



[www.sronsrockbolts.com](http://www.sronsrockbolts.com)

# GEO TECHNICAL BAR SYSTEM



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**FACTORY :**

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QUALITY COMMITMENT  
MAKE IN INDIA

## COMPANY PROFILE

### About Us

Established in 2015 to support the growing demand of our Rock Hardware Products with excellent customer service. Srons Engineers are the Indian manufacturers of Rock Bolts, Self-drilling anchor systems and Self Drilling Anchor Bolt parts like hollow bar & rod, threaded rods, tie rods, coil rods, anchor couplers, anchor adapters, anchor nuts, drilling bits, Plain Washers, Spring Washers etc. We are also manufacturing High Tensile Precision Fasteners products like Hex Head Bolts and Hex Nuts & Spring Channel Nuts etc.

Our manufacturing of hollow self-drilling anchors or SDA Bars has increased progressively to cover the national and international markets due to the competitiveness level reached by our company, latest technology, innovation and the experience made in the tunnel & mining rock bolt field. Srons Engineers is an engineering company committed to deliver high quality rock bolts for tunnel support and slope reinforcement. Because we are a new company, we are able to keep our overheads low and maintain competitive pricing.

### Mission & Vision

Srons Engineers's mission is consistent supply of its quality, durable, hi-performance products, we have established ourselves as one of the most reliable players in the industry. Due to our customer centric approach, we are able to provide our customers with best possible solutions to meet their various requirements.

### Products Range

Srons Engineers are the Indian manufacturers and exporters of Rock Bolts, Self Drilling Anchor Bolt Systems, Threaded Rods, Thread Bars, Coil Rods, Hollow Rods, Tie Rods, Plain Washers, Flat Washers, Spring Washers, Spring Lock Washers, Fasteners like Hex Nuts, Hex Bolts, Spring Channel Nuts etc. Our products are available in Material like Stainless Steel and Mild Steel and Finish of products like Hot Dip Galvanized & Zinc finish. Our main motto is to worldwide supply quality and safe products.

### Enquiry / Query

To place an enquiry / query / order or to avail more information about our company and services, you can contact us or e-mail us and we would get back to you as soon as possible.



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## SELF DRILLING ANCHOR BOLT

The self-drilling Hollow bar anchor system is comprised of a hollow threaded bar with an attached drill bit that can perform drilling, anchoring and grouting in a single operation. The hollow bar allows air and water to freely pass through the bar during drilling to remove debris and then allow grout to be injected immediately after drilling is completed. Grout fills the hollow bar and completely covers the entire bolt. Couplers can be used to join hollow bars and extend the bolt length while nuts and plates are used to provide the required tension.

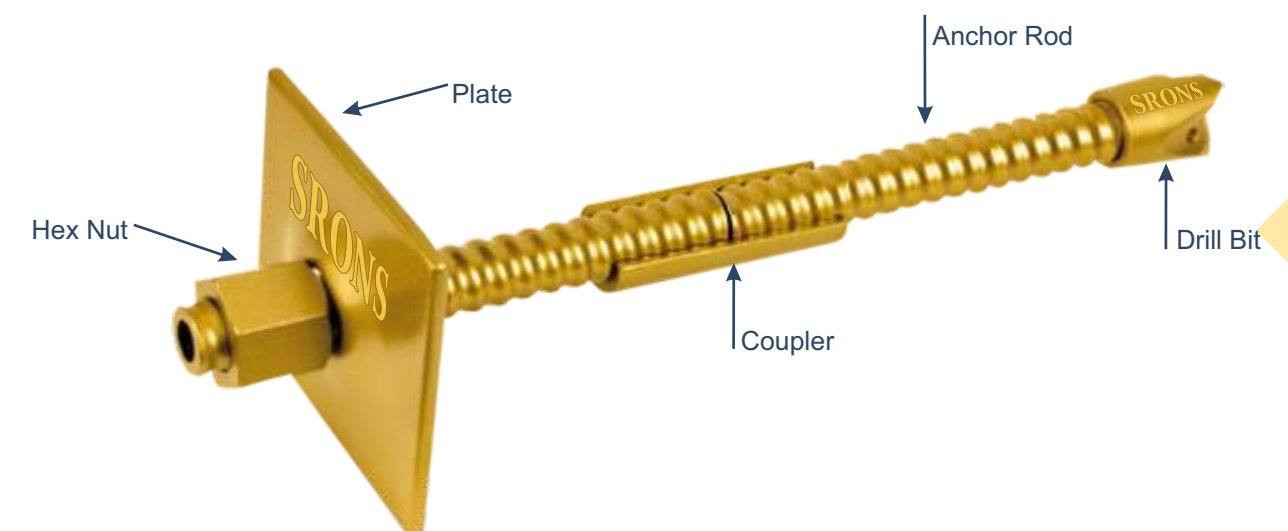
Srons Engineers offers Self Drilling Anchors in variants of R25, R32, R38, R51 and T76 and their accessories including the Anchor Nut, Anchor Plate, Anchor Coupler and Drilling bits depending on the geological condition of the project site (Type EX, EXX, ES, ESS, EY, EYY).

### ANCHOR RODS

	Unit	R 25N	R 32L	R 32N	R 32S	R38 N	R51 L	R51 N	T 76N	T 76S
Outer Diameter	mm	25.00	32.00	32.00	32.00	38.00	51.00	51.00	76.00	76.00
Inner Diameter	mm	14.00	22	20	18.5	22.00	36.00	33.00	51.00	47.00
Ultimate Load	kN	200	260	280	360	500	550	800	1600	1900
Yield Load	kN	150	200	230	280	400	450	630	1200	1500

### ANCHOR NUTS

	Unit	R 25N	R 32L	R 32N	R 32S	R38 N	R51 L	R51 N	T 76N	T 76S
Key Size	mm	41	46	46	46	50	75	75	100	100
Length	mm	35	45	45	65	60	70	70	80	80



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## ANCHOR PLATE

	Unit	R 25N	R 32L	R 32N	R 32S	R38 N	R51 L	R51 N	T 76N	T 76S
Dimension	mm	150x150	200x200	200x200	200x200	200x200	200x200	250x250	250x250	250x250
Thickness	mm	8	10	10	12	12	30	40	40	40
Hole Diameter	mm	30	35	35	35	41	60	60	80	80

## ANCHOR COUPLER

	Unit	R 25N	R 32L	R 32N	R 32S	R38 N	R51 L	R51 N	T 76N	T 76S
Outer Dimension	mm	36	42	42	42	52	63	63	95	95
Length	mm	150	145	160	190	220	140	200	200	220

## SELF DRILLING HOLLOW ROCK BOLTS

### Product Features

- \* 3 in 1 concept : drilling rod, anchor bar & grouting pipe.
- \* Suitable for both permanent and temporary applications.
- \* Optimum bonding and load transfer.
- \* Complete solution including plate and bolts.
- \* Splicing system to adjust to custom lengths.
- \* Standard sacrificial drill bits for every ground conditions.

### Benefits

- \* Flexible installation : core injection to suit all ground conditions.
- \* Safely : Visual control of full encapsulation.
- \* One step installation with sacrificial drill bits. drilling, placing , grouting.
- \* No cased borehole allowing ground preservation.

### Corrosion Protection :

- \* For temporary applications the corrosion protection is achieved through encapsulation with grout.
- \* For permanent applications, SRONS Hollow Rock Bolts can be hot dip galvanized according to EN-1461, epoxy coated or supplied with a sacrificial thickness if accounted for all design stage.

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Threaded Rods / Tie Rods

## FULLY THREADED BAR

Nominal Diameter	Cross-section area	Linear Weight	Grade 525/575		Grade 835/1035		Grade 935/1085	
			Yield load (kN)	Ultimate load (kN)	Yield load (kN)	Ultimate load (kN)	Yield load (kN)	Ultimate load (kN)
mm	(mm <sup>2</sup> )	(kg/m)						
25	491	4.10	270	375	405	500	450	520
32	804	6.65	440	620	660	820	740	860
36	1,018	8.41	560	780	840	1,040	940	1,090
40	1,257	10.34	690	960	1,040	1,290	1,160	1,350
50	1,964	16.28	1,080	1,500	1,600	2,010	1,820	2,110

### Product Features

- \* High tensile fully threaded bars available in three grades for passive and active (pre-tensioned) anchors. Higher grades & Higher size are also available on request.
- \* Diameter range 25 mm to 50 mm
- \* Continuous cold rolled & hot rolled available thread.
- \* Minimum Elongation
  - Gr 525/575 6%
  - Gr 835/1035 6%
  - Gr 935/1085 6%
- \* Available with either left hand or right hand threads.

### Typical applications

- \* Excavation tie anchoring (1)
- \* Slope stabilization (3)
- \* Structural repairing
- \* Tunneling (2)
- \* Tension piles
- \* Mining

### Benefits

- \* High grade steel effectively reduces the diameter of the bar allowing for easier handling and a smaller bore hole.
- \* Continuous thread makes connections, possible at any point and increases bonding.
- \* Coarse thread and surface hardening allow for rough handling.
- \* Pre-stressing possible for active anchors (available for grade 835/1035 and grade 935/1035)

## THREAD ROD DIN 976

Dia	Thread Pitch (mm)	Per Mtr. Wt. (Kg.)	Dia	Thread Pitch (mm)	Per Mtr. Wt. (Kg.)
M2	0.04	0.019	M20	1.5/2.5	2.080
M2.5	0.05	0.030	M22	1.5/2.5	2.540
M3	0.50	0.044	M24	2.0/3.0	3.000
M3.5	0.60	0.060	M25	2.0/3.0	3.260
M4	0.70	0.078	M27	2.0/3.0	3.850
M5	0.80	0.124	M30	2/3.5	4.750
M6	1.00	0.177	M32	2/3.5	5.500
M8	1/1.25	0.319	M36	3/4.0	6.900
M10	1/1.25/1.5	0.500	M39	3/4.0	8.200
M12	1.25/1.5/1.75	0.725	M42	3/4.5	9.400
M14	1.5/2	0.970	M45	3/4.5	11.000
M16	1.5/2	1.330	M48	3/5.0	12.400
M18	1.5/2.5	1.650	M52	3/5.0	12.700

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### Typical Applications

- \* Harbours
- \* Wharves
- \* Jetties
- \* River Embankments

### Product Features

- \* Available in steel grades 355, 500, 700 N/mm<sup>2</sup>
- \* Rolled thread for better performance
- \* Minimum Elongation
  - Gr 355 18-22%
  - Gr 500 17%
  - Gr 700 15%

### Product Benefits

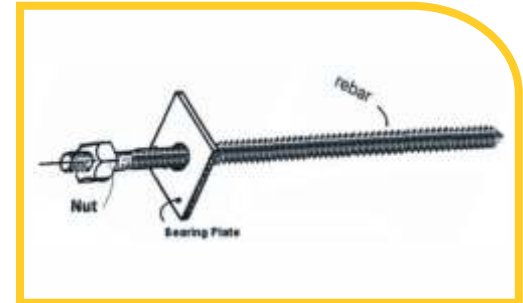
- \* Ductile Design
- \* Quick Installation
- \* Pre-tensioning application
- \* Full range of accessories for specific applications

### TIE RODS

Thread size	Normal bar diameter	Linear weight	Grade 355/510			Grade 500/660			Grade 700/900		
			Yield load*	Ultimate load*	Tension capacity as per EC3	Yield load*	Ultimate load*	Tension capacity as per EC3	Yield load*	Ultimate load*	Tension capacity as per EC3
mm	mm	kg/m	kN	kN	kN	kN	kN	kN	kN	kN	kN
M42	40	9.86	398	572	411.6	560	740	532.7	785	1,009	726.4
M45	43	11.40	464	666	479.6	653	862	620.6	914	1,175	846.3
M48	45	12.48	523	751	540.9	737	972	700.0	1,031	1,326	954.6
M52	49	14.80	624	897	645.5	879	1,160	835.3	1,230	1,582	1,139.1
M56	53	17.32	721	1,035	745.4	1,015	1,340	964.7	1,421	1,827	1,315.5
M60	57	20.03	839	1,205	867.3	1,181	1,559	1,122.4	1,653	2,126	1,530.6
M64	61	22.94	950	1,365	982.6	1,338	1,766	1,271.6	1,873	2,408	1,734.0
M68	65	26.04	1,085	1,558	1,121.9	1,528	2,017	1,541.9	2,139	2,750	1,979.8
M72	69	29.35	1,228	1,764	1,270.4	1,730	2,283	1,644.1	2,422	3,114	2,241.9
M78	75	34.67	1,460	2,098	1,510.5	2,057	2,715	1,954.8	2,880	3,702	2,665.6
M83	80	39.45	1,669	2,398	1,726.4	2,351	3,103	2,234.2	3,291	4,231	3,046.6
M88	85	44.54	1,892	2,718	1,956.8	2,664	3,517	2,532.3	3,730	4,796	3,453.1
M93	90	49.93	2,128	3,058	2,201.5	2,998	3,957	2,849.1	4,197	5,396	3,885.1
M98	95	55.63	2,379	3,418	2,460.7	3,351	4,423	3,184.5	4,691	6,031	4,342.5
M103	100	61.64	2,643	3,798	2,734.3	3,723	4,915	3,538.6	5,213	6,702	4,825.3
M108	105	67.96	2,922	4,198	3,022.4	4,115	5,432	3,911.3	5,762	7,408	5,333.6
M113	110	74.59	3,214	4,618	3,324.8	4,527	5,976	4,302.7	6,338	8,149	5,867.3
M118	115	81.52	3,521	5,058	3,641.7	4,959	6,546	4,712.8	6,942	8,926	6,426.5
M123	120	88.76	3,841	5,518	3,973.0	5,410	7,141	5,141.5	7,574	9,738	7,011.1
M128	125	96.32	4,175	5,998	4,318.7	5,881	7,762	5,588.9	8,233	10,585	7,621.2
M133	130	104.18	4,523	6,498	4,678.8	6,371	8,410	6,054.9	8,919	11,468	8,256.7
M143	140	120.82	5,261	7,559	5,442.3	7,411	9,782	7,043.0	10,375	13,339	9,604.1
M153	150	138.69	6,055	8,699	6,263.5	8,529	11,258	8,105.7	11,940	15,352	11,053.2
M162	160	157.80	6,818	9,794	7,051.9	9,602	12,675	9,126.0	13,443	17,284	12,444.5

### SN ROCK BOLT SYSTEM

Grouted rockbolts have been commonly used world-wide in mining and civil engineering applications. The most commonly used grouted rockbolt is the fully grouted rebar or threaded bar made of steel. Cement or resin are used as grouting agent. The rebar used with resin creates a system commonly used for tensioned rockbolt but the rebar or the threaded bar with cement grout can also be used for untensioned bolts.



Steel Quality Designation :	B500 - Grade C - EN 10080		
Steel Diameter :	25 mm	32 mm	40 mm
Yield Load, Steel :	> 500MPa	> 500MPa	> 500MPa
Ultimate Load, Steel :	>550 Mpa	>550 Mpa	>550 Mpa
Weight of Bolt (Without plate and nut) :	3.85 kg/mt	6.31 kg/mt	10.00 kg/mt
Bolts Length :	Any Length Required		
Thread at one end x 100mm	M24	M30	M38



NUT	Hexagon Nut Class 8 ISO Metric Thread		
Steel Quality Designation :	UNI 3740 - ISO 898-2		
Dimension :	36 x 19mm	46 x 32mm	55 x 40mm
Coarse Thread :	3.0	3.5	4.5
Weight :	0.11 Kg	0.26 Kg	0.55 Kg



Steel Quality Designation :	S355JR - EN 10025-2		
	Rockbolts Dia 25mm	Rockbolts Dia 32mm	Rockbolts Dia 40mm
Dimension :	150x150x8mm	200x200x10mm	200x200x12mm
Shape - Hole	Flat-Central Hole Dia 28mm	Flat-Central Hole Dia 35mm	Flat-Central Hole Dia 43mm
Weight :	1.360 kg	3.10 kg	3.60 kg
Optional :	20mm Hole for injection tube		



## HEXAGEN NUT DIN 934



Thread Size	M2	M3	M4	M5	M6	M8	M10	M12	M16
Pitch	0.4	0.5	0.7	0.8	1	1.25	1.5	1.75	2
m	1.6	2.4	3.2	4	5	6.5	8	10	13
e	4.32	6.01	7.68	8.79	11.05	14.38	18.9	21.1	16.75
s	4	5.5	7	8	10	13	17	19	24

Thread Size	M20	M24	M30	M36	M42	M48	M48		
Pitch	2.5	3	3.5	4	4.5	5	5.5		
m	16	19	24	29	34	38	45		
e	32.95	39.55	50.85	60.79	71.3	82.6	93.56		
s	30	36	46	55	65	75	85		

## HEXAGEN HEAD BOLT DIN 933



Thread Size	M4	M5	M6	M8	M10	M12	M14
Pitch	0.7	0.8	1	1.25	1.5	1.75	2
k	2.8	3.5	4	5.3	6.4	7.5	8.8
e	Grade A	7.66	8.79	11.05	14.38	18.9	24.49
	Grade B	-	8.63	10.89	14.2	18.72	20.88
S	7	8	10	13	17	19	22
L	8-40	8-40	8-50	12-60	16-60	20-80	25-80

Thread Size	M16	M18	M20	M22	M24	M27	M30
Pitch	2	2.5	2.5	2.5	3	3	3.5
k	10	11.5	12.5	14	15	17	18.7
e	Grade A	26.75	30.14	33.53	35.72	35.98	45.2
	Grade B	26.17	29.56	32.95	35.03	39.55	45.2
S	24	27	30	32	36	41	46
L	30-100	30-100	40-100	50-100	50-100	60-100	70-100

## SPRING WASHER DIN 7980



d	M 3	M 4	M 5	M 6	M 8	M 10	M 12	M 14
d1 min.	3,6	4,1	5,1	6,1	8,1	10,2	12,2	14,2
d2 max.	5,6	7,0	8,8	9,9	12,7	16,0	18,0	21,1
s	1,0	1,2	1,6	1,6	2,0	2,5	2,5	3,0

	0,1	0,2	0,3	0,4	0,8	2,0	3,0	5,5
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d	M 16	M 18	M 20	M 22	M 24	M 27	M 30	M 36
d1 min.	16,2	18,2	20,2	22,5	24,5	27,5	30,5	36,5
d2 max.	24,4	26,4	30,6	32,9	35,9	38,9	44,1	52,2
s	3,5	3,5	4,5	4,5	5,0	5,0	6,0	7,0

	6,0	7,8	8,4	11,9	14,5	21,1	29,5	50,2
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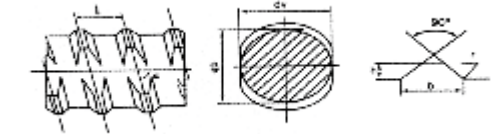
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## HIGH STRENGTH THREAD BAR

### POST-TENSIONING BAR

In application of Post-Tensioning/Geotechnical/Formworks/Ground Anchors

Soil Nailing/Tunneling/Mining



- Left hand Thread available
- Hot Dipped Galvanized available
- Anit-rust processing available

MM	MM		MM		MM		MM		MM		R/MM	
	DH	SV	H	B	I							
15	15	± 0.3	15.0	+0.4-0.8	1.2	± 0.3	4.0	± 0.5	10.0	± 0.2	1.0	80°42'
20	20	± 0.4	20.0	+0.4-0.8	1.3	± 0.3	4.8		10.0	± 0.2	1.2	80°42'
25	25		25.0	+0.4-0.8	1.6		6.0		12.0	± 0.3	1.5	81°19'
32	32	± 0.5	32.0	+0.4-1.2	2.0	± 0.4	7.0		16.0		± 0.3	2.0
36	36	± 0.5	36.0	+0.4-1.2	2.2	± 0.4	8.0		18.0	± 0.4	2.5	81°50'
40	40	± 0.5	40.0	+0.4-1.2	2.5	± 0.5	8.0		20.0		2.5	80°29'
50	50		50.0	+0.4-1.2	3.0	-0.5	9.0		24.0	2.5	81°19'	
63.5	63.5		63.5	+0.4-1.2	3.0	± 0.6	12.0		22.0	2.5	84°10'	

## ACCESSORY FOR THREAD BAR

### FULL HEX NUT & SPHERICAL HEX NUT

Normally there are Full Hex and Spherical Hex used in construction. There is also Lock nut, which is shorter and thinner than normal Hex Nut in the tensioning end.

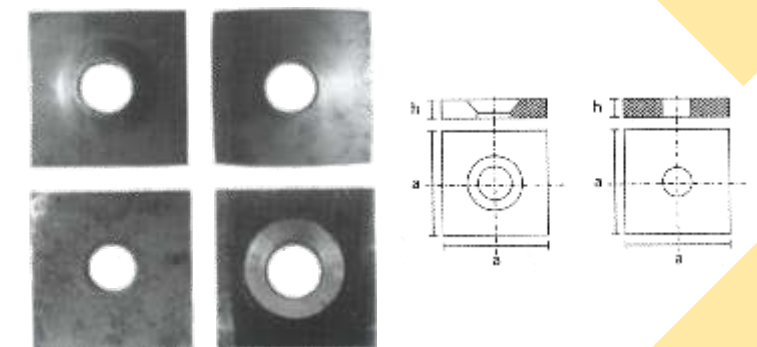


D MM	S MM	H MM	D MM	KN	KG
20	32	45	37	560	0.17
25	50	60	55	590	0.70
32	65	72	75	835	1.40
36	65	80	77	960	1.45
40	70	100	81	1050	2.12
50	80	120	88	-	3.1

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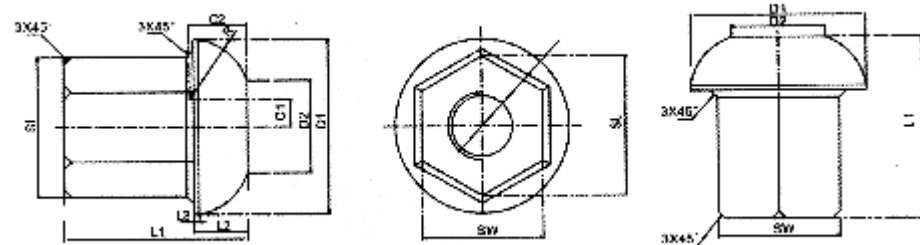
D MM	A MM	H MM	MATERIAL	KG
20	100	30	Q235	2.2
25	150	35	Q235	5.9
32	180	40	Q235	9.6
36	200	45	Q235	13.4
40	220	50	Q235	18.0
50	240	55	Q235	23.6

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## DOMED NUT



DIA	DIMENSION					
	SW	SL	D1	D2	L1	L2
18mm	36	42	50	30	55	15
25mm	50	58	72	38	75	22
32mm	60	69	80	45	90	28
36mm	65	75	90	50	100	30
40mm	70	81	100	55	115	32
50mm	85	98	120	64	145	36



## COUPLERS

Couplers was designed to connect the Thread Bar, to increase the length where projects request.

D MM	D MM	L MM	KG
15	38	110	0.8
20	38	110	0.7
25	50	132	1.35
32	60	168	2.4
36	70	200	3.6
40	75	220	5.2
50	90	290	9.64

