

DESCRIPTION

The rebar bolt consists of a main body with a series of longitudinal grooves (corrugations) that increase its anchorage capacity in the surrounding rock. They have the inner end cut at 45° to facilitate their insertion and the outer threaded end to tension the bolt and the plate by means of a nut, which can either be hexagonal or round.

To install a rebar bolt, a hole is drilled in the rock with a diameter greater than the diameter of the bolt and the hole is filled with cement mortar or resin. The bolt is immediately inserted, turning it to react the resin catalyst and it begins to harden, generating tension. Once inserted and the grout or resin have already generated consistency, the anchor plate is tightened with the nut, thus putting the bolt under load and fixing it firmly.

Once the bolt is firmly set in the rock, it can be used to support wire mesh, steel plates or netting to provide additional stability to the ground.

Rebar bolts are commonly used in mining and tunneling to prevent ground instability, which can jeopardize worker safety and damage underground excavation infrastructure.

FIELDS OF APPLICATION

- **Rock support:** corrugated bolts are used to provide support and stabilization of rocks in underground excavations.
- **Tunnel reinforcement:** they are used to reinforce tunnel structures and prevent rock falls.
- **Cable anchoring:** they can serve as anchors for steel cables and other support elements.
- **Slope stabilization:** they are used in slope stabilization to prevent landslides and rock falls.
- **Underground mining:** they are used in underground mining to provide support and stabilization of rocks.
- **Structural anchoring:** they can serve as anchors for structures between them and the ground.



ADVANTAGES OF THE REBAR BOLTS

- **Improved stability:** Corrugated bolts provide strong anchoring of rocks around excavations, which improves the overall stability of the tunnel or mine.
- **Enhanced load-bearing capacity:** Corrugated bolts have a high load-bearing capacity due to their design and high-strength materials, making them ideal for supporting large loads.
- **Durability:** Corrugated bolts are corrosion-resistant and can last for many years, reducing the need for frequent replacement.
- **Flexibility:** Corrugated bolts can be customized to adapt to different geological conditions, making them suitable for a wide range of applications.

TECHNICAL PROPERTIES OF THE REBAR BOLTS

SPECIFICATIONS	D-16	D-20	D-25	D-32
Variable length up to (m)	12	12	12	12
Nominal Diameter (mm)	16	20	25	32
Thread	M16	M20	M26	M30
Nominal section (mm ²)	249	315	490	615
Weight (Kg x m)	1.58	2.47	3.58	6.31
Yield Load (Kn)	139	173	245	308
Breaking Load (Kn)	150	190	260	330
Maximum Elongation	5%	5%	5%	5%
SW Nut	6	8	10	12
Recommended Plate (mm)	100x100x8	100x100x8	100x100x10	100x100x12

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