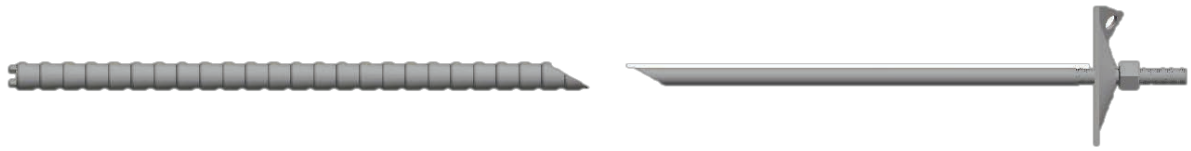
ROCBOLT TECHNOLOGIES: **MINING**

Yield-Lok™ Bolt



Overview

The Yield-Lok Bolt provides a two in one solution in areas with high seismic activity. It is primarily used to absorb energy through yielding a pre-determined length. At a specific point, the bolt then provides additional support by halting the yield and holds a load until failure. The design of the Yield-Lok Bolt utilises every aspect and strength of the bolt to ensure for maximum performance for both loads that occur. With the unique head design and profile of the polymer coating on the bolt, the resin capsules are mixed entirely and thoroughly providing the best results.

Extensive testing ensures that the performance is at its highest for the bolt. The Yield-Lok Bolt goes through vigorous quality checks before and after packaging.

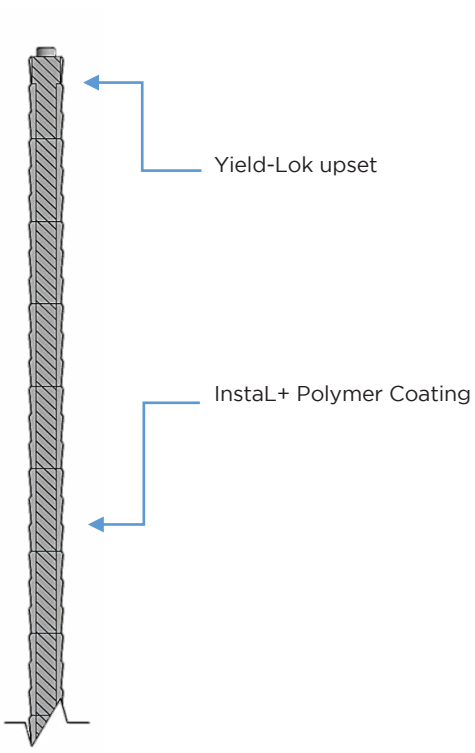
Features

- The Yield-Lok Bolt is manufactured from high strength steel round bar. The round bar strength is crucial to the performance of the bolt.
- The round bar is covered with the InstaL+ Polymer Coating material giving the Yield-Lok Bolt its unique performance. The polymer coating allows the bolt to yield within, keeping the entire bar intact.
- The design allows for absorption of energy that is released from multiple seismic activities.
- Standard Hex nut is fitted to the threaded end of the bar for easy installation purposes.

Advantages

- The design makes installation the same as any resin roof bolt
- No special equipment needed
- High initial impact load
- Additional load point after yield
- Better resin mixing due to unique head and polymer coating design
- Larger Yield length across bolt
- The polymer coating protects the bolt against the elements
- No extra accessories are needed to install the bolt

Technical Data	
Bar Diameter, mm	18
Min Ultimate Tensile Load, kN	200
Calculated Shear Strength***, kN	120
Major Diameter, mm	29.4
Cross Sectional Area Major, mm2	678.9
Typical Yield Point Static, kN	140
Typical Yield Point Dynamic, kN	150
Yield Displacement, mm *	650
Absorbed Energy Over 140mm, kJ **	38.49



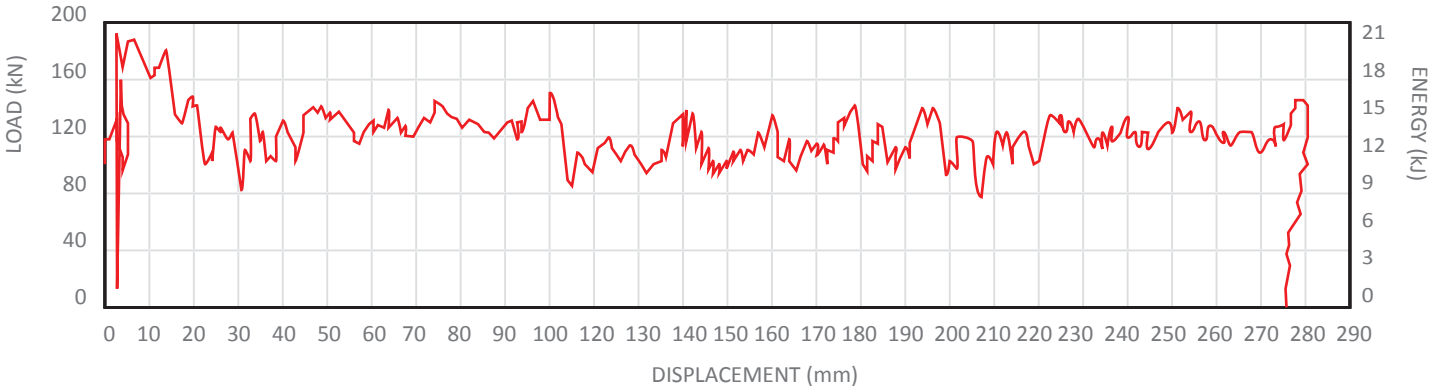
* Theoretical based on coating length - Point loaded
** Dynamic tests Canmet Canada
*** Shear values calculated at 60% of U.T.S

Yield-Lok™ Bolt

TYPICAL TEST RESULTS

EXTERNAL DYNAMIC TEST RESULTS (CANMET)

SA Yield-Lok Bolt Performance
Projected Energy Absorbtion on an Impact Load of
3 3.3 Tons = 47.19 kJ



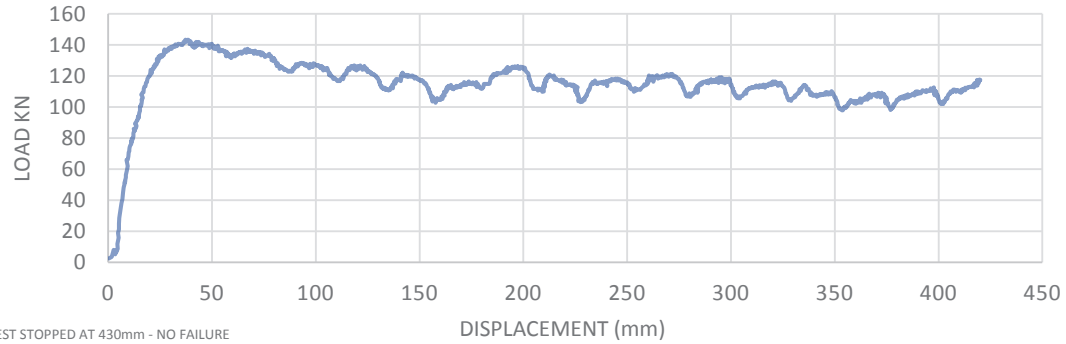
Notes

Extrapolated Energy/Load vs Displacement based on Canmet tests set up as follows.
Impact Energy = 16.4 kJ; Mass = 1115 kg Height = 1.5m; Velocity = 5.42 m/s

Velocity = 0.00245 m/s

IN HOUSE STATIC TEST RESULTS

Consolidated Results



NOTE: TEST STOPPED AT 430mm - NO FAILURE

Notes

- *Minimum order quantities may apply to this product*
- *Only Rocbolt South Africa components should be used to enable the full performance of the bolt system to be obtained*