

MINING / CONSTRUCTION

RESIN BOLTS

G TYPE

DESCRIPTION

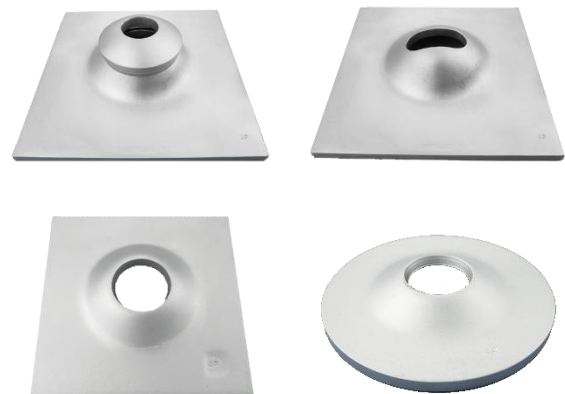
Resin bolts G type are anchors of modern design, with high anchoring and adjustment range of capacity.

Anchor rods are made of ribbed bar of nominal diameters $d_n = 20$, $d_n = 22$, $d_n = 25$, $d_n = 28$, and $d_n = 32$ mm. Rods are threaded and bevelled on its top with an angle of 45° or flat.



APPLICATION AND USE

Resin bolts G type are designed for security of roof and side walls of mine workings and tunnelling as an independent or strengthening housing bolting. They also apply to strengthen and stabilize the soil on the slopes.



Resin Bolt G type set and plates

ADVANTAGES

- Reliable rock bolting elements in situations where increased bearing capacity is required
- Allow for improved binding force and bearing capacity of the bolt along its whole length - faster and easier stabilisation of the formation
- A wide range of anchor strength solutions is available

TECHNICAL DATA

DESIGN DATA

Anchor Type	Steel Grade	Standard No
G20/20	BSt 500S	DIN 488:2009
G22/22	B500B	
G25/24	GR 60	ASTM A615
G25/26		
G28/27	GR B500B	BS 4449/2005 + A2:2009
G32/30		
G32/33	B500S	CAN/CSA.G3. 18-M92(R2007)

BOLTS SPECIFICATIONS

Anchor Type	Rod Nominal Diameter d_n (mm)	Bolt Thread	1m Length Rod Weight (kg)	Bolt Length (mm)
G20/20	20	M20	2.47	1000±1 2000
G22/22	20	M22	2.98	
G25/24	25	M24	3.85	
G25/26	25	M26	3.85	
G28/27	28	M27	4.83	
G32/30	32	M30	6.31	
G32/33	32	M33	6.31	

Resin bolts G type can be made with corrosion protection:

- option I - hot dip galvanized
- option II - hot-dip galvanized and epoxy coated (duplex)

BOLT ROD STRENGTH PARAMETERS

Anchor Type	Yield Strength R_e min (MPa)	Tensile Strength R_m min (MPa)	Elongation A5 min (%)	Capacity (kN)
G20/20	500	550	16	150
G22/22				180
G25/24				210
G25/26				260
G28/27				280
G32/30				340
G32/33				430

Anchor plates are made of steel sheet thickness of 6, 8, 10 or 12mm material S235JR or S355JR.

The set of bolts is expected to use flat or draw shape plates. The standard version provides square-shaped size 150 or 200 mm or 150mm round shape plates.

Nuts are made in strength class of 5 or 8.

APPLICATION METHOD

- Drill hole at proper diameter and depth equal to Bolt.
- Insert appropriate resin cartridge in the borehole.
- Insert rod bolt into the hole and rotate, causing mixing resin cartridge.
- Rotate bolt to ensure complete mixing of resin.
- Stop rotation.
- For specified resin set time, hold Bolt in place.
- While it should read once the adhesive gels and sets, put the washer on the rod and screw the nut.
- Torque bolt to pre-determined torque in accordance with approved roof control plan.

PACKAGING AND TRANSPORTATION

As a standard practice, anchor poles are packed in bundles of 10pcs or in bundles of 100-300pcs and plates are stapled with 10pcs of wire.

Other packaging options available on request.

Plates and nuts are placed in containers. Elements of the bolts can be transported by any means of transport in bundles or in containers.

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