



# **ALLIED BOLT<sup>®</sup>**

**PRODUCTS, LLC**

**EARTH  
ANCHORS**

**POLELINE  
HARDWARE**

**AERIAL DROP  
HARDWARE**

**DROP  
ATTACHMENTS**

**GROUNDING  
HARDWARE**

**BANDING**

**TOOLS**

**WALL  
ANCHORS**

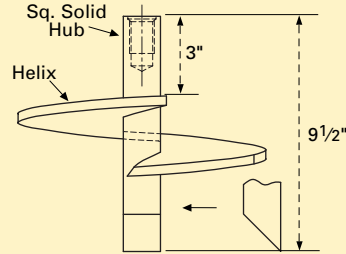
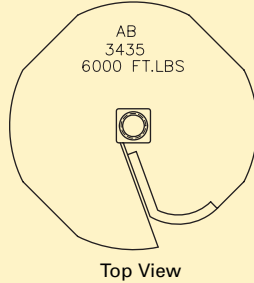
**FASTENERS**

**2009-2010**

## Single Solid Square Hub Power Driven Anchor



- Installation is performed using a power digger. An anchor wrench fits over the anchor hub and a torque measurement device is required to determine proper installation.
- Correct installation is achieved only when the anchor is installed using the appropriate torque for the particular soil and anchor type (see reference charts).
- Proper anchor selection depends on the type of soil and guying requirements.
- Installation torque is usually measured using a device connected in series with the wrench, digger, and Kelley Bar during installation.
- Anchors are painted with rust inhibiting blue paint after fabrication.



### 1<sup>3</sup>/<sub>8</sub>" Square Solid Hub: 4000 ft. lb. Maximum Working Torque

PART NUMBER	HELIX SIZE	ROD SIZE ACCOMMODATED	STD PKG
3403	8"	5/8"	1
3404	8"	3/4" or 1"	1
3405	10"	5/8"	1
3406	10"	3/4" or 1"	1
3407	12"	5/8"	1
3408	12"	3/4" or 1"	1

### 1<sup>3</sup>/<sub>8</sub>" Square Solid Hub: 6000 ft. lb. Maximum Working Torque

PART NUMBER	HELIX SIZE	ROD SIZE ACCOMMODATED	STD PKG
3432	8"	5/8"	1
3433	8"	3/4" or 1"	1
3434	10"	5/8"	1
3435	10"	3/4" or 1"	1
3436	12"	5/8"	1
3437	12"	3/4" or 1"	1
3438	14"	3/4" or 1"	1
3439	15"	3/4" or 1"	1

### 1<sup>1</sup>/<sub>2</sub>" Square Solid Hub: 6000 ft. lb. Maximum Working Torque

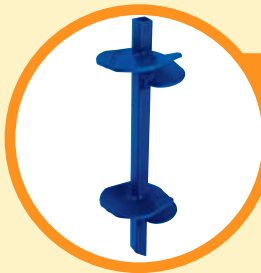
PART NUMBER	HELIX SIZE	ROD SIZE ACCOMMODATED	STD PKG
3473	8"	5/8"	1
3474	8"	3/4" or 1"	1
3475	10"	5/8"	1
3476	10"	3/4" or 1"	1
3478	12"	3/4" or 1"	1
3479	14"	3/4" or 1"	1
3480	15"	3/4" or 1"	1

**Single Solid Square Hub Power Driven Anchor (continued)****1½" Square Solid Hub: 7000 ft. lb. Maximum Working Torque**

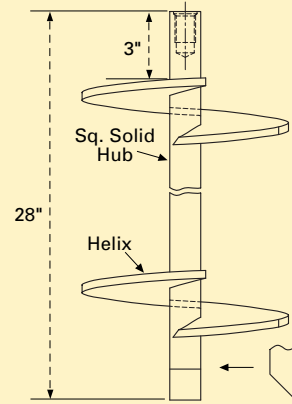
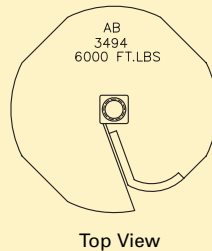
PART NUMBER	HELIX SIZE	ROD SIZE ACCOMMODATED	STD PKG
3450	8"	¾" or 1"	1
3451	10"	¾" or 1"	1
3452	12"	¾" or 1"	1

**1½" Square Solid Hub: 8000 ft. lb. Maximum Working Torque**

PART NUMBER	HELIX SIZE	ROD SIZE ACCOMMODATED	STD PKG
3460	8"	¾" or 1"	1
3461	10"	¾" or 1"	1
3462	12"	¾" or 1"	1

**Twin Solid Square Hub Power Driven Anchor**

- Installation is performed using a power digger. An anchor wrench fits over the anchor hub and a torque measurement device is required to determine proper installation.
- Correct installation is achieved only when the anchor is installed using the appropriate torque for the particular soil and anchor type (see reference charts).
- Proper anchor selection depends on the type of soil and guying requirements.
- Installation torque is usually measured using a device connected in series with the wrench, digger, and Kelley Bar during installation.
- Anchors are painted with rust inhibiting blue paint after fabrication.

**1⅜" Square Solid Hub: 4000 ft. lb. Maximum Working Torque**

PART NUMBER	HELIX SIZE	ROD SIZE ACCOMMODATED	STD PKG
3490	8"	¾" or 1"	1
3491	10"	¾" or 1"	1

**1⅜" Square Solid Hub: 6000 ft. lb. Maximum Working Torque**

PART NUMBER	HELIX SIZE	ROD SIZE ACCOMMODATED	STD PKG
3492	4"	¾" or 1"	1
3493	8"	¾" or 1"	1
3494	10"	¾" or 1"	1

**Twin Solid Square Hub Power Driven Anchor (continued)****1½" Square Solid Hub: 6000 ft. lb. Maximum Working Torque**

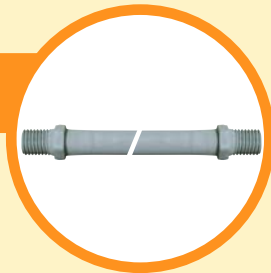
PART NUMBER	HELIX SIZE	ROD SIZE ACCOMMODATED	STD PKG
3495	8"	¾" or 1"	1
3496	10"	¾" or 1"	1

**1½" Square Solid Hub: 7000 ft. lb. Maximum Working Torque**

PART NUMBER	HELIX SIZE	ROD SIZE ACCOMMODATED	STD PKG
3497	4"	¾" or 1"	1
3498	8"	¾" or 1"	1
3499	10"	¾" or 1"	1

**Anchor Rod for Helical Anchors**

- Used in conjunction with internally tapped earth anchors and couplings or eye nuts.
- Anchor Rods are forged from AISI 1045 Steel to ensure high tensile strength.
- Hot Dip galvanized to meet ASTM Specification A153 Class B1 and C.
- Butt of Rod marked with "AB" for identification.



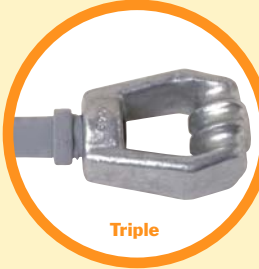
PART NUMBER	SIZE	THREAD SIZE ON OPPOSITE SIDES OF ROD	HEX SIZE	MINIMUM TENSILE STRENGTH (lbs)	STD PKG
3420	5/8" x 3½'	43/64"-11 UNS-2A	1"	16,000	5
3423	5/8" x 7'	43/64"-11 UNS-2A	1"	16,000	5
3421	¾" x 3½'	1"-8 UNC-2A	1.23"	23,000	5
3424	¾" x 7'	1"-8 UNC-2A	1.23"	23,000	5
3422	1" x 3½'	1"-8 UNC-2A	1.23"	36,000	5
3425	1" x 7'	1"-8 UNC-2A	1.23"	36,000	5



Single



Twin

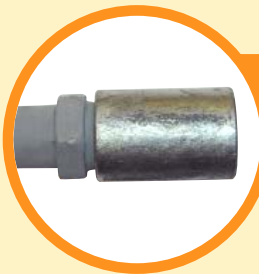


Triple

## Anchor Rod and Eye Nut Assemblies for Helical Anchors

- Used in conjunction with internally tapped earth anchors.
- Anchor Rods are forged from AISI 1045 Steel to ensure high tensile strength.
- Eye Nuts are forged from High Strength 1045 Steel.
- Hot Dip galvanized to meet ASTM Specification A153 Class B1 and C.
- Butt of Rod marked with "AB" for identification.

PART NUMBER	SIZE	EYE NUT ASSEMBLY	MINIMUM TENSILE STRENGTH (LBS)	STD PKG
3601	5/8" x 3 1/2'	Single Strand Eye Nut	16,000	1
3602	5/8" x 3 1/2'	Twin Strand Eye Nut	16,000	1
3603	5/8" x 3 1/2'	Triple Strand Eye Nut	16,000	1
3610	5/8" x 7'	Single Strand Eye Nut	16,000	1
3611	5/8" x 7'	Twin Strand Eye Nut	16,000	1
3612	5/8" x 7'	Triple Strand Eye Nut	16,000	1
3604	3/4" x 3 1/2'	Single Strand Eye Nut	23,000	1
3605	3/4" x 3 1/2'	Twin Strand Eye Nut	23,000	1
3606	3/4" x 3 1/2'	Triple Strand Eye Nut	23,000	1
3613	3/4" x 7'	Single Strand Eye Nut	23,000	1
3614	3/4" x 7'	Twin Strand Eye Nut	23,000	1
3615	3/4" x 7'	Triple Strand Eye Nut	23,000	1
3607	1" x 3 1/2'	Single Strand Eye Nut	36,000	1
3608	1" x 3 1/2'	Twin Strand Eye Nut	36,000	1
3609	1" x 3 1/2'	Triple Strand Eye Nut	36,000	1
3616	1" x 7'	Single Strand Eye Nut	36,000	1
3617	1" x 7'	Twin Strand Eye Nut	36,000	1
3618	1" x 7'	Triple Strand Eye Nut	36,000	1



## Anchor Rod and Coupling Nut Assemblies for Helical Hub Anchors

- Used for conjunction with internally tapped earth anchors.
- Anchor Rods are forged from AISI 1045 Steel to ensure high tensile strength.
- Coupling Nuts are forged from High Strength 1045 Steel.
- Hot Dip galvanized to meet ASTM Specification A153 Class B1 and C.
- Butt of Rod marked with "AB" for identification.

PART NUMBER	SIZE	MINIMUM TENSILE STRENGTH (lbs)	STD PKG
3640	5/8" x 3 1/2'	16,000	1
3643	5/8" x 7'	16,000	1
3641	3/4" x 3 1/2'	23,000	1
3644	3/4" x 7'	23,000	1
3642	1" x 3 1/2'	36,000	1
3645	1" x 7'	36,000	1

## Eye Nut for Helical Anchors

- Used in conjunction with Anchor Rods for Helical Anchors.
- Eye Nuts are forged from High Strength 1045 Steel.
- Hot Dip galvanized to meet ASTM Specification A153 Class B1 and C.



Double



Single



Triple

PART NUMBER	ROD SIZES ACCOMMODATED	NUMBER OF STRANDS ACCOMMODATED	THREAD SIZE	STD PKG
5049	5/8"	1	.695"-11 UNS-2B	50
5095	3/4" and 1"	1	1.021"-8 UNS-2B	20
5041	5/8"	2	.695"-11 UNS-2B	25
5042	3/4" and 1"	2	1.021"-8 UNS-2B	25
5044	5/8"	3	.695"-11 UNS-2B	20
5043	3/4" and 1"	3	1.021"-8 UNS-2B	20

## Coupling Nut

- Used to join two Helical Anchor Rods.
- Coupling Nuts are 2" in length.
- Coupling Nut is formed from AISI 4130 Seamless Tubing.
- Hot Dip galvanized to meet ASTM Specification A153 Class C.



PART NUMBER	SIZE	THREAD SIZE	STD PKG
5052	5/8"	.695"-11 UNS-2B	25
5053	3/4" and 1"	1.021"-8 UNS-2B	25



## Socket Drive Power Installed Anchor

- Installation is performed using a drive wrench which fits into the anchor hub.
- Proper anchor selection depends on the type of soil and guying requirements.
- The Anchors have a 3" helix pitch.
- Installation uses standard tools.
- Anchors are painted with rust inhibiting blue paint after fabrication.

### **2<sup>1</sup>/<sub>4</sub>" Socket Drive Hub Power Installed Anchor: 8,000 Ft. Lb. Maximum Working Torque**

PART NUMBER	HELIX SIZE	ROD SIZE ACCOMMODATED	STD PKG
3500	8"	5/8"	4
3501	8"	3/4" and 1"	4
3502	10"	5/8"	4
3503	10"	3/4" and 1"	4
3504	12"	3/4" and 1"	4
3505	14"	3/4" and 1"	4

### **2<sup>1</sup>/<sub>4</sub>" Socket Drive Hub Power Installed Anchor: 10,000 Ft. Lb. Maximum Working Torque**

PART NUMBER	HELIX SIZE	ROD SIZE ACCOMMODATED	STD PKG
3511	8"	3/4" and 1"	4
3512	10"	3/4" and 1"	4
3513	12"	3/4" and 1"	4
3514	14"	3/4" and 1"	4

### **2<sup>1</sup>/<sub>2</sub>" Socket Drive Hub Power Installed Anchor: 8,000 Ft. Lb. Maximum Working Torque**

PART NUMBER	HELIX SIZE	ROD SIZE ACCOMMODATED	STD PKG
3520	8"	5/8"	4
3521	8"	3/4" and 1"	4
3522	10"	5/8"	4
3523	10"	3/4" and 1"	4
3524	12"	5/8"	4
3525	12"	3/4" and 1"	4
3526	14"	3/4" and 1"	4

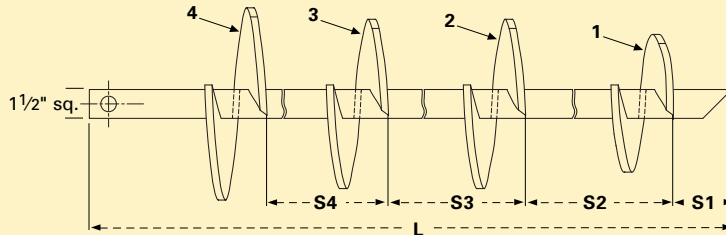
### **2<sup>1</sup>/<sub>2</sub>" Socket Drive Hub Power Installed Anchor: 15,000 Ft. Lb. Maximum Working Torque**

PART NUMBER	HELIX SIZE	ROD SIZE ACCOMMODATED	STD PKG
3530	8"	3/4" and 1"	4
3531	10"	3/4" and 1"	4
3532	12"	3/4" and 1"	4
3533	14"	3/4" and 1"	4

## Multi Helix Screw Anchor



- Installation is performed by applying force to an extension that is engaged with the Multi Helix Anchor.
- All Multi-Helix Anchors have a 1½" diameter square shaft.
- Anchor has a hole drilled in top of shank for engaging bolt of extension.
- Multi-Helix Anchors are painted with rust inhibiting blue paint after fabrication.
- Multi-Helix Anchors have a typical working torque of 5,000 ft. lbs.



PART NUMBER	HELIX SIZE				DIM. S1	DIM. S2	DIM. S3	DIM. S4	DIM. L ± 0.25"	STD PKG
	1	2	3	4						
3550	8"				4"				60"	1
3551	8"	10"			4"	24"			60"	1
3552	4"	8"	10"		3"	12"	24"		60"	1
3553	8"	10"	12"		4"	24"	30"		84"	1
3554	6"	8"	10"		3"	18"	24"		84"	1
3555	10"	12"	14"		5"	30"	36"		84"	1
3556	10"	12"	14"		5"	30"	36"		120"	1
3557	14"	14"	14"		7"	42"	42"		120"	1
3558	8"	10"	12"	14"	4"	24"	30"	36"	120"	1

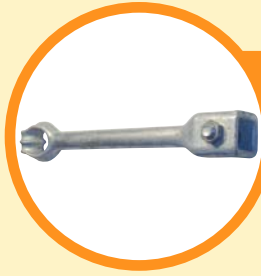
## Extension for Multi Helix Screw Anchor



- Extensions are 1½" square shank rods with a hollowed square end for engaging the Multi Helix Screw Anchor.
- Extension has a hole drilled in top of shank for engaging bolt of Guy Adaptor.
- The Extensions are equipped with Hex Bolt for securing the anchor.
- Extensions have a typical working torque of 5,000 ft. lbs.
- All components of Extension for Multi Helix Screw Anchor are hot dip galvanized to meet ASTM Specification A153 Class C.

PART NUMBER	LENGTH	STD PKG
3560	3½'	1
3561	5'	1
3562	7'	1
3563	10'	1





## Guy Adaptor for Multi Helix Screw Anchor

- Guy Adaptors are forgings used to engage the 1½" square shank of the Extension for Multi Helix Screw Anchor and accept guy wires in its' Multi-Strand Eye.
- Guy Adaptors are hot dip galvanized to meet ASTM Specification A153 Class C.

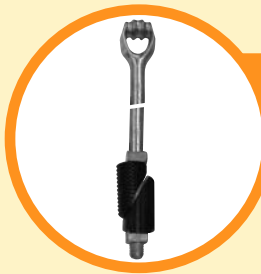
PART NUMBER	LENGTH	STD PKG
3566	Double Strand Adaptor	1
3567	Triple Strand Adaptor	1



## No Wrench Screw Anchor

- Used for guying wires at utility poles.
- Anchors are installed by simply turning anchor into ground. No Wrench Anchors may be driven by hand or with power equipment.
- Eye dimensions are the same as Anchor Rods.
- Screw anchors consist of an unthreaded triple eye rod with an angled point, and a firmly welded helix.
- Hot dip galvanized to meet ASTM Specification A153, Class C.

PART NUMBER	HELIX DIAMETER	HELIX THICKNESS	ROD SIZE	STD PKG
6044	4"	3/16"	3/4" x 54"	1
1166	6"	1/4"	3/4" x 66"	1
1167	8"	1/4"	1" x 66"	1
1168	10"	1/4"	1 1/4" x 66"	1
1169	10"	1/4"	1 1/4" x 96"	1
1163	15"	1/2"	1 1/4" x 96"	1



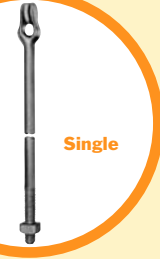
## Expanding Rock Anchor

- Used as a heavy-duty anchor in solid rock.
- Anchor consists of two Malleable castings that are asphaltum dipped and a hot dip galvanized Triple Eye Anchor Rod.
- Rod is hot dip galvanized to meet ASTM Specification A153, Class C.
- To install anchor, drill a 12" deep hole in solid rock, put anchor in hole, turn rod until anchor expands and wedges in the hole.
- The harder the pull on the rod, the tighter it wedges into the rock.

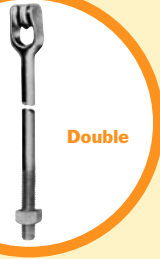
PART NUMBER	ROD DIAMETER	ROD LENGTH	ANCHOR SIZE	ANCHOR SIZE EXPANDED	HOLE SIZE	STD PKG
55500	3/4"	15"	1 3/4"	2 3/8"	1 7/8"	1
55501	3/4"	30"	1 3/4"	2 3/8"	1 7/8"	1
55502	3/4"	53"	1 3/4"	2 3/8"	1 7/8"	1
55503	3/4"	60"	1 3/4"	2 3/8"	1 7/8"	1
55504	3/4"	72"	1 3/4"	2 3/8"	1 7/8"	1
55505	3/4"	84"	1 3/4"	2 3/8"	1 7/8"	1
55506	3/4"	96"	1 3/4"	2 3/8"	1 7/8"	1
55508	1"	30"	2 1/4"	3 1/8"	2 3/8"	1
55509	1"	53"	2 1/4"	3 1/8"	2 3/8"	1
55510	1"	72"	2 1/4"	3 1/8"	2 3/8"	1
55511	1"	84"	2 1/4"	3 1/8"	2 3/8"	1
55512	1"	96"	2 1/4"	3 1/8"	2 3/8"	1

## Anchor Rod

- Used for guying utility poles.
- Used with all types of expanding anchors.
- Contoured to prevent damage to strand.
- $3\frac{1}{2}$ " minimum thread length on all rods.
- A heavy square nut is attached to every anchor rod.
- Hot dip galvanized to meet ASTM Specification A153, Class B1 and C.



Single



Double



Triple

### Single-Strand Anchor Rod

PART NUMBER	SIZE	STD PKG
4150	$\frac{5}{8}$ " x 5'	5
4151	$\frac{5}{8}$ " x 6'	5
4152	$\frac{5}{8}$ " x 7'	5
4153	$\frac{5}{8}$ " x 8'	5
4154	$\frac{3}{4}$ " x 7'	5
4155	$\frac{3}{4}$ " x 8'	5
4156	$\frac{3}{4}$ " x 10'	5

### Double-Strand Anchor Rod

PART NUMBER	SIZE	STD PKG
4165	$\frac{5}{8}$ " x 6'	5
4166	$\frac{5}{8}$ " x 7'	5
4167	$\frac{5}{8}$ " x 8'	5
4168	$\frac{3}{4}$ " x 6'	5
4169	$\frac{3}{4}$ " x 7'	5
4170	$\frac{3}{4}$ " x 8'	5
4171	$\frac{3}{4}$ " x 9'	5
4172	$\frac{3}{4}$ " x 10'	5
4173	1" x 8'	5
4174	1" x 10'	5

### Triple-Strand Anchor Rod

PART NUMBER	SIZE	STD PKG
4180	$\frac{3}{4}$ " x 8'	5
4181	$\frac{3}{4}$ " x 9'	5
4182	1" x 8'	5
4183	1" x 10'	5
4184	$1\frac{1}{4}$ " x 10'	5

### Minimum Tensile Strength

ANCHOR ROD DIAMETER	MINIMUM TENSILE STRENGTH (lb.)
$\frac{5}{8}$ "	16000
$\frac{3}{4}$ "	23000
1"	36000
$1\frac{1}{4}$ "	58000



## Anchor Rod Auxiliary Eye

- Used to attach of an additional guy to an existing anchor rod.
- Each auxiliary eye is comprised of two Ductile Iron "U" bolt guy clips and a ductile casting with a 1½" thimble diameter.
- Accommodates all strands up to ½" in diameter.
- All components are hot dip galvanized to meet ASTM Specification A153, Class A and C.

PART NUMBER	DESCRIPTION	BELL NUMBER	STD PKG
3160	5/8" - 3/4" Anchor Rod Auxiliary Eye	900274598	5
3162	3/4" - 1" Anchor Rod Auxiliary Eye	900274598	5



## Bust Anchor

- Offer excellent holding power with minimal soil disturbance.
- A two piece assembly that consists of a curved base plate and an integral unit with eight expanding blades.
- Black paint is applied for maximum corrosion resistance.
- Formed metal cavity on the underside of the curved base unit accepts the nut of the guy rod when assembling the anchor.
- The blades expand in a lateral motion by forcing the curved blades against the curved base.
- Manufactured from AISI 1018 Steel.

PART NUMBER	ANCHOR HOLE SIZE	AREA (Sq. In.)	ROD SIZE (Sold Separately)	STD PKG
19020	6"	70	½"	1
19021	8"	135	¾"	1
19022	10"	200	1"	1
19023	10"	200	¾"	1
19024	12"	300	1"	1
19025	12"	300	1¼"	1

## Soil Class Description

CLASS	DESCRIPTION
2	Dense sand, hard silts, coarse gravel. <b>Probe value 600-750 inch lbs.</b>
3	Compact clay and gravel mixed, shale, broken rock, hardpan. <b>Probe value 500-600 inch lbs.</b>
4	Compact sand, claypan, compacted gravel. <b>Probe value 400-500 inch lbs.</b>
5	Loose sand, gravel and clay, compacted coarse sand. <b>Probe value 300-400 inch lbs.</b>
6	Clay loam, damp clay, compacted sand fines, loose coarse sand. <b>Probe value 200-300 inch lbs.</b>
7	Silt loam, loose sand fines, wet clay, miscellaneous fill. <b>Probe value 100-200 inch lbs.</b>
8	Swamp, saturated loam, marshland (anchor should penetrate through saturated strata to Class 5, 6, or 7 for best results)

## Estimated Anchor Holding Strength

- Holding strengths given are mid-range values for each soil class.
- Holding strengths given are mid-range values to aid initial anchor selection.
- Variations of 10% or more in some cases can be expected depending on soil variations and conditions.
- In general the higher soil classes have lower variations.

### Twin Helix Power Driven Anchor

Limited by rod strength =

TORQUE RATING (FT. LB.)	HELIX SIZE	HUB SIZE	HOLDING STRENGTH LBS.						TAP SIZE	ROD SIZE
			SOIL CLASS							
			2	3	4	5	6	7		
4000	8"	1 <sup>3</sup> / <sub>8</sub> "	38000	32000	26000	22500	17500	14000	1.021-8UNS-2B	3/4"
4000	8"	1 <sup>3</sup> / <sub>8</sub> "	38000	32000	26000	22500	17500	14000	1.021-8UNS-2B	1"
4000	10"	1 <sup>3</sup> / <sub>8</sub> "	43000	37500	32500	27500	23000	18000	1.021-8UNS-2B	3/4"
4000	10"	1 <sup>3</sup> / <sub>8</sub> "	43000	37500	32500	27500	23000	18000	1.021-8UNS-2B	1"
6000	8"	1 <sup>3</sup> / <sub>8</sub> "	38000	32000	26000	22500	17500	14000	1.021-8UNS-2B	3/4"
6000	8"	1 <sup>3</sup> / <sub>8</sub> "	38000	32000	26000	22500	17500	14000	1.021-8UNS-2B	1"
6000	10"	1 <sup>3</sup> / <sub>8</sub> "	43000	37500	32500	27500	23000	18000	1.021-8UNS-2B	3/4"
6000	10"	1 <sup>3</sup> / <sub>8</sub> "	43000	37500	32500	27500	23000	18000	1.021-8UNS-2B	1"
6000	8"	1 <sup>1</sup> / <sub>2</sub> "	38000	32000	26000	22500	17500	14000	1.021-8UNS-2B	3/4"
6000	8"	1 <sup>1</sup> / <sub>2</sub> "	38000	32000	26000	22500	17500	14000	1.021-8UNS-2B	1"
6000	10"	1 <sup>1</sup> / <sub>2</sub> "	43000	37500	32500	27500	23000	18000	1.021-8UNS-2B	3/4"
6000	10"	1 <sup>1</sup> / <sub>2</sub> "	43000	37500	32500	27500	23000	18000	1.021-8UNS-2B	1"
7000	8"	1 <sup>1</sup> / <sub>2</sub> "	38000	32000	26000	22500	17500	14000	1.021-8UNS-2B	3/4"
7000	8"	1 <sup>1</sup> / <sub>2</sub> "	38000	32000	26000	22500	17500	14000	1.021-8UNS-2B	1"
7000	10"	1 <sup>1</sup> / <sub>2</sub> "	43000	37500	32500	27500	23000	18000	1.021-8UNS-2B	3/4"
7000	10"	1 <sup>1</sup> / <sub>2</sub> "	43000	37500	32500	27500	23000	18000	1.021-8UNS-2B	1"

## Single Helix Power Driven Anchor

Limited by rod strength =

# EARTH ANCHORS

TORQUE RATING (FT. LB.)	HELIX SIZE	HUB SIZE	HOLDING STRENGTH LBS. SOIL CLASS							TAP SIZE	ROD SIZE
			2	3	4	5	6	7			
4000	8"	1 3/8"	30000	23000	16000	12000	9000	6000	0.695-11UNS-2B	5/8"	
4000	8"	1 3/8"	30000	23000	16000	12000	9000	6000	1.021-8UNS-2B	3/4"	
4000	8"	1 3/8"	30000	23000	16000	12000	9000	6000	1.021-8UNS-2B	1"	
4000	10"	1 3/8"	34000	27000	22500	17500	14500	10000	0.695-11UNS-2B	5/8"	
4000	10"	1 3/8"	34000	27000	22500	17500	14500	10000	1.021-8UNS-2B	3/4"	
4000	10"	1 3/8"	34000	27000	22500	17500	14500	10000	1.021-8UNS-2B	1"	
4000	12"	1 3/8"	39000	33000	27000	23000	18000	14000	0.695-11UNS-2B	5/8"	
4000	12"	1 3/8"	39000	33000	27000	23000	18000	14000	1.021-8UNS-2B	3/4"	
4000	12"	1 3/8"	39000	33000	27000	23000	18000	14000	1.021-8UNS-2B	1"	
6000	8"	1 3/8"	30000	23000	16000	12000	9000	6000	0.695-11UNS-2B	5/8"	
6000	8"	1 3/8"	30000	23000	16000	12000	9000	6000	1.021-8UNS-2B	3/4"	
6000	8"	1 3/8"	30000	23000	16000	12000	9000	6000	1.021-8UNS-2B	1"	
6000	10"	1 3/8"	34000	27000	22500	17500	14500	10000	0.695-11UNS-2B	5/8"	
6000	10"	1 3/8"	34000	27000	22500	17500	14500	10000	1.021-8UNS-2B	3/4"	
6000	10"	1 3/8"	34000	27000	22500	17500	14500	10000	1.021-8UNS-2B	1"	
6000	12"	1 3/8"	39000	33000	27000	23000	18000	14000	0.695-11UNS-2B	5/8"	
6000	12"	1 3/8"	39000	33000	27000	23000	18000	14000	1.021-8UNS-2B	3/4"	
6000	12"	1 3/8"	39000	33000	27000	23000	18000	14000	1.021-8UNS-2B	1"	
6000	14"	1 3/8"	45000	40000	34000	28000	24500	20000	1.021-8UNS-2B	3/4"	
6000	14"	1 3/8"	45000	40000	34000	28000	24500	20000	1.021-8UNS-2B	1"	
6000	15"	1 3/8"	52000	46000	39000	32000	28000	23000	1.021-8UNS-2B	3/4"	
6000	15"	1 3/8"	52000	46000	39000	32000	28000	23000	1.021-8UNS-2B	1"	
6000	8"	1 1/2"	30000	23000	16000	12000	9000	6000	0.695-11UNS-2B	5/8"	
6000	8"	1 1/2"	30000	23000	16000	12000	9000	6000	1.021-8UNS-2B	3/4"	
6000	8"	1 1/2"	30000	23000	16000	12000	9000	6000	1.021-8UNS-2B	1"	
6000	10"	1 1/2"	34000	27000	22500	17500	14500	10000	0.695-11UNS-2B	5/8"	
6000	10"	1 1/2"	34000	27000	22500	17500	14500	10000	1.021-8UNS-2B	3/4"	
6000	10"	1 1/2"	34000	27000	22500	17500	14500	10000	1.021-8UNS-2B	1"	
6000	12"	1 1/2"	39000	33000	27000	23000	18000	14000	1.021-8UNS-2B	3/4"	
6000	12"	1 1/2"	39000	33000	27000	23000	18000	14000	1.021-8UNS-2B	1"	
6000	14"	1 1/2"	45000	40000	34000	28000	24500	20000	1.021-8UNS-2B	3/4"	
6000	14"	1 1/2"	45000	40000	34000	28000	24500	20000	1.021-8UNS-2B	1"	
6000	15"	1 1/2"	52000	46000	39000	32000	28000	23000	1.021-8UNS-2B	3/4"	
6000	15"	1 1/2"	52000	46000	39000	32000	28000	23000	1.021-8UNS-2B	1"	
7000	8"	1 1/2"	30000	23000	16000	12000	9000	6000	1.021-8UNS-2B	3/4"	
7000	8"	1 1/2"	30000	23000	16000	12000	9000	6000	1.021-8UNS-2B	1"	
7000	10"	1 1/2"	34000	27000	22500	17500	14500	10000	1.021-8UNS-2B	3/4"	
7000	10"	1 1/2"	34000	27000	22500	17500	14500	10000	1.021-8UNS-2B	1"	
8000	8"	1 1/2"	30000	23000	16000	12000	9000	6000	1.021-8UNS-2B	3/4"	
8000	8"	1 1/2"	30000	23000	16000	12000	9000	6000	1.021-8UNS-2B	1"	
8000	10"	1 1/2"	34000	27000	22500	17500	14500	10000	1.021-8UNS-2B	3/4"	
8000	10"	1 1/2"	34000	27000	22500	17500	14500	10000	1.021-8UNS-2B	1"	
8000	12"	1 1/2"	39000	33000	27000	23000	18000	14000	1.021-8UNS-2B	3/4"	
8000	12"	1 1/2"	39000	33000	27000	23000	18000	14000	1.021-8UNS-2B	1"	

## Holding Capacity Chart for Multi Helix Screw Anchors

HELIX CONFIGURATION	HOLDING STRENGTH LBS. SOIL CLASS						TO ESTIMATE TORQUE DIVIDE LBS. BY	TOTAL HELIX AREA (in. <sup>2</sup> )
	2	3	4	5	6	7		
8" *	23000	23000	17500	16000	12500	8000	10	50
8", 10"	40000	35000	33500	28250	23000	18500	10	129
4", 8", 10"	42000	36000	35000	29000	24000	19000	11	141
6", 8", 10"	44000	39000	36000	30000	25000	21000	11	157
8", 10", 12"	56000	50500	43750	36000	26000	23000	12	242
10", 12", 14"	65000	60250	50500	42000	34750	27000	12	345
8", 10", 12", 14"		65000	55500	46000	37500	30000	13	396
14", 14", 14"		72000	62000	51000	42000	37000	13	462

\* Limited by single helix load capacity in soil class 2 and 3

- Anchors with 4" - 8" - 10" helices and with 6" - 8" - 10" helices should be considered appropriate for soil conditions in which the anchor encounters a transition to dense soil following installation into moderate or low density soils.
- Anchors with 14" - 14" - 14" helices should be considered appropriate only for very low density soils.
- Torques vary widely, depending on soil type. Ratios of capacity in kips (Kilo Pounds) to torque in ft. lbs. can vary widely over a range as large as 8 to 25 times, depending on anchor configuration and soil type. Once the soil reaction is established, torque can be used as a predictor of capacity. When torque ratios are used an average torque over the last 2 or 3 feet (or 3 times the diameter of the upper helix) of the installation is the torque that should be used. For Multi Helix Anchors, final installation torque can be very misleading.

