





BULTECK
MINING SYSTEMS



ABOUT US

Our company has a great deal of international experience manufacturing metallic elements, used mainly for ground support in mining as well as in tunnel infrastructures.

Our main product is the Expansion Hydraulic Bolt (Bul-teck). We also manufacture other metallic elements for ground support such as Corrugated Bolts, Friction Bolts, Steel Trusses (HEB and THN), Bernold Sheets, Sharing Plates, etc.

Bul-teck also offers training services so that the customer can adapt and implement our technology in the shortest time and with the greatest guarantees. Our target is to collaborate with companies and develop pioneering products in the world of mining and construction.

All our products are manufactured using materials from the European Union with quality certificates and approved under EU requirements.





PRODUCTS

1/ Expansion Hydraulic **BOLTS**

They are made up by a tube of high yield strength steel specially shaped and folding onto itself, with two welded caps at both ends.

The water is introduced into one the caps using a high pressure hydraulic pump, that causes the expansion of the bolt along its length, being fixed to the whole length of the borehole previously drilled and adapting itself to the ground irregularities. Its main advantages are its fast installation, obtaining

immediate support without using chemical or contaminant products, proper adaptation to ground irregularities and ease of installation that can be manual or automatic.

We can also supply these bolts with antirust protection for use in highly corrosive terrains. There are three types of expansion bolts, each type`s use depending on ground characteristics and type of support needed

* SPECIFICATIONS FOR BULTECK STANDARD

MINIMUM BREAKING LOAD	120KN.
Variable lengths	entre 1 y 6 m.
Wall thickness	2mm.
Tube original diameter	41mm.
Recommended hole diameter ...	32/38mm.
Inflation pressure	300 bar.
Elongation	20%

* SPECIFICATIONS FOR BULTECK MIDL

MINIMUM BREAKING LOAD	160KN.
Variable lengths	entre 1 y 6 m.
Wall thickness.....	2mm.
Tube original diameter	54mm.
Recommended hole diameter ...	43/50mm.
Inflation pressure	240 bar.
Elongation	20%

* SPECIFICATIONS FOR BULTECK SUPER

MINIMUM BREAKING LOAD	240KN.
Variable lengths	entre 1 y 6 m.
Wall thickness.....	3 mm.
Tube original diameter	54mm.
Recommended hole diameter ...	43/50mm.
Inflation pressure	300 bar.
Elongation	20%

*** Plate size according customer specifications



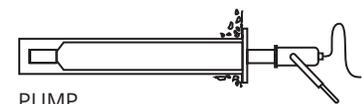
BOREHOLE DRILLING



BOLT INSERTION



BOLT EXPANSION



PUMP REMOVAL



2/ CORRUGATED STEEL BOLTS

They are conventional corrugated steel B500SD bars similar to the ones used to reinforce concrete, with one end threaded approximately 20 cm to install the anchor head.

Most common bar diameters are 25, 32 and 40 mm. They can be installed with different types of resin cartridges.



3/ FRICTION BOLTS

These consist of a steel tube slotted along its length and a domed bearing plate. They are introduced entirely into a borehole whose diameter is smaller than the bolt's.

To facilitate the introduction, one of the ends of the bolt is wedged. At the other end a ring shaped bracket is used to keep the domed bearing plate in its position. Once the bolt is inserted, the friction produced against the terrain provides ground support. There are 3 types of friction bolts according to their diameter:

SS33

Tube diameter	33 mm.
Tube thickness	2 mm.
Weight	1,40 kg/m.
Breaking load	110 kN.
Steel elongation range	18 y 25%

SS39

Tube diameter	39 mm.
Tube thickness	2,5 mm.
Weight	2,16 kg/m.
Breaking load	130 kN.
Steel elongation range	18 y 25%

SS46

Tube diameter	46 mm.
Tube thickness	3 mm.
Weight	2,83 kg/m.
Breaking load.....	180 kN.
Steel elongation range	18 y 25%

PRODUCTS

4 / STEEL TRUSSES

They are **steel profiles** curved with the corresponding radius and jointed together so they can easily be transported inside the tunnel. The joint for the THN profiles is made by overlapping the sections, fixed by staples. The HEB profiles are joined by means of welded plates screwed to each other.

a. THN Profiles

THN-16,5
THN-21
THN-29
THN-36

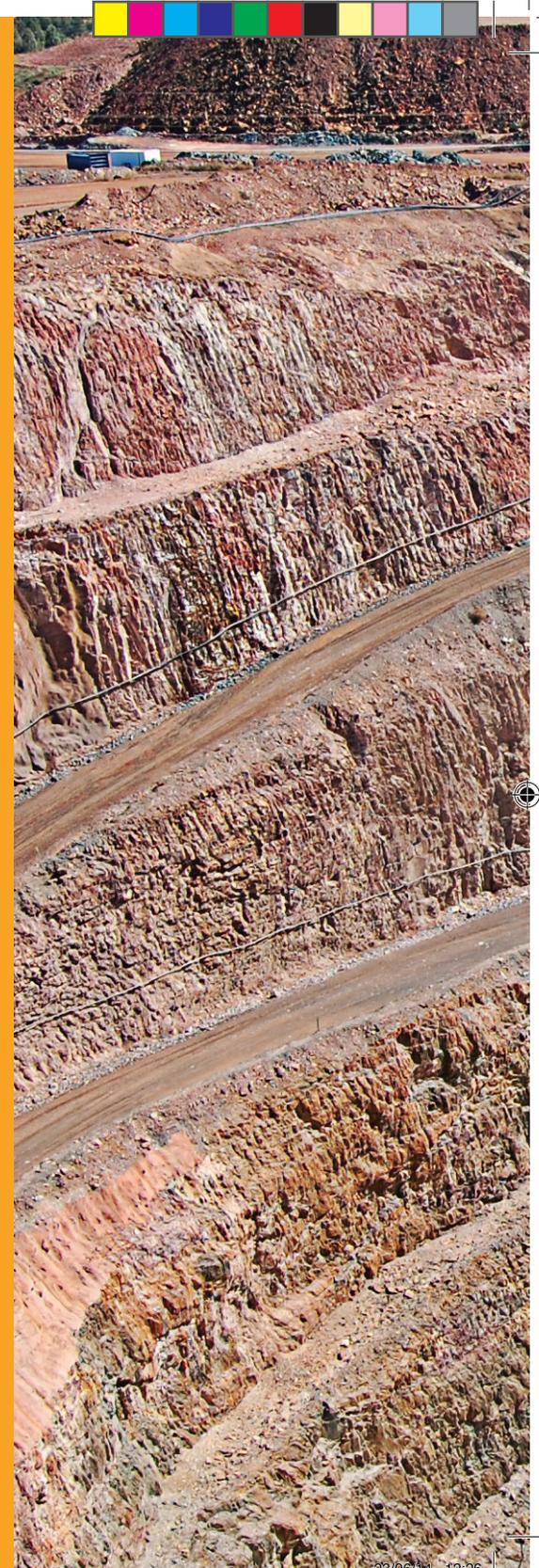
b. HEB Profiles-100/120/140/160/180/200

5 / BERNOLD SHEETS

They are **2-3 mm** thick specially molded perforated steel sheets, undulated and curved with the required radius, that make the function of concreting formwork and provide reinforcement for the concrete once it is set. The plates are installed on top of the steel trusses overlapped and tied together with pins.

6 / ACCESSORIES

- Pumps for inflating Expansion Hydraulic Bolts.
- Tools to check resistance of the Hydraulic Expansion Bolts.
- Load distribution Plates 3 to 8 mm thick.





WE OFFER

EXPERIENCE

Our team has accumulated broad experience in all kinds of different terrains, guaranteeing proper service to your needs.

QUICKNESS, EASE AND SECURITY

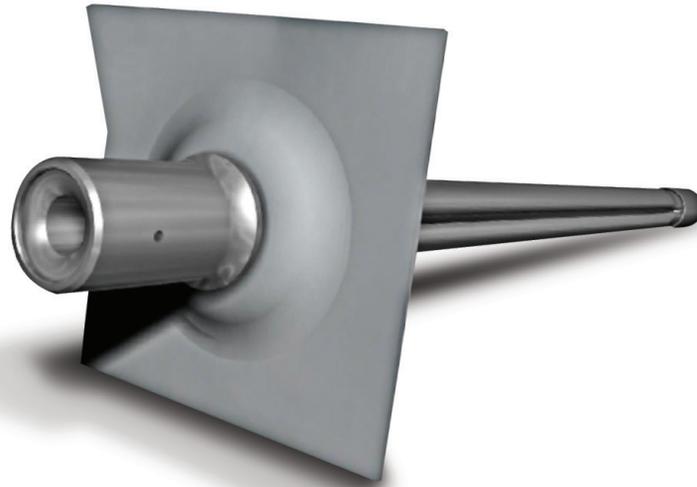
Quick installation and fixing, obtaining immediate ground support and providing quicker and safer working conditions.

QUALITY AND GUARANTEE

All our products are manufactured with quality certified products and all our units are marked to ensure proper traceability according to ISO9000.

PRODUCT VARIETY

We provide a great variety of ground support systems and accessories, Hydraulic Expansion Bolts, Corrugated Bolts, Friction Bolts, Steel Trusses (HEB and THN), Bernold Sheets, Shoring Plates, Hydraulic Pumps, Bolt resistance tools.



**ACCESS TO THE
BEST TECHNOLOGY
WITH THE MOST
CONFIDENCE**

At **Bulteck** we ensure our customers have access to the best mining technology whenever they need it.

All our products are manufactured to the highest levels of quality as per ISO Norm 9001/2008.

Bulteck offers a training service so our customers can adapt and implement our technology in the shortest time and with the greatest guarantees. For many years our objective has been to collaborate with our customers and develop innovative products for the mining and infrastructure sectors.



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