



**Shaft Material:**

Shaft: HSS 3 x 3 x 3/16" (0.291") wall  
 Coupler: HSS 4 x 4 x 3/8" (0.349") wall  
 Square HSS Tubing per ASTM A500-07, Grade B  
 Min Yield Stress: Fy = 42 ksi  
 Min Ult Tensile Stress: Fu = 58 ksi

**Connecting Bolts:**

One Ø1"-8 UNC x 5" Standard Hex Bolt per SAE J429 Grade 8, and Hex Nut per SAE J995 Grade 8  
 Min Yield Stress: Fy = 130 ksi  
 Min Ult Tensile Stress: Fu = 150 ksi  
 Zinc coated per ASTM B633-07

**Optional Connecting Bolts:**

Structural Bolt per ASTM A490-08b  
 Type 1 and Heavy Hex Nut per ASTM A563, Grade DH, Zinc Coated per ASTM F1136, Grade 3

**Helix Material:**

3/8" Thick Plate Steel per ASTM A36-08  
 Min Yield Stress: Fy = 36 ksi  
 Min Ult Tensile Stress: Fu = 58 ksi

**Weld:**

ER70S per AWS D1.1-2010  
 Min Ult Tensile Stress: Fu = 70 ksi

**Optional Corrosion Protection:**

Completed Welded Extension or Lead Section with Welded Helices  
 Hot-dip Galvanized per ASTM A123-02

$P_{ult} = K_t T$

Torque, ft-lbs *	Compression** Capacity, kips	Tension *** Capacity, kips
4,000	40	40
6,000	60	60
8,000	80	70
10,000	100	70
12,000	120	70

\* Max. Recommended Torque 12,000 ft-lbs  
 \*\* Max. Recommended Comp. Capacity to Torque Ratio: Kt = 10 ft<sup>-1</sup>  
 \*\*\* Max. Recommended Tension Capacity to Torque Ratio: Kt = 7 - 10 ft<sup>-1</sup>

**5' Lead Sections**

GRIP-TITE CATALOG #	helix diam, in				weight, lbs	net helix area, ft <sup>2</sup>
	8	10	12	14		
GTSQ3x3 - 5LS8	x				56	0.29
GTSQ3x3 - 5LS10		x			59	0.48
GTSQ3x3 - 5LS12			x		63	0.72
GTSQ3x3 - 5LS810	x	x			64	0.77
GTSQ3x3 - 5LS14				x	67	1.0
GTSQ3x3 - 5LS1012		x	x		70	1.2
GTSQ3x3 - 5LS1214			x	x	78	1.7

**7' Lead Sections**

GRIP-TITE CATALOG #	helix diam, in				weight, lbs	net helix area, ft <sup>2</sup>
	8	10	12	14		
GTSQ3x3 - 7LS8	x				77	0.29
GTSQ3x3 - 7LS10		x			80	0.48
GTSQ3x3 - 7LS12			x		84	0.72
GTSQ3x3 - 7LS810	x	x			85	0.77
GTSQ3x3 - 7LS14				x	88	1.0
GTSQ3x3 - 7LS1012		x	x		91	1.2
GTSQ3x3 - 7LS81012	x	x	x		96	1.5
GTSQ3x3 - 7LS1214			x	x	99	1.7
GTSQ3x3 - 7LS101214		x	x	x	107	2.2

**10' Lead Sections**

GRIP-TITE CATALOG #	helix diam, in				weight, lbs	net helix area, ft <sup>2</sup>
	8	10	12	14		
GTSQ3x3-10LS8	x				109	0.29
GTSQ3x3-10LS10		x			112	0.48
GTSQ3x3-10LS12			x		116	0.72
GTSQ3x3-10LS810	x	x			116	0.77
GTSQ3x3-10LS14				x	120	1.0
GTSQ3x3-10LS1012		x	x		123	1.2
GTSQ3x3-10LS81012	x	x	x		127	1.5
GTSQ3x3-10LS1214			x	x	131	1.7
GTSQ3x3-10LS101214		x	x	x	138	2.2

**Extensions**

GRIP-TITE CATALOG #	helix diam, in				weight, lbs	net helix area, ft <sup>2</sup>
	8	10	12	14		
GTSQ3x3 - 5E					63	---
GTSQ3x3 - 7E					84	---
GTSQ3x3 - 10E					116	---
GTSQ3x3 - 5E14				x	79	1.0
GTSQ3x3 - 7E14				x	100	1.0
GTSQ3x3 - 10E14				x	131	1.0
GTSQ3x3 - 7E1414				x x	115	2.0
GTSQ3x3 - 10E1414				x x	147	2.0

Note: Additional lead sections and extensions available upon request

\* A, B, C = Helix Diam (in); # = Thick Helix Material Used; H = Thick Helix Material is Available; Add G - Hot-Dip Galvanized per ASTM A123-02