



Product Code Guide	Designator	Length	Diameter	Speeds
	RQ	1,000	24	STS

Description

TORQ resin capsules are formulated for optimal spin to stall installation performance. Spin to stall installations does not employ a hold time to allow the upper fast set-time resin to harden before pre-tensioning. Removing the hold time can improve roof bolt installation time consistency, and pre-tension levels remain unaffected.

The TORQ resin capsule contains two-parts: a mastic compartment, and an oil-based catalyst compartment at a ratio of 11:1. Bolt rotation during installation ruptures and shreds the resin capsule compartments enabling the two components to mix. Mixing commences the chemical reaction transforming the liquids into a hard and solid bolt anchor.

TORQ resin capsules contain an upper extra-fast set-time resin and a lower slow set-time resin. This configuration of resin set-times provides a timely upper resin-anchor from which to pre-tension the roof bolt. The slow set-time resin hardens after pre-tensioning and provides load-transfer in the lower portion of the bolt. Resin capsule length is chosen to achieve a fully encapsulated bolt. TORQ resin can be employed in conjunction with any DSI Underground bar profile.

Performance Testing

Pull Out Test

Measured using slow set-time resin, 300[mm] encapsulation length using 21.7mm core diameter high tensile grade bolts in a 28mm diameter hole, the typical peak pull-out load is greater than 250kN.

Punch Shear Test

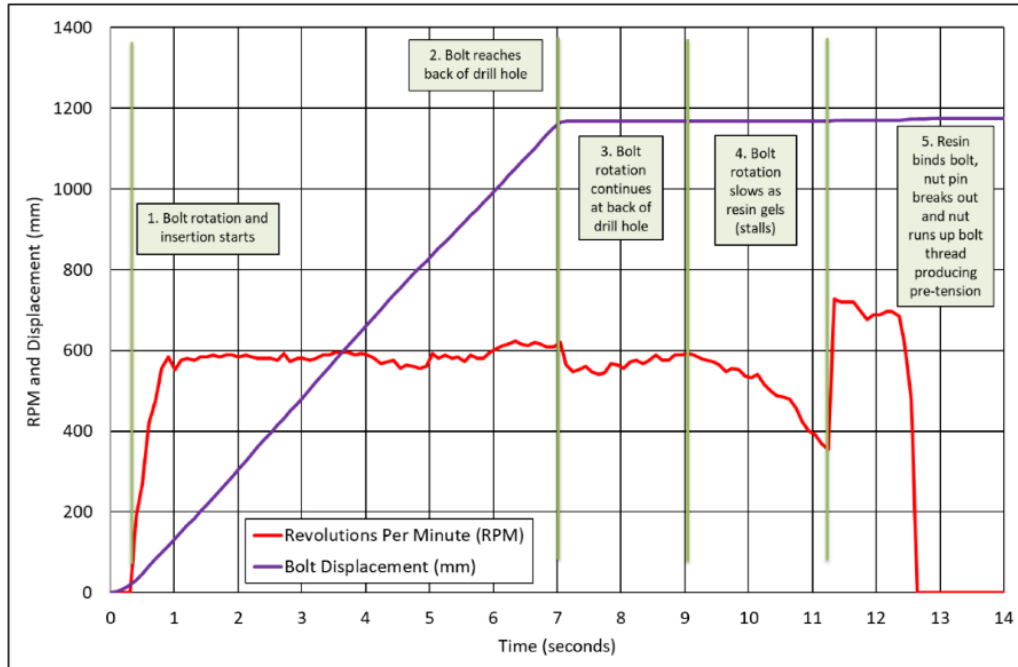
Measured using a slow set-time resin in accordance with BS2782 (Part 3), the typical peak punch shear test is greater than 20kN.

Resin Installation Times

The total installation time for a 1,200mm long TORQ resin capsule with a 2.1m long AXR bar is typically 13 to 16 seconds (strata condition dependent). This time includes the following installation steps: pushing through the resin while rotating the bolt, continued rotation at the back of the drill hole, “stalling” of the drill motor, nut breakout, and nut travel and pre-tension application. These installation steps are shown below.

Description	Value
Pull Out Test	>250kN
Punch Shear Test	>20kN
Resin Installation Speed* *using 2.1m AXR bolt with 1,200mm TORQ cartridge	13-16 secs

Spin To Stall Resin



Typical rotation and bolt travel using TORQ resin capsules

Shelf Life and Packaging

Suggested shelf life is 4 months when stored below 25°C. Storage at lower temperature is recommended in conjunction with careful stock rotation based on use-by date.

Standard resin capsule diameter is 24mm, and typical resin capsule lengths are 1,000mm and 1,200mm.

Both resin capsule lengths contain 600mm of extra-fast set-time resin.

Notes

- Only DSI Underground rock bolt components are recommended to ensure the optimum performance of the bolt system.
- DSI Underground is Quality Assured to ISO 9001:2015.

Phone APP

- Want to know more; our full product range, knowledge centre, and other details are available via the App; available on iOS and Android devices by searching “DSI Underground”.



iOS



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