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MINE TUNNEL SUPPORT PRODUCTS
STEEL RAIL AND ACCESSORIES

Henan Zongxiang Heavy Industry Import & Export Co., Ltd

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Company Brief Introduction

Henan Zongxiang Heavy Industry Import & Export Co., Ltd. established by experienced crew on the mine tunnel support products, steel rail and track accessories field, is a professional & reliable supplier.

As an international trade subsidiary of Zhongxiang Steel Group Inc., was founded in 1997. We have more than two decades experience on this field, covering an area of 33,000 square meters, with about 300 employees, 4 production lines, 2 R & D department, and 5 quality control staff. With advanced technology, powerful processing capacity and excellent service, our products have been well recognized by our customers from domestic & overseas market.

Our products mainly used by various mines, tunnels, railroads, heavy industries, transit authorities, and operators of port facilities.

We have the inventory, resources, and experience to meet your needs. Main products in our whole Group include as below

- Mine tunnel support products
U / I profile steel arch, split set stabiliser, mining anchor bolts, mine welded wire mesh, W-section strap, T-section trap, π steel and etc.
- Steel rails
GB light rail, heavy rail, crane rail & other standard steel rails
- Railway accessories
turnout switch, fish plate, rail clip, rail clamp, track spike, rail bolt/nut/washer, rail pad and etc.

We try our best to treat every customer with the importance they deserve. We pride ourselves on being conscientious, reliable, and doing the right thing in every situation.

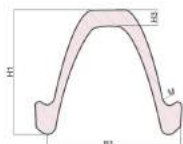


MINE & TUNNEL ARCH SUPPORT

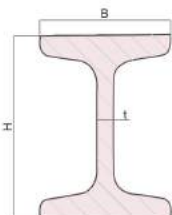
U steel arch is a kind of passive support for coal mine. It has high tensile strength and compressive strength, good toughness, high supporting force, large supporting strength and can be used repeatedly. It is widely used in the mine U lane, especially in deep complex roadways and soft coal seam roadways.



Steel arch usually produced by U profile and I profile. The profile specification are as below for your reference.



U Profile		STANDARD: GB/T 4697-2008				
Size	Specifications(mm)				Weight (kg/m)	Steel Grade
	H1	H3	B1	M		
25U	120	15	135	6.3	24.95	20MnK
25UY	110	17	134	6.6	24.76	20MnK
29U	124	16	150.5	7.2	29.00	20MnK
36U	138	17	171	7.8	35.87	20MnK
40U	141.9	20.2	171	8.5	40.05	20MnK



I Profile		STANDARD: KSE4002, YB/T 5047-2000			
Size	Specifications(mm)			Weight (kg/m)	Steel Grade
	H	B	t		
10	100	80	9	20.7	20MnK
11	110	90	9	26.05	20MnK
12	120	95	11	31.18	20MnK
13	130	100	12	35	20MnK

ADVANTAGES

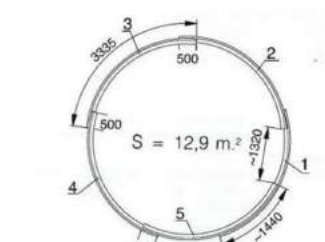
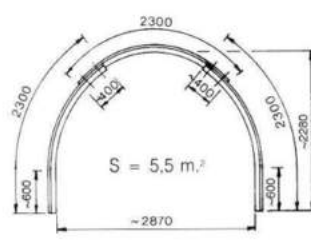
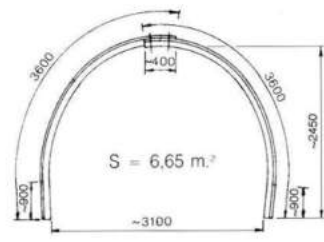
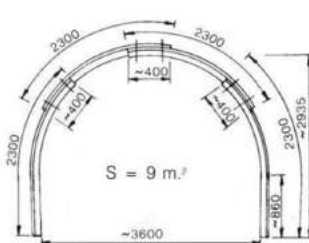
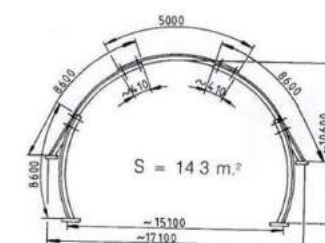
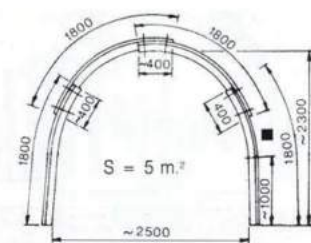
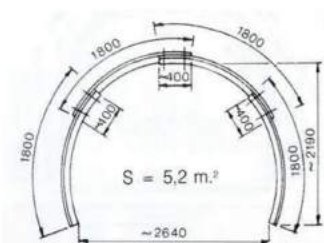
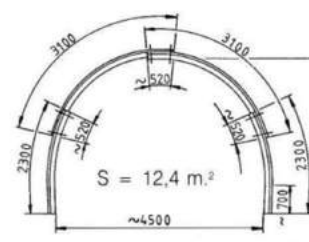
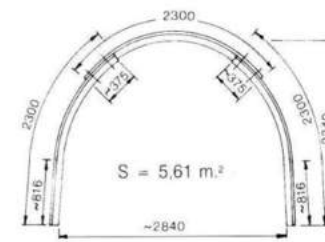
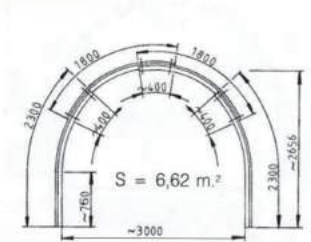
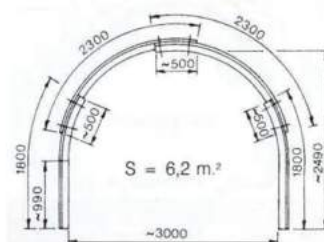
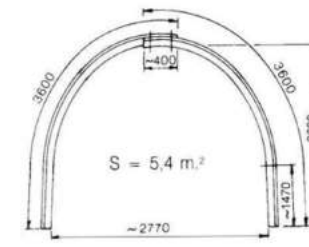
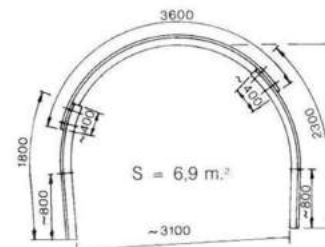
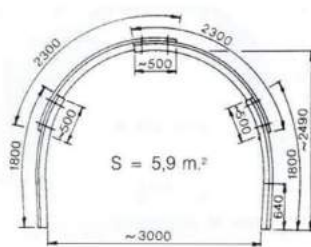
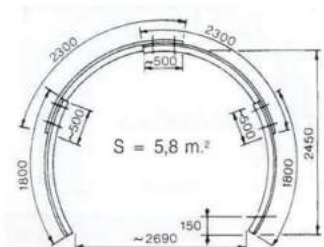
Tunnel arches in mine tunnels and roadways supporting provides not only a higher resistance but also a yielding support. When the surrounding ground reaches a certain degree, avoiding arch failure.

U profile steel arches instead of other frames, timber ones or different steel sections, in mining operations have the following advantages:

- higher resistance against transversal and longitudinal stresses
- allow a very high roadway section convergency
- easy and fast assembling
- can be re-used after recovery and cold forming



We can process mine & tunnel arch based on the following drawings and your requirement.



STEEL ARCHES ACCESSORIES

Clamp

Single Clamp			Double Clamp						
25U	29U	36U	25U	29U		36U			
14*80*24			14*80*24	14*80*24	16*90*24	16*100*24	14*80*30	16*100*24	16*100*30 20*80*30



Collar Bracing / Pull Bar / Connect Plate



Foot Plate



SPLIT SET STABILISER

The split set is a slotted steel tube, with one end tapered for easy insertion into a drill hole. The other end has a welded ring flange to hold the bearing plate.

The stabilizer is inserted into a hole slightly smaller in diameter than the tube, using a simple driver tool fitted to the drill. As the tube enters, its diameter is compressed and the slot partially closes. This exerts radial forces along the length of contact with the rock, providing the friction which holds the rock together. The driving force of the drill actively loads the bearing plate against the rock.



Mining and Ground Support

Split set friction rock stabiliser is used for underground or surface support in many applications.



Places Where Need Ground Support

Split set rock stabiliser is an easy solution to your ground support, mine roof support and other stabilising, holding, or anchoring problems. They are cost effective and simple to install.

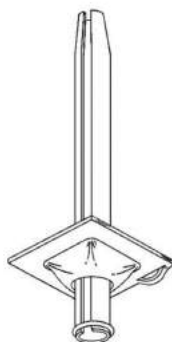
SPLIT SET STABILISER

Features & Advantages

- made from high strength steel band
- immediate frictional support in axial and radial
- independent supporting without plate
- easy for installation
- simple design, cost saving
- available in black, cold galvanized or hot dip galvanized

Accessories

Bearing plate, Driver, Pull collar.




Specifcation

Dia.	33mm	39mm	42mm	47mm
Thickness	1.8-3.2mm (Or as per customer requirements)			
Slot Size	6-8mm (Or as per customer requirements)			
Min.Yield Strength	78Kn	88Kn	95Kn	124Kn
Min.Breaking Strength	103Kn	116Kn	123Kn	160Kn
Max.Breaking Strength	117Kn	132Kn	140Kn	186Kn
Elongation	>16%	>16%	16%	16%
Anchoring	4-7tons	5-8tons	5-8tons	6-12tons

Domed Bearing Plate

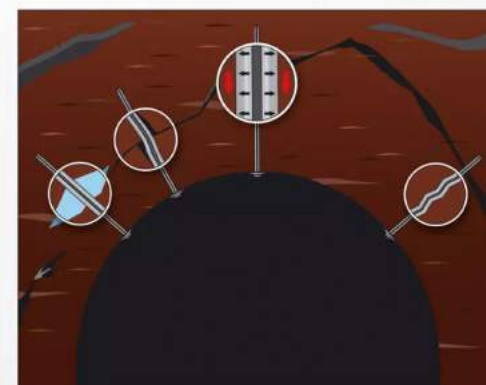
Split set domed bearing plates uniquely combine high strength with light weight, and are integral parts of the split set system.

Domed Plate		Dimensions(mm)	Black weight(kg)	Galvanized weight(kg)
		120*120*4	0.37	0.47
		125*125*4	0.4	0.5
		140*140*4	0.5	0.6
		150*150*5	0.73	0.83
Rmks: Plate for split sets shape and size can be produced according to customer's requirements				

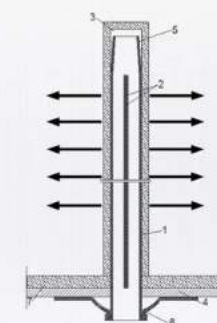
SPLIT SET STABILISER

How does Split Set Rock Bolts and Friction Bolts Work:

Split sets are rock bolts with only 2 parts, a tube and matching domed bearing plate. The high strength steel tube is slotted along its length. One end is tapered for easy insertion into a drill hole and the other has a welded ring flange to hold the bearing plate. With the bearing plate in place, the tube is driven into a slightly smaller hole, using the same standard percussion drill that made the hole. As the tube of the rock bolt slides into place, the full length of the slot narrows, causing radial pressure to be exerted against the rock over its full contact length.



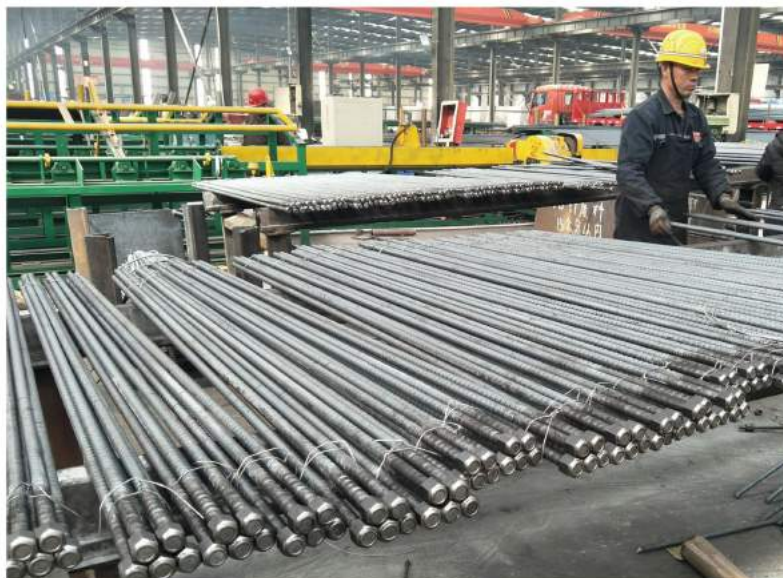
The work of ATFW type tubular friction roof bolting



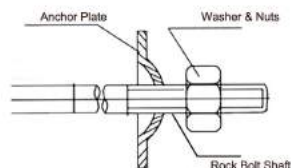
ATFW installed in a borehole

- 1-roof bolting rod;
- 2-bursting edges;
- 3-borehole;
- 4-atf seat washer;
- 5-conical end of the roof bolting;
- 6-tail of the roof bolting;

RESIN ANCHOR BOLT



The non-longitudinal ribbed steel resin anchor bolt is a kind of bolt made by the spheronization process. The strength of the thread segment is greater than the strength of the rod body, and the thread section has good bending and shearing performance. It is a new type of anchor bolt with high strength support in the roadway.



RESIN ANCHOR BOLT

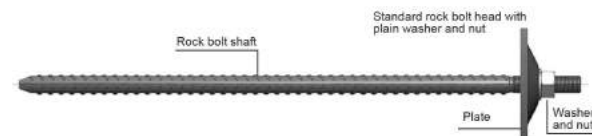
Products specification

Dimensions and allowable deviations of hot-rolled ribbed steel bars with no longitudinal ribs (Unit: mm)

Size	Inner Diameter		Rib Height		Rib Width	Out of Roundness	Cross Rib Spacing	
	Nominal Size	Allowable Deviations	Nominal Size	Allowable Deviations			Nominal Size	Allowable Deviations
Φ16	16	+0.5 +0.1	1.5	± 0.4	1.0	≤0.4	11.5	± 0.5
Φ18	18	+0.5 +0.1	1.5	± 0.4	1.3	≤0.4	13.3	± 0.5
Φ20	20	+0.5 +0.1	1.5	± 0.4	1.3	≤0.4	13.3	± 0.5
Φ22	22	+0.5 -0.4	0.8	+0.3 -0.2	1.1	≤0.4	12	± 0.8

Mechanical properties of hot-rolled ribbed bars with no longitudinal rib anchors

Grade	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A (%)
	Not Less Than		
MG335	335	490	20
MG400	400	570	20
MG500	500	630	18
MG600	600	800	18



FEATURES & ADVANTAGES



- available in left hand or right hand thread
- higher thread ribs mix resin better and improve anchorage
- suitable for using with either resin cartridges or cement grout
- equal strength on the entire length
- due to continuous thread on entire length
- the nut can be fastened upward at any place
- increase the material utilization ratio and save cost
- available in black or hot dip galvanized

Accessories:

Domed Nut, Hex Nut, Anti-Friction Washer, Domed Ball

Various Nuts:



RESIN ANCHOR BOLTS CAPSULES

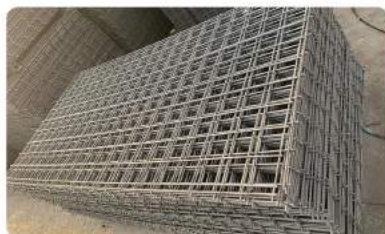
Resin Anchor Bolts Capsules					
Standard: MT 146.1-2002		Product Classification			
Model	Gel Time / S	Wait Time / S	Color Identification		
CKa Super Fast Speed	8-25	10-30	Yellow		
CK Super Fast Speed	8-40	10-60	Red		
K Fast Speed	41-90	90-180	Blue		
Z Medium Speed	91-180	480	White		
M Slow Speed	>180	----	----		
Product Specification (mm)					
Resin Capsules OD	35	23	23		
For Anchor Hole OD	42	28	28		
Technical Requirements					
1	Resin Cement Consistency	More than 16mm	(22±1) °C		
2	Compressive Strength	More than 40MPa	(22±1) °C		
3	Product Validity	More than 3 month	(20-25) °C		
Anchorage Force (KN)					
Type	CKa	CK	K	Z	M
Age / Min	3	10	15	30	--
Threaded Steel Bar ≥ 335MPa	φ22mm	>125			
	φ20mm	>105			
	φ18mm	>85			
	φ16mm	>75			
Round Steel Bar ≥ 235MPa	φ22mm	>90			
	φ20mm	>70			
	φ18mm	>60			
	φ16mm	>50			



MESH

Mesh is used for coal mine roofing, tunnels, bridge construction, road-based mesh, construction site building materials. The common mesh we supplied are as below. And we can also produced based on your requirement.

Products Name	Hole Size (mm)	Material	Wire Diameter(mm)	Size
Welded Mesh	50-250	Q195/Q235	3.5-8	custom-made

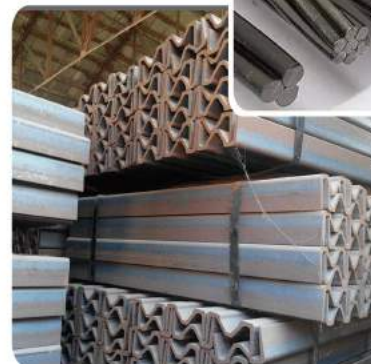


Products Name	Hole Size (mm)	Material	Wire Diameter(mm)	Size
Diamond Mesh	40*40	Q195	2.5-4	Width: 1-2m Length as required
	45*45			
	50*50			
	60*60			

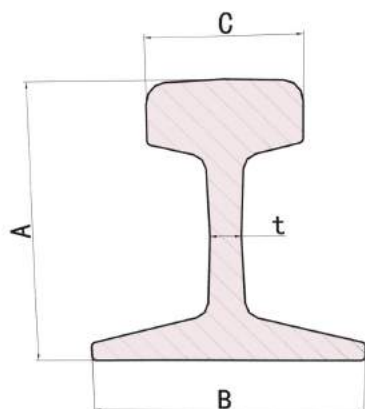


OTHER MINING SUPPORT PRODUCTS

Except mine & tunnel arch supports, split sets & resin anchor bolts, mesh, we can also supply other mining support products: Cable Bolts, W-Section Strap, M-Section Strap, T-Section Strap, π Steel.



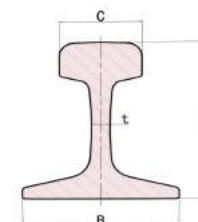
LIGHT RAIL



STANDARD: GB/T 11264-2012

Size	Specifications (mm)				Weight (kg/m)	Steel Grade	Length (m)
	A	B	C	t			
GB 6KG	50.8	50.8	25.4	4.76	5.98	Q235B	6
GB 8KG	65	54	25	7	8.42	Q235B	6
GB 9KG	63.50	63.50	32.10	5.90	8.94	Q235B/55Q	5-12
GB 12KG	69.85	69.85	38.10	7.54	12.20	Q235B/55Q	5-12
GB 15KG	79.37	79.37	42.86	8.33	15.20	Q235B/55Q	5-12
GB 18KG	90.00	80.00	40.00	10.00	18.06	Q235B/55Q	5-12
GB 22KG	93.66	93.66	50.80	10.72	22.30	Q235B/55Q	5-12
GB 24KG	107.00	92.00	51.00	10.90	24.46	Q235B/55Q	5-12
GB 30KG	107.95	107.95	60.33	12.30	30.10	Q235B/55Q	5-12

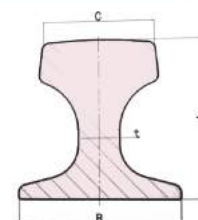
HEAVY RAIL



STANDARD: GB2585-2007

Size	Specifications (mm)				Weight (kg/m)	Steel Grade	Length (m)
	A	B	C	t			
GB 38KG	134	114	68	13.0	38.733	50Mn/U71Mn	12.5-25
GB 43KG	140	114	70	14.5	44.653	50Mn/U71Mn	12.5-25
GB 50KG	152	132	70	15.5	51.514	50Mn/U71Mn	12.5-25
GB 60KG	176	150	73	16.5	60.64	50Mn/U71Mn	12.5-25
GB 75KG	192	150	75	20	74.4	50Mn/U71Mn	12.5-25

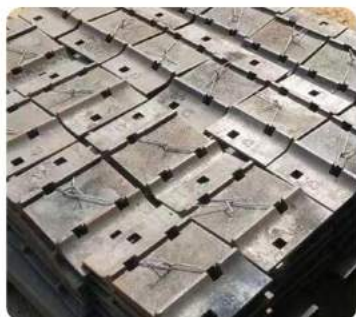
CRANE RAIL



STANDARD: YB/T5055-2014

Size	Specifications (mm)				Weight (kg/m)	Steel Grade	Length (m)
	A	B	C	t			
QU70	120	120	70	28	52.8	U71Mn	12
QU80	130	130	80	32	63.69	U71Mn	12
QU100	150	150	100	38	88.96	U71Mn	12
QU120	170	170	120	44	118.1	U71Mn	12

RAIL TRACK ACCESSORIES



RAIL TRACK ACCESSORIES





ZHONGXIANG STEEL GROUP

Market Orientation



Longevity



*Advancing forward, keeping improving,
creating a bright future with users.*