



TERRATORQUE HELICAL ANCHORS AND HELICAL PILING

PRODUCT CATALOG

INTRODUCTION

TerraTorque offers quality helical anchors and helical piling to the construction industry. Our products are available in solid square shaft (type TSA), hollow round shaft (type TRP) and hollow square shaft (type TSP) configurations. Standard series TSA solid square anchors are available in 1-1/2", 1-3/4" and 2" square sizes. Standard series TRP hollow round piles are available in 2-7/8" OD up to 12-3/4" OD and series TSP hollow square piles are available in 2-1/2" to 5" sizes. Custom sizes per customer request can be easily accommodated. Type TSA, TRP and TSP are suitable for compression and tension applications in a wide variety of soils and load capacities. The TSA series anchors are also utilized for our TPL pipeline anchor sets.

For pipeline buoyancy control, our TPL series pipeline anchors are offered as a complete pipeline anchor set. This product is commonly used on pipelines worldwide to provide buoyancy control for onshore pipelines. The TPL series anchor sets are also utilized offshore to provide pipeline stabilization solutions, span rectification and buoyancy control. The sets are designed to meet the project specifications and are supplied complete with anchors, extensions, saddles, corrosion protection and fasteners.

The TSA solid square shaft anchors utilize a high strength steel coupling to bolt the sections together to reach the required depth. The TRP round pipe and TSP square tubing incorporates a welded sleeve/coupling and high strength bolts to connect sections together. Our helices are machine pressed to form a true helical shape that does not auger or dig its way into the soil, but slowly screws into the soil with minimal soil disturbance.

The lead section has helical plates welded to the shaft. The lead may be a single helix or multiple helices, depending on the site soil conditions and the design loads. If additional helices are required, a helical extension may be used. Plain extensions are then added to the assembly as required until the lead sections penetrate into the bearing strata of the soil and the installation torque requirements are achieved.

Our materials are fabricated in our ISO 9001-2008 certified factory using new materials and industry accepted fabrication techniques. Our on premises hot dip galvanizing is available for all our products.

Worldwide shipping is no problem. Our experienced shipping team can ship our products worldwide to your destination quickly, efficiently and economically.

Common material configurations are provided in this catalog. We can also readily manufacture products to meet the specific requirements of our customers. In addition to what we present in our catalog we also have the flexibility, upon request, to provide custom designed product with:

1. Larger or smaller size square shafts or round shafts
2. Any diameter pipe for helical shafts as specified by a project requirement or customer
3. Any wall thickness of pipe for helical piling shafts as specified by project requirement or customer
4. Higher grades of pipe for helical piling shafts as specified by project requirements or customer
5. Wide range of component lengths
6. Various grades, thicknesses, diameters and quantities of helices
7. Stepped or transition piling / combination piles

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TERRATORQUE FAMILY OF PRODUCTS

Our Product Line at a Glance:

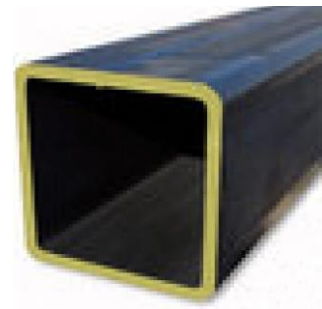
Product	Description	Standard Sizes
TSA	Solid Square Shaft Helical Anchors	1-1/2" to 2" Solid Square Bar
TPL	Pipeline Anchor Sets Utilizing TSA Anchors	1-1/2" to 2" Solid Square Bar
TRP	Hollow Round Shaft Helical Piling	2-7/8" O.D. to 12-3/4" O.D pipe
TSP	Hollow Square Shaft Helical Piling	2-1/2" square to 5" square tubing



TSA/TPL
SOLID SQUARE BAR



TRP
HOLLOW ROUND TUBING/PIPE



TSP
HOLLOW SQUARE TUBING

Note: Above table indicates typical sizes. Custom sizes per customer requirements available on request.
Shipping: Our experienced shipping team can ship our products worldwide quickly and economically



TERRATORQUE SOLID SQUARE SHAFT (TSA) PRODUCTS STRENGTH RATINGS



TSA/TPL
SOLID SQUARE SHAFT

Solid Square Shaft (TSA) Product Strength Ratings

Product	Torque Rating ft-lbs	Ultimate Tension lbs	Ultimate Compression lbs
TSA38 (1-1/2")	7,000	70,000	70,000
TSA44 (1-3/4")	10,000	100,000	100,000
TSA50 (2")	15,000	150,000	150,000



TerraTorque 1-1/2" x 1-1/2" (38mm) Solid Square Shaft Anchors and Extensions (TSA38 Series) Torque Rating: 7,000 ft-lb

Series TSA38 Data

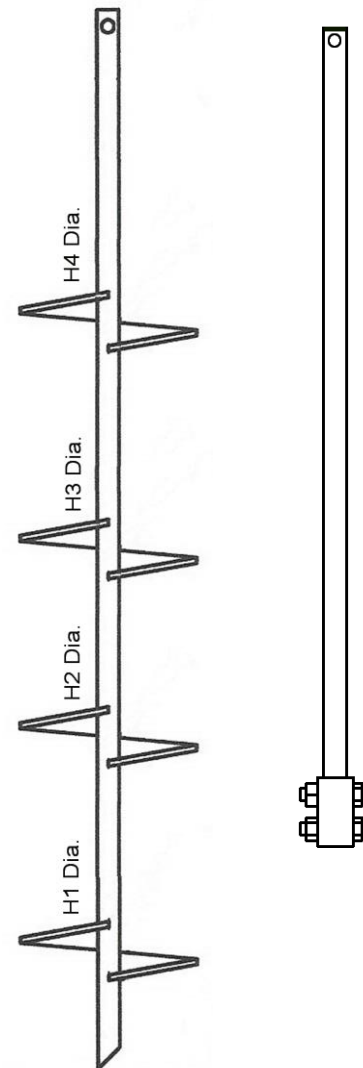
Product Specifications	
Shaft Dimensions	1.5" (38mm) solid square bar
Shaft Material	High Strength Alloy Steel
Coupling	Bolted
Coupling Material	High Strength Cast Steel
Helix Material	Yield: Minimum 50 ksi*
Coating Options	Bare Steel, Galvanization, Painted

*80 ksi helix material available on request

Anchor Capacity	
Maximum Torque Rating	7,000 ft-lbs
Uplift Capacity Limit	70 kips (based on torque rating)
Compression Capacity Limit	70 kips (based on torque rating)

Helix Configuration Options	
Diameters, inches	6, 8, 10, 12, 14
Thicknesses, inches	.375, .500, .625

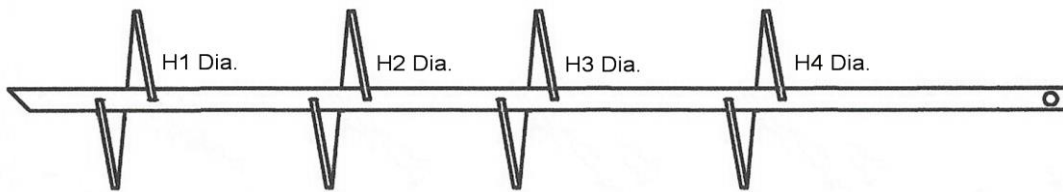
Fasteners	
High Strength Bolt and Nut	3/4-inch, grade 8.8





TerraTorque 1-1/2" (38mm) Solid Square Shaft Product (TSA38 Series) Torque Rating: 7,000 ft-lb

Common Lead Configurations



Part No.	Helix Diameters (in)				Length ft	Weight lbs
	1	2	3	4		
TSA38L-28103-6B	8	10	-	-	6	59
TSA38L-28103-9B	8	10	-	-	9	81
TSA38L-212123-6B	12	12	-	-	6	69
TSA38L-212123-9B	12	12	-	-	9	92
TSA38L-214143-6B	14	14	-	-	6	78
TSA38L-214143-9B	14	14	-	-	9	100
TSA38L-368103-6B	6	8	10	-	6	61
TSA38L-368103-9B	6	8	10	-	9	84
TSA38L-3810123-6B	8	10	12	-	6	70
TSA38L-3810123-9B	8	10	12	-	9	93
TSA38L-31012143-9B	10	12	14	-	9	104
TSA38L-31012143-12B	10	12	14	-	12	127
TSA38L-31414143-9B	14	14	14	-	9	117
TSA38L-31414143-12B	14	14	14	-	12	140
TSA38L-481012143-12B	8	10	12	14	12	132
TSA38L-4101214143-12B	10	12	14	14	12	143

Notes:

Alternative configurations specified by customer can be readily accommodated.

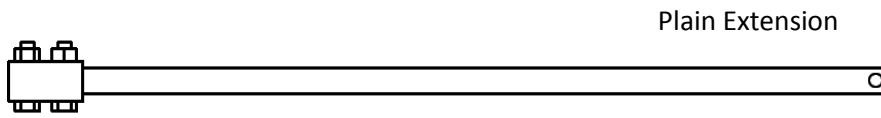
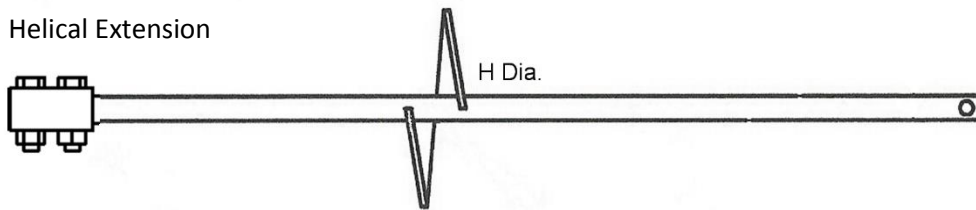
Above table weights denote .375" thick helices. Other thickness available include: .500", .625" and .750".

Above table weights denote bare steel. On premises hot dip galvanize is available.



TerraTorque 1-1/2" (38mm) Solid Square Shaft Product (TSA38 Series) Torque Rating: 7,000 ft-lb

Common Extension Configurations



Part No.	Helix Diameters (in)				Length ft	Weight lbs
	1	2	3	4		
TSA38E-3B	-	-	-	-	3	30
TSA38E-6B	-	-	-	-	6	53
TSA38E-9B	-	-	-	-	9	76
TSA38E-12B	-	-	-	-	12	99
TSA38HE-1143-6B	14	-	-	-	6	69
TSA38HE-214143-9B	14	14	-	-	9	108
TSA38HE-31414143-9B	14	14	14	-	9	124
TSA38HE-31414143-12B	14	14	14	-	12	147

Notes:

Alternative configurations specified by customer can be readily accommodated.
 Above table weights denote .375" thick helices. Other thicknesses available include: .500", .625" and .750".
 Above table weights denote bare steel. On premises hot dip galvanize is available.
 Coupling and fasteners included in extension weights.



TerraTorque 1-3/4" x 1-3/4" (44mm) Solid Square Shaft Anchors and Extensions (TSA44 Series) Torque Rating: 10,000 ft-lb

Series TSA44 Data

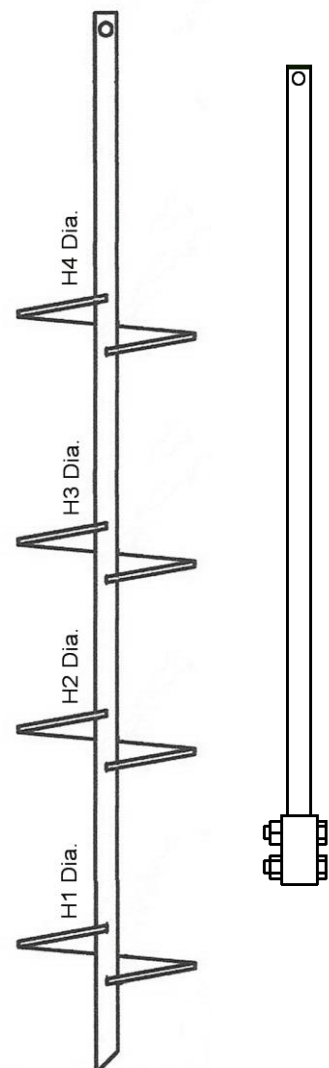
Product Specifications	
Shaft Dimensions	1-3/4" (44mm) solid square bar
Shaft Material	High Strength Alloy Steel
Coupling	Bolted
Coupling Material	High Strength Cast Steel
Helix Material	Yield: Minimum 50 ksi*
Coating Options	Bare Steel, Galvanization, Painted

*80 ksi helix material available on request

Anchor Capacity	
Maximum Torque Rating	10,000 ft-lbs
Uplift Capacity Limit	100 kips (based on torque rating)
Compression Capacity Limit	100 kips (based on torque rating)

Helix Configuration Options	
Diameters, inches	6, 8, 10, 12, 14, 16
Thicknesses, inches	.375, .500, .625, .750

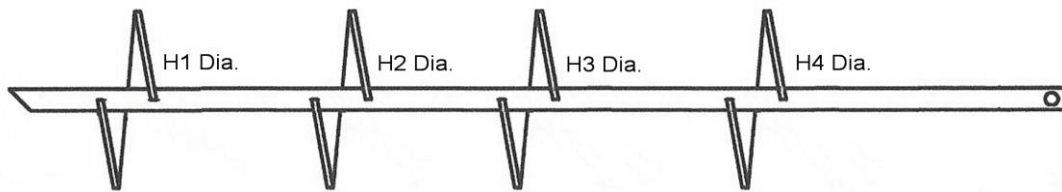
Fasteners	
High Strength Bolt and Nut	7/8-inch, grade 8.8





TerraTorque 1-3/4" (44mm) Solid Square Shaft Product (TSA44 Series) Torque Rating: 11,000 ft-lb

Common Lead Configurations



Part No.	Helix Diameters (in)				Length ft	Weight lbs
	1	2	3	4		
TSA44L-28103-6B	8	10	-	-	6	75
TSA44L-28103-9B	8	10	-	-	9	106
TSA44L-212123-6B	12	12	-	-	6	85
TSA44L-212123-9B	12	12	-	-	9	117
TSA44L-214143-6B	14	14	-	-	6	94
TSA44L-214143-9B	14	14	-	-	9	125
TSA44L-216163-6B	16	16			6	104
TSA44L-216163-9B	16	16			9	135
TSA44L-368103-6B	6	8	10	-	6	78
TSA44L-368103-9B	6	8	10	-	9	109
TSA44L-3810123-6B	8	10	12	-	6	87
TSA44L-3810123-9B	8	10	12	-	9	118
TSA44L-31012143-9B	10	12	14	-	9	129
TSA44L-31012143-12B	10	12	14	-	12	160
TSA44L-31414143-9B	14	14	14	-	9	141
TSA44L-31414143-12B	14	14	14	-	12	172
TSA44L-481012143-12B	8	10	12	14	12	165
TSA44L-4101214143-12B	10	12	14	14	12	176

Notes:

Alternative configurations specified by customer can be readily accommodated.

Above table weights denote .375" thick helices. Other thicknesses available include: .500", .625" and .750".

Above table weights denote bare steel. On premises hot dip galvanize is available.

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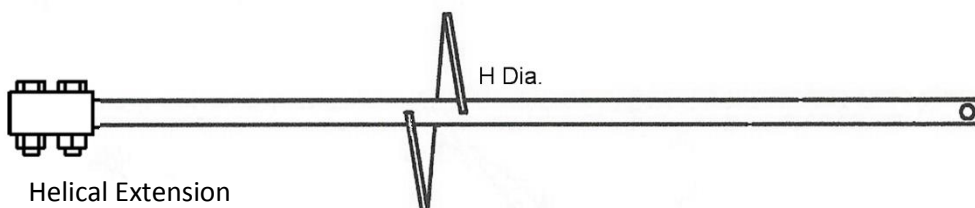
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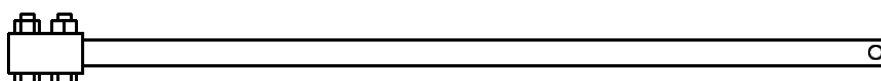


TerraTorque 1-3/4" (44mm) Solid Square Shaft Product (TSA44 Series) Torque Rating: 11,000 ft-lb

Common Extension Configurations



Helical Extension



Plain Extension

Part No.	Helix Diameters (in)				Length ft	Weight lbs
	1	2	3	4		
TSA44E-3B	-	-	-	-	3	40
TSA44E-6B	-	-	-	-	6	72
TSA44E-9B	-	-	-	-	9	103
TSA44E-12B	-	-	-	-	12	134
TSA44HE-1143-6B	14	-	-	-	6	88
TSA44HE-214143-9B	14	14	-	-	9	135
TSA44HE-31414143-9B	14	14	14	-	9	151
TSA44HE-31414143-12B	14	14	14	-	12	182

Notes:

Alternative configurations specified by customer can be readily accommodated.

Above table weights denote .375" thick helices. Other thicknesses available include: .500", .625" and .750".

Above table weights denote bare steel. On premises hot dip galvanize is available.

Coupling and fasteners included in extension weights.



TerraTorque 2" x 2" (50mm) Solid Square Shaft Anchors and Extensions (TSA50 Series) Torque Rating: 15,000 ft-lb

Series TSA50 Data

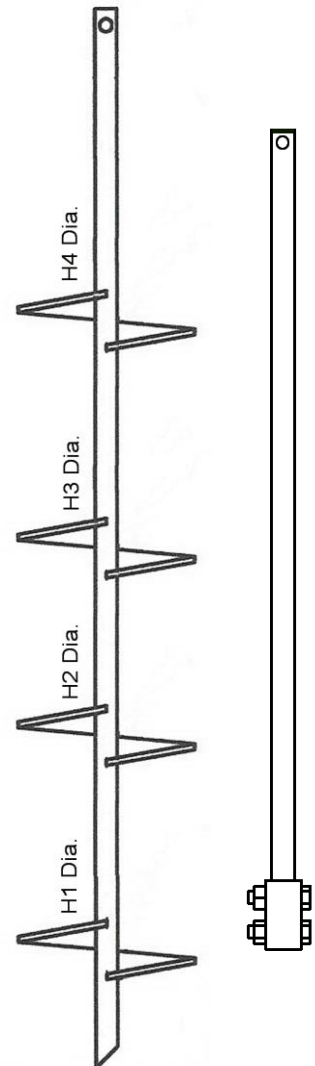
Product Specifications	
Shaft Dimensions	2" (50mm) solid square bar
Shaft Material	High Strength Alloy Steel
Coupling	Bolted
Coupling Material	High Strength Cast Steel
Helix Material	Yield: Minimum 50 ksi*
Coating Options	Bare Steel, Galvanization, Painted

*80 ksi helix material available on request

Anchor Capacity	
Maximum Torque Rating	15,000 ft-lbs
Uplift Capacity Limit	150 kips (based on torque rating)
Compression Capacity Limit	150 kips (based on torque rating)

Helix Configuration Options	
Diameters, inches	6, 8, 10, 12, 14, 16
Thicknesses, inches	.375, .500, .625, .750

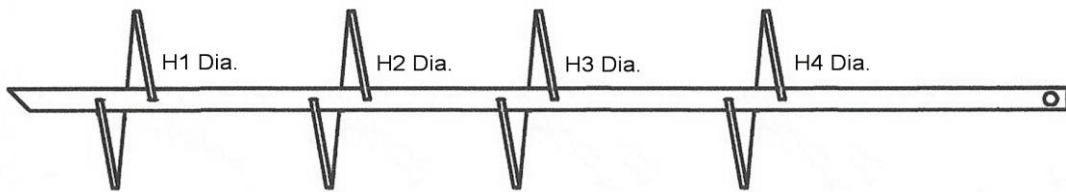
Fasteners	
High Strength Bolt and Nut	1-1/8-inch, grade 10.9





TerraTorque 2" (50mm) Solid Square Shaft Product (TSA50 Series) Torque Rating: 15,000 ft-lb

Common Lead Configurations



Part No.	Helix Diameters (in)				Length ft	Weight lbs
	1	2	3	4		
TSA50L-28103-6B	8	10	-	-	6	94
TSA50L-28103-9B	8	10	-	-	9	135
TSA50L-212123-6B	12	12	-	-	6	104
TSA50L-212123-9B	12	12	-	-	9	145
TSA50L-214143-6B	14	14	-	-	6	113
TSA50L-214143-9B	14	14	-	-	9	154
TSA50L-216163-6B	16	16			6	123
TSA50L-216163-9B	16	16			9	164
TSA50L-368103-6B	6	8	10	-	6	96
TSA50L-368103-9B	6	8	10	-	9	137
TSA50L-3810123-6B	8	10	12	-	6	105
TSA50L-3810123-9B	8	10	12	-	9	146
TSA50L-31012143-9B	10	12	14	-	9	157
TSA50L-31012143-12B	10	12	14	-	12	197
TSA50L-31414143-9B	14	14	14	-	9	170
TSA50L-31414143-12B	14	14	14	-	12	211
TSA50L-481012143-12B	8	10	12	14	12	203
TSA50L-4101214143-12B	10	12	14	14	12	214

Notes:

Alternative configurations specified by customer can be readily accommodated.

Above table weights denote .375" thick helices. Other thicknesses available include: .500", .625" and .750".

Above table weights denote bare steel. On premises hot dip galvanize is available.

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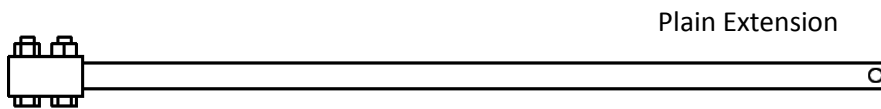
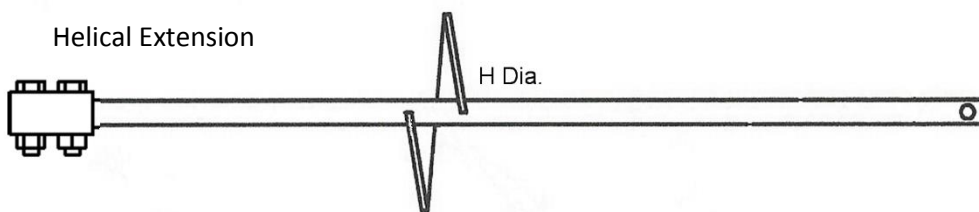
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TerraTorque 2" (50mm) Solid Square Shaft Product (TSA50 Series) Torque Rating: 15,000 ft-lb

Common Extension Configurations



Part No.	Helix Diameters (in)				Length (ft)	Weight (lbs)
	1	2	3	4		
TSA50E-3B	-	-	-	-	3	55
TSA50E-6B	-	-	-	-	6	96
TSA50E-9B	-	-	-	-	9	136
TSA50E-12B	-	-	-	-	12	177
TSA50HE-1143-6B	14	-	-	-	6	111
TSA50HE-214143-9B	14	14	-	-	9	168
TSA50HE-31414143-9B	14	14	14	-	9	184
TSA50HE-31414143-12B	14	14	14	-	12	225

Notes:

Alternative configurations specified by customer can be readily accommodated.

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Above table weights denote bare steel. On premises hot dip galvanize is available.

Coupling and fasteners included in extension weights.

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Ordering Information

We provide quick turn-around on all piling and anchor orders. Our professional team of engineers, fabricators and support staff follows each order from start to finish. Detailed fabrication records are kept as part of the process and MTR's and laboratory testing records for the various components are provided with each order.

Worldwide shipping to your destination is no problem. Our experienced shipping team will make sure your order is shipped quickly, efficiently and economically to its final destination.

For load transfer to screw anchors or piles, we can also provide various anchor hardware attachments suited for guy wires, underpinning assemblies, top caps that utilize rebar or plates and tieback hardware for shoring applications. Load transfer hardware can also be custom fabricated to meet our customer's specifications.

To get the process started, simply contact us at info@terratorque.com and indicate the details of your anchor or pile requirements. We will provide you a price and delivery quotation for the products you require. We look forward to the opportunity of meeting your project's material requirements with our high quality, cost effective helical products.