

ASTEC

ASTEC GFRP Rock-bolt

High capacity GFRP rock bolting solution



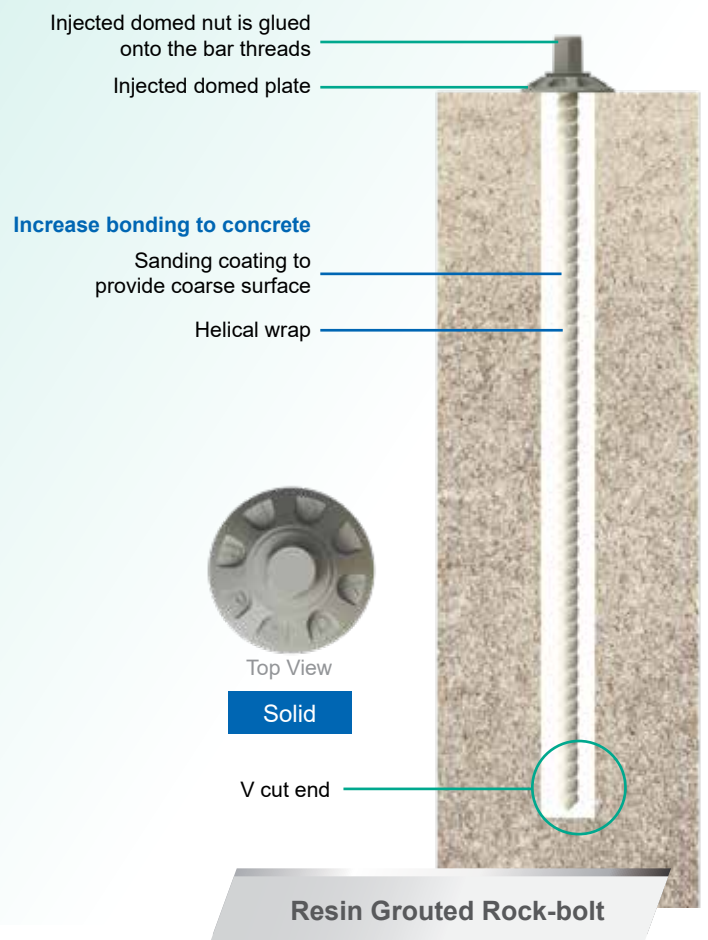
Dextra

About ASTEC GFRP Rock-bolt

ASTEC GFRP Injected Thread Rock-bolt is made for permanent and temporary applications. Installed as conventional cement grout anchor bolt, its hollow body allow the cement grout to fill the hole. Its unique glass features make it easy to cut and consume by extraction machines increasing the productivity and reducing the costs. Mainly used in mines, it is also suitable for tunnels and civil project.

ASTEC GFRP Thrust bolt is made for permanent applications. The domed nut is injected onto the bar which provides the **high tensile load capacity**. This is particularly adapted to installation with resin cartridges, its v cut end is designed to penetrate cartridges, the helical pattern also allows an efficient cartridge mixing.

Product design & concept



Key benefits

High head capacity

✓ The injected thread ensures an outstanding head capacity for tensile load.

Easy and flexible installation

- ✓ Light weight: Easy Handling & installation
- ✓ V cut and Chamfer cut to facilitate resin mix and prevent gloving
- ✓ Helical pattern for cartridge mixing to ensure full encapsulation
- ✓ Custom lengths to adjust to ground conditions
- ✓ Dual surface deformation and sand coating = Optimum bonding

Cost effective

- ✓ Cut-ability: Faster excavation + No removal cost.
- ✓ No Shelf Life and pre-assembled accessories
- ✓ No premature bolt failing due to corrosion

Standards

Design

BS EN 7861-1:2007

Technical Information



Injected Thread Rock-bolt

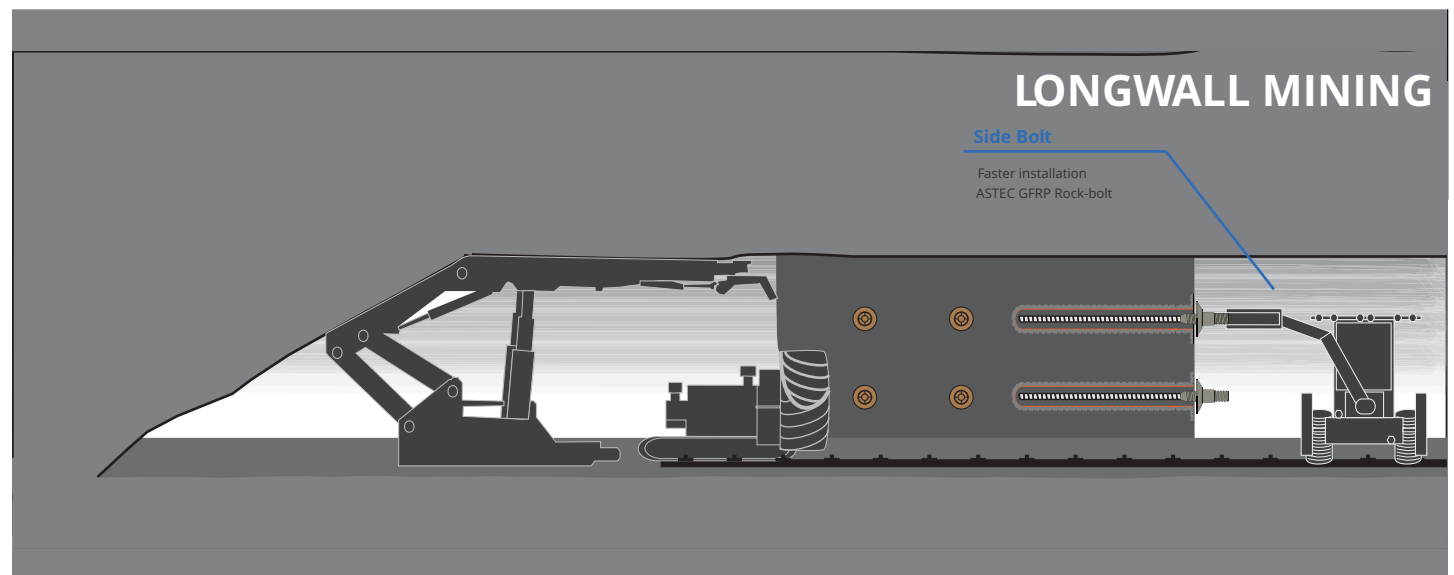
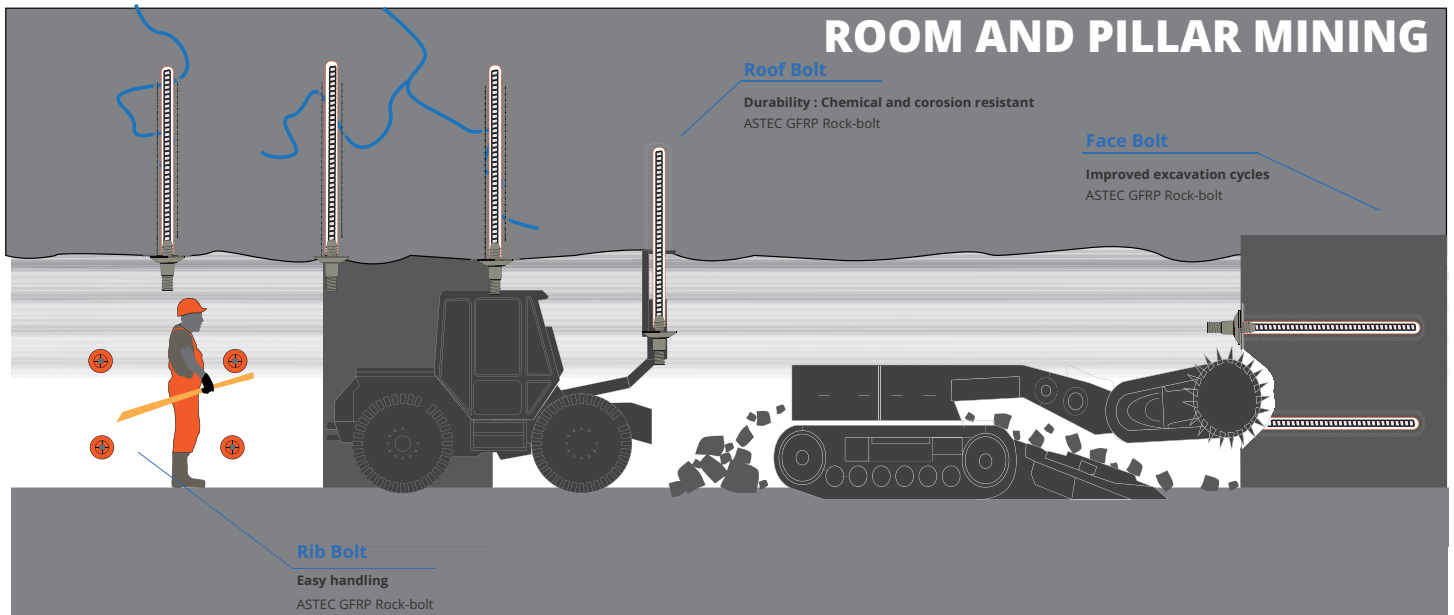
Hollow Bar						
OD x ID (mm)	Nominal Dia. (mm)	Nominal CSA (mm ²)	MoE: 45 GPa			
			Grade 45T	Grade 45P	Mechanical Properties	
			Fiber/Resin	Fiber/Resin	Ultimate Tensile Load (kN)	Ultimate Tensile Strength (MPa)
32 x 13	32.3	675	ECR/PE	ECR/VE	355	526
Injected Threads						
Major Diameter x Pitch (mm)			Thread Length (mm)		Breaking Load (kN)	
39.5 x 7.0			384		≥ 150	
Accessories						
Dia (mm)	Injected Domed Nut			Breaking Load (kN)		
	Major Diameter x Pitch (mm)	Length (mm)		Breaking Load (kN)		
32	40 x 7.0	85		≥ 150		
Dia (mm)	Injected Domed Plate			Breaking Load (kN)		
	Diameter (mm)	Thickness (mm)		Breaking Load (kN)		
32	150	10		≥ 220		



Thrust Bolt

Solid Bar						
Dia (mm)	Nominal Dia. (mm)	Nominal CSA (mm ²)	Grade 45P (MoE: 45 GPa)			
			Material		Mechanical Properties	
			Fiber	Resin	Ultimate Tensile Load (kN)	Ultimate Tensile Strength (MPa)
25	25.4	510	ECR	Epoxy	324	635
32	32.3	819	ECR	Epoxy	450	550
35	35.0	962	ECR	Epoxy	550	550
System Capacity						
Dia (mm)	Nut Length (mm)	Nut OD (mm)	Transverse Shear (MPa)	Torque (N•m)	System Breaking Load (kN)	
25	85	74	124	200	≥ 100	
32	85	74	124	300	≥ 130	
35	85	74	124	350	≥ 150	
Accessories						
Dia (mm)	Injected Domed Plate			Breaking Load (kN)		
	Diameter (mm)	Thickness (mm)		Breaking Load (kN)		
25/32/35	150	10		≥ 220		

Applications



Commercial presence
in more than
55 countries



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