

# CHANCE® Type RS5500.361 Helical Piles

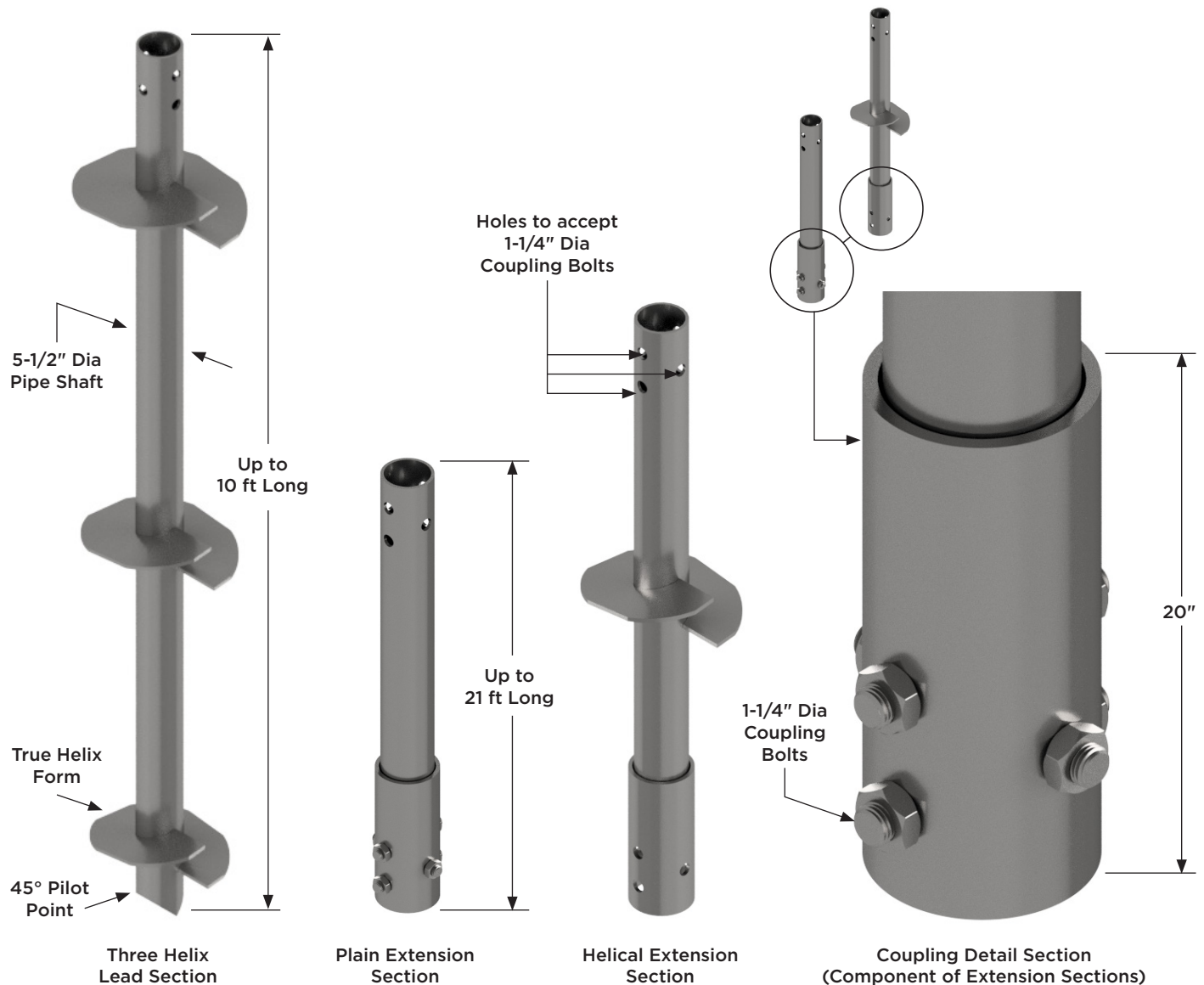
280 kip Ultimate - 140 kip Allowable Capacity

Installation Torque Rating - 56,000 ft-lb

Multi-Purpose 5-1/2" Diameter, 0.361" Wall, Round HSS Shaft with Sleeve Coupling

## Description:

Hubbell Power Systems, Inc. / CHANCE Type RS5500.361 Helical Piles have 280-kip ultimate capacity and 140 kip working or allowable capacity in compression or tension. This capacity is based on well documented correlations with installation torque, which is recognized as one method to determine capacity per IBC Section 1810.3.3.1.9. Lead sections and extensions couple together to extend the helix bearing plates to the required load bearing stratum. Round shaft helical piles offer increased lateral and buckling resistance compared to solid square shafts with similar torque strength. Strength calculations are based on an average life expectancy of 50 years for most soil conditions. CHANCE Type RS helical piles and anchors feature straight leading edge helix plates that are circular in plan to provide uniform load bearing in most soil conditions. Custom lengths and helix configurations are available upon request. See page 2 for additional information and specifications.



# RS5500.361 Helical Pile Specifications & Available Configurations

**Shaft** - HSS 5-1/2 inch OD x 0.361 inch wall steel shaft produced exclusively for CHANCE products.

**Coupling** - welded sleeve forming a socket connected with multiple structural grade bolts.

**Helix** - 1/2 and 5/8 inch Thick: ASTM A572 with minimum yield strength of 50 ksi, depending on helix diameter.

6 inch Helix Pitch - a Standard established by CHANCE for larger diameter Helical Anchors & Piles

Available Helix Diameters: 12, 14, 16, and 18 inches

All helix plates are spaced 3 times the diameter of the preceding (lower) helix unless otherwise specified.

The standard helix plate has straight leading edges.

## Configurations:

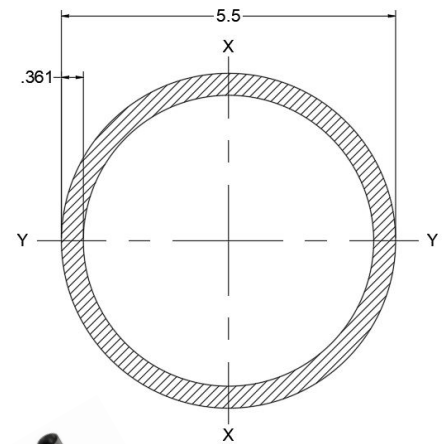
- Single, double, triple, lead sections, 10 feet long
- Plain extensions, 5, 7, 10, 15, and 21 feet long
- Extensions with helix Plates, 5 feet long

Helical products are hot dip galvanized per ASTM A123 Grade 75, or are available in black.

**NOTE:** Helical piles shall be installed to appropriate depth in suitable bearing stratum as determined by the geotechnical engineer or local jurisdictional authority. Torque correlated capacities are based on installing the pile to its torque rating, using consistent rate of advance and RPM. A minimum factor of safety of 2 is recommended for determining allowable capacity from correlations. Deflections of 0.25 to 0.50 inches are typical at allowable capacity.

RS5500.361 HELICAL PILE AND ANCHOR PRODUCT SPECIFICATIONS				
SHAFT	Hot Rolled HSS 5.5 inch, 0.391 inch nominal wall per with 80 ksi minimum yield strength			
Shaft Size, OD	5.5 in	140 mm	Corroded	
			5.487 in	139.4 mm
Shaft Size, ID*	4.83 in	122.7 mm	Corroded	
			4.842 in	122.9 mm
Moment of Inertia (I)*	18.23 in <sup>4</sup>	758.79 cm <sup>4</sup>	Corroded	
			17.51 in <sup>4</sup>	728.82 cm <sup>4</sup>
Shaft Area (A)*	5.45 in <sup>2</sup>	35.2 cm <sup>2</sup>	Corroded	
			5.23 in <sup>2</sup>	33.74 cm <sup>2</sup>
Section Modulus (S <sub>xx</sub> )*	6.63 in <sup>3</sup>	108.6 cm <sup>3</sup>	Corroded	
			6.38 in <sup>3</sup>	104.5 cm <sup>3</sup>
Perimeter	17.3 in	44 cm	Corroded	
			17.24 in	43.8 cm
Coupling	Welded Round Deep Socket			
Coupling Bolts	Three 1-1/4 in Dia. SAE J429 Grade 5 Hex Head Bolts			
Helix Plates	0.5 - 0.625-inch Thick, Formed on Matching Metal Dies, ASTM A572 Grade 50 or better			
Coatings	Hot Dip Galvanized per ASTM A123 Grade 75, 3.0 mil minimum thickness or Bare Steel			
TORQUE PROPERTIES				
Torque Correlation Factor	5 ft <sup>-1</sup>		16.5 m <sup>-1</sup>	
Torque Rating	56,000 ft-lb		76,000 N-m	
STRUCTURAL CAPACITY				
Tension / Compression Strength	Nominal		LRFD Design	
	280 kip	1245 kN	210 kip	934 kN
Allowable Tension / Compression Strength	140 kip		623 kN	
TORQUE CORRELATED CAPACITY				
Capacity Limit Based on Torque Correlation, Tension / Compression	Ultimate		Allowable	
	280 kip	1245 kN	140 kip	623 kN

\* computed with 93% of wall thickness per AISC 360-10, B4.2



Assembly of CHANCE Type RS5500.361 Helical Pile Shaft Cross-Section



Assembly of RS5500.361

