



Certified Installers/Exclusive Dealers - CA, NV, AZ

1-1/2 inch Square Bar Helical Anchor

ECP manufactures 1-1/2 inch square bar helical anchor in its USA manufacturing facility. ECP is proud to only use American Steel and American labor in the production of our products. 1-1/2 inch square bar helical anchors are the most popular anchor for tiebacks, guy anchors, soil nails and foundation repair applications. ECP square shaft helical anchors are very tough and have many uses including applications where corrosion is a problem.

Helical piers, also known as ground anchors, screw anchors and ground anchors are ideal for applications where there is a need to resist both tension and axial compressive forces. Examples of these include expansive clay soils, metal buildings, telecommunication towers and canopies. 1-1/2 square bar helical anchors are easy to install, can be used in limited access spaces and can be loaded or tested immediately upon installation making them very unique to the deep foundation industry.

ECP offers 1-1/2 inch RCSB Helical Anchors for:

- Tiebacks
- New Construction
- Foundation Repair
- Guy Anchors
- Shoring
- Tilt Walls
- Soil Nails
- Slab Repair
- Bowed Walls



Standard Torque Anchor™ Lead Configurations					
Product Designation	Plate Diameter-inches			Plate Area sq. ft.	Length
	"A"	"B"	"C"		
TAH-150-10 (8)	8	--	--	0.33	10"
TAH-150-10 (10)	10	--	--	0.53	10"
TAH-150-10 (12)	12	--	--	0.77	10"



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TAH-150-60 (8)	8	--	--	0.33	60"
TAH-150-60 (10)	10	--	--	0.53	60"
TAH-150-60 (12)	12	--	--	0.77	60"
TAF-150-60 (6-8)	6	8	--	0.51	60"
TAF-150-60 (8-10)	8	10	--	0.86	60"
TAF-150-60 (10-12)	10	12	--	1.30	60"
TAH-150-84 (12)	12	--	--	0.77	84"
TAF-150-84 (8-10-12)	8	10	12	1.63	84"
TAF-150-84 (10-12)	10	12	--	1.30	84"
TAF-150-84 (10-12-14)	10	12	14	2.35	84"
TAF-150-120 (8-10-12)	8	10	12	1.63	120"
TAF-150-120 (10-12-14)	10	12	14	2.35	120"

Standard ECP Torque Anchor™ Extensions			
Part Number			
36"	60"	84"	120"
TAE-150-36	TAE-150-60	TAE-150-84	TAE-150-120

Note: Products Listed Above Are Standard Items And Are Usually Available From Stock. Other Specialized Configurations Are Available As Special Order – Allow Extra Time For Processing. All Helical Plates Are Spaced At Three Times The Diameter Of The Preceding Plate Effective Length Of Extension Is 3" Less Than Overall Dimension Due to Coupling Overlap All Product Hot Dip Galvanized Per ASTM A123 Grade 100 Shaft Weight per Foot – 7.7 lb.

Shaft Size	Installation Torque Factor (k)	Axial Compression Load Limit	Ultimate-Limit Tension Strength	Useable Torsional Strength	Practical Load Limit Based Torsional Strength
1-1/2" Square Bar	9 - 11	70,000 lb.	70,000 lb.	7,500 ft-lb	Load limited to the rated capacity of the attachments and the lateral soil strength against the shaft
1-3/4" Square Bar	9 - 11	100,000 lb.	100,000 lb.	11,000 ft-lb	
2-1/4" Square Bar	10 - 12	200,000 lb.	200,000 lb.	23,000 ft-lb	
2-7/8" Tubular – 0.203" Wall	8 - 9	60,000 lb.	60,000 lb.	5,500 ft-lb	44,000 lb
2-7/8" Tubular – 0.262" Wall	8 - 9	100,000 lb.	100,000 lb.	9,500 ft-lb	80,000 lb
3-1/2" Tubular – 0.300" Wall	7 - 8	115,000 lb.	120,000 lb.	13,000 ft-lb	97,000 lb
4-1/2" Tubular – 0.337" Wall	6 - 7	160,000 lb.	160,000 lb.	22,000 ft-lb	143,000 lb

The designer should select a product that provides adequate additional torsional capacity for the specific project and soil conditions.



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IMPORTANT NOTES:

The capacities listed for Axial Compression, Tension and Torsion in Table 2 are mechanical ratings. One must understand that the actual installed load capacities for the product are dependent upon the actual soil conditions on a specific job site. The shaft “Useable Torsional Strengths” given here are the maximum values that should be applied to the product. Furthermore, these torsional ratings assume homogeneous soil conditions and proper alignment of the drive motor to the shaft. In homogeneous soils it might be possible to achieve up to 95% or more of the “Useable Torsional Strength” shown in Table 2. In obstruction-laden soils, torsion spikes experienced by the shaft may cause impact fractures of the couplings or other components. Where impact loading is expected, reduce shaft torsion by 30% or more from “Useable Torsional Strength” depending upon site soil conditions to reduce chance of fracture or damage. Another advantage of selecting a torsional rating below the values shown in Table 2 is that one may be able to drive the pile slightly deeper after the torsional requirements have been met, thus eliminating the need to cut the pile shaft in the field.

The load transfer attachment capacity must be verified for the design. Standard attachments and ratings are shown on the following pages. Special configurations to fit your project can be fabricated to your specifications upon request.

ECP Engineering, Design and Production capabilities of helical piles, piers, anchors and soil nails have become the standard in the industry. Many professional contractors prefer to use helical piers to tieback bowed walls as well as support foundations. Our high strength 7,000ft-lb steel shafts make them ideal for many applications and far exceed other helical anchor offerings. For more information about helical anchor specifications and technical data visit ECP Engineering.

ECP provides a national network of foundation repair contractors for the installation of 1-1/2 inch square bar helical piers and all of our foundation repair products.



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