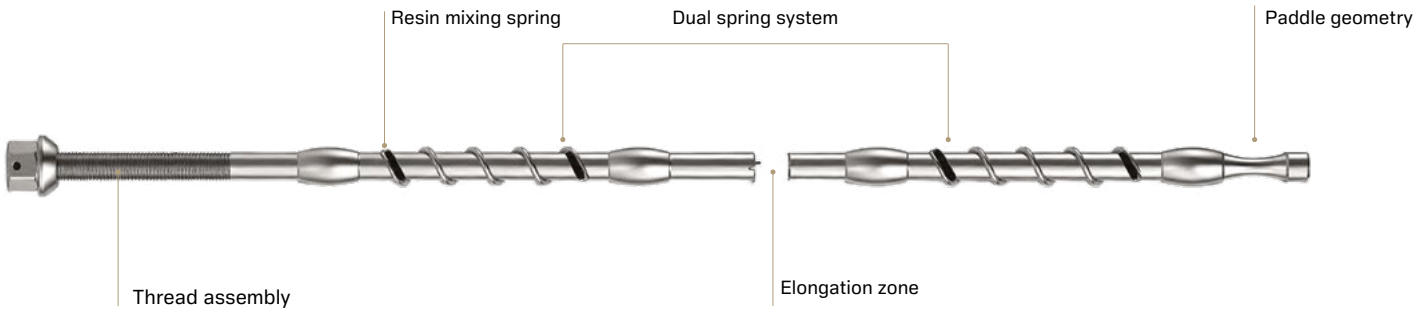
Corrosion protection options
Optional hot-dip galvanized coating available.

Excellent anchoring performance
Minimising slippage of the anchor within the resin.

Dual spring design
Ensures resin is retained within the bore hole and the bolt is well centralised.

Bolt lead-in guide
Paddle features facilitates easy lead-in of the bolt to the borehole.

Leading technology
Combines proven aspects of the Posimix Bolt and Versamix Bolt.



Indicative dynamic performance

Performance

Dynamic testing demonstrates stable energy absorption performance and controlled displacement behavior in underground loading conditions.

Insights

Controlled elongation
Stable displacement capability helps absorb underground dynamic loading.

Reliable energy absorption
Engineered for demanding underground mining environments.

Performance validation
Dynamic testing supports the controlled elongation design philosophy.

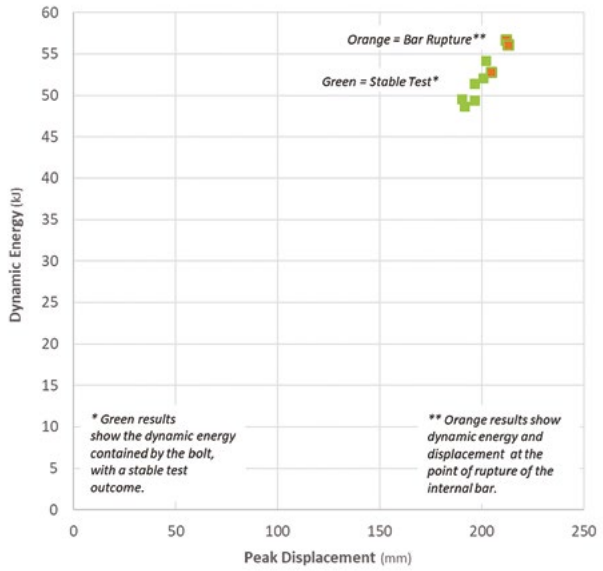
Dynamic capacity
>50 kJ

Peak displacement
Up to 200 mm

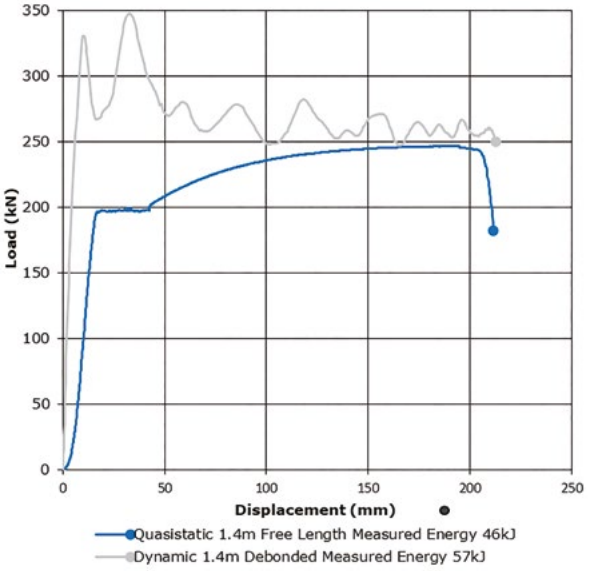
Test outcomes
Stable

Configuration
2.4 m Gal

Dynamic Performance Chart
(Compiled from DSI Underground Test Rig Data)



Load vs. Displacement Versamix 2.4 m Gal



Technical specifications

Physical properties

Property	Typical value
Yield Strength Bar	558 MPa / 207 kN
Tensile Strength Bar	680 MPa / 254 kN
Measured Shear Force Bar	161 kN
Elongation Bar Typical	22%
Mass Per Metre Bar	2.9 kg
Diameter Bar	21.7 mm
Cross Sectional Area	370 mm²
Recommended Borehole Diameter	35–38 mm
Standard Bolt Length	2400 mm - 3000 mm
Alternative lengths can be manufactured if required	



Standard



Galvanised (for erosion protection)

Compatible components









(Product code prefix)

STP	COMBI PLATE	SPANNER	OS



Installation overview

Designed for efficient underground installation using standard resin capsules and tooling, Versamix integrates easily into existing bolting workflows.

Installation steps

01
Drill borehole according to mine support design.

02
Insert resin capsules into hole, fast set end first.

03
Rotate bolt left-hand while pushing to back of hole.

04
Follow the advised resin anchor hold times.

05
Rotate nut left-hand to break pin and tension the bolt.

Warning
DO NOT OVERMIX
It is critical to follow recommended resin mixing and hold times as specified by the resin anchor manufacturer.



Ground support at your fingertips

Safety remains at the center of every Sandvik ground support solution. Helping underground mining operations improve installation reliability, productivity, and long-term performance in demanding environments.

The Ground Support Product App has been developed to provide fast access to essential product information, technical resources, and installation guidance directly underground or on site.

Access essential ground support information and resources, including:

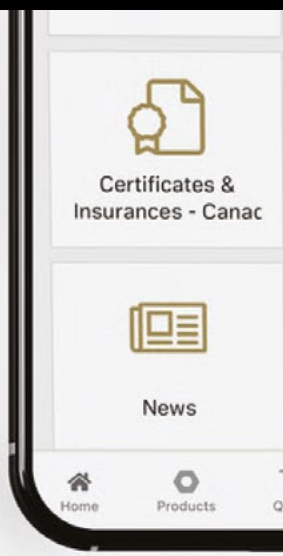
— Product catalogs
— Technical specifications
— Installation guidance
— Ground support resources
— Product updates

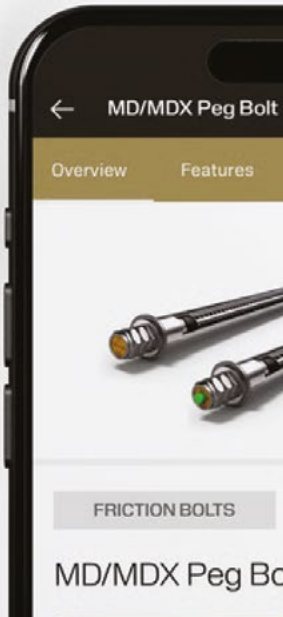
To download the Ground Support Product App, scan the QR code or visit your preferred app store.

Download on the App Store

GET IT ON Google Play







We keep people safe



Safety and support

Sandvik is committed to improving safety and productivity in underground mining through the continuous development of safer products and practical operational guidance. Safety remains central to every stage of the mining process — from planning and installation through to ongoing operation and maintenance.

We encourage all operations to follow safe work procedures, conduct risk assessments, provide appropriate training, and ensure workers use the correct personal protective equipment (PPE) at all times. Early ground support installation, regular inspections, and proactive hazard management all contribute to safer underground environments and healthier workforces.

All dimensions, weights, quantities, and specifications are those applicable at the time of publication and may be amended from time to time.

mining.sandvik/groundsupport