

CHANCE® HELICAL ROUND CORNER SQUARE SHAFT PRODUCTS

CHANCE® Square Shaft (SS) Helical Product Ratings

Table 2

Product Series	Torque Rating ft-lbs (Nm)	Ultimate Tension Strength* kip (kN)	Uplift/Compression Capacity Limit** kip (kN)
SS125	4,000 (5 400)	60 (267)	40 (178)
SS5	5,500 (7 500)	70 (312)	55 (245)
SS150	7,000 (9 500)	70 (312)	70 (312)
SS175	11,000 (14 900)	100 (445)	110 (489)
SS200	16,000 (21 700)	150 (668)	150 (668) ***
SS225	23,000 (31 200)	200 (890)	200 (890) ***

* Based on Mechanical Strength of Coupling

** Based on Torque Rating – Uplift/Compression Capacity Limit = Torque Rating x Kt.

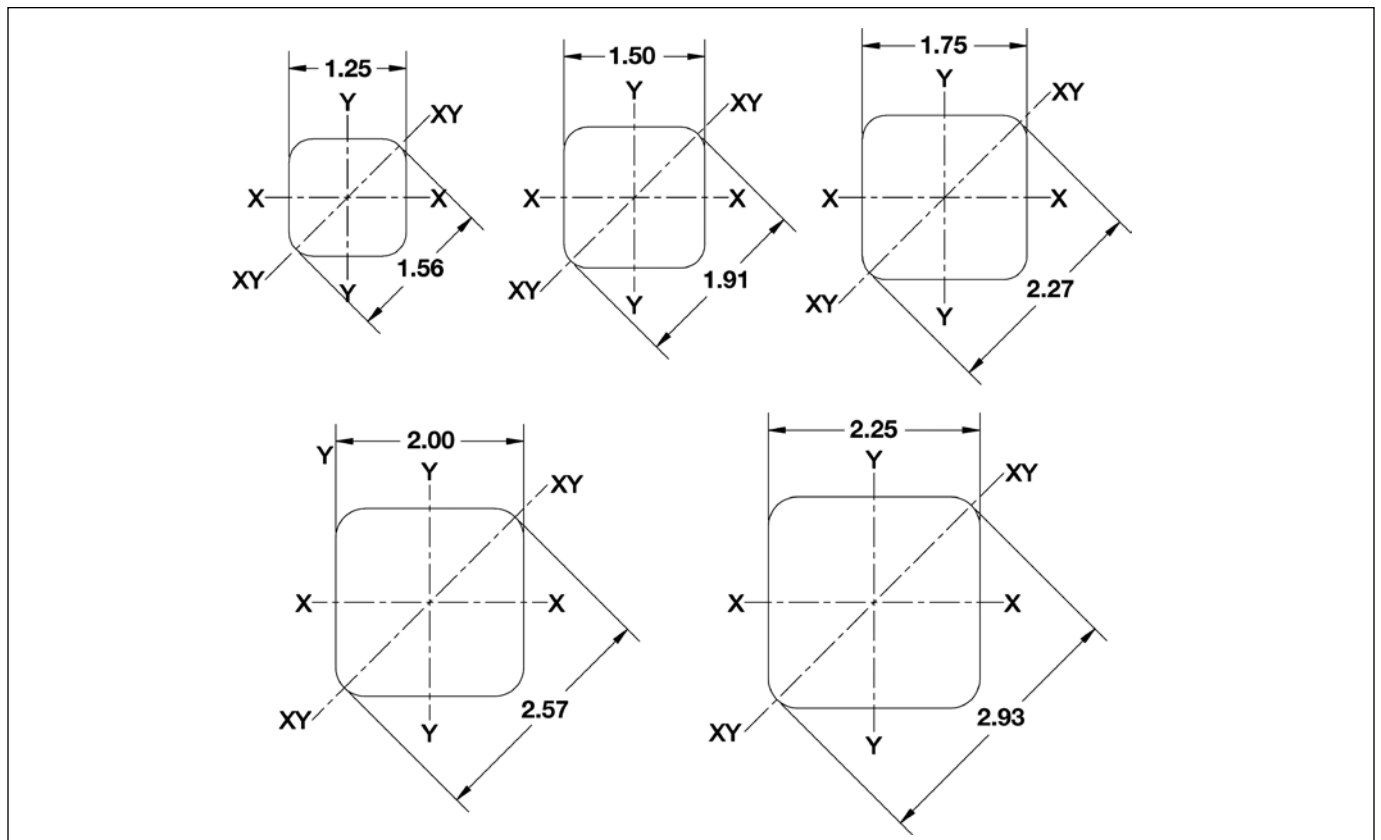
“Default” Kt for Type SS = 10 ft-1 (33 m-1)

*** Based on Mechanical Strength of Coupling Bolt

Higher Compression Capacities Available with Helical Pulldown® Micropile

CHANCE® Square Shaft Helical Cross Sections

Figure 1



CHANCE® Square Shaft (SS) Helical Section Properties

Table 3

Product Series	Shaft Size in (mm)	Wall Thickness in (mm)	Metal Area in ² (cm ²)	Perimeter in (cm)	Moment of Inertia in ⁴ (cm ⁴) <i>I_{x-x}, I_{y-y}, I_{x-y}</i>	Section Modulus in ³ (cm ³)	
						<i>S_{x-x}</i>	<i>S_{y-y}</i>
SS125	1.25 (32)	solid	1.55 (10.0)	4.79 (12.17)	0.20 (8.3)	0.32 (5.3)	0.24 (3.9)
SS5	1.5 (38)	solid	2.2 (14.2)	5.6 (14.2)	0.40 (16.5)	0.53 (8.7)	0.42 (6.9)
SS150	1.5 (38)	solid	2.2 (14.2)	5.6 (14.2)	0.40 (16.5)	0.53 (8.7)	0.42 (6.9)
SS175	1.75 (44)	solid	3.1 (19.4)	6.6 (16.7)	0.75 (31.1)	0.85 (13.9)	0.66 (10.8)
SS200	2 (51)	solid	3.9 (25.3)	7.5 (18.9)	1.26 (52.4)	1.26 (20.6)	0.98 (16.1)
SS225	2.25 (57)	solid	5.0 (32.1)	8.5 (21.5)	2.04 (84.9)	1.81 (29.7)	1.40 (22.9)

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CHANCE® Square Shaft (SS) Helix Thickness and Mechanical Strength

Table 4

DEFAULT (STANDARD)				OPTIONS		
Product Series	Helix Grade ksi (mPa)	Thickness in (mm)	Mechanical Strength kip (kN)	Helix Grade ksi (mPa)	Thickness in (mm)	Mechanical Strength kip (kN)
SS125	50 (345)	3/8" (9.5)	30 (133)	50 (345)	1/2" (13)	35 (156)
SS5	50 (345)	3/8" (9.5)	40 (178)	50 (345)	1/2" (13)	45 (200)
				80 (552)	3/8" (9.5)	40 (178)
				80 (552)	1/2" (13)	50 (222)
SS150	80 (552)	3/8" (9.5)	40 (178)	50 (345)	1/2" (13)	45 (200)
SS175	80 (552)	3/8" (9.5)	50 (222)	80 (552)	1/2" (13)	60 (267)
SS200	80 (552)	1/2" (13)	60 (267)	---	---	---
SS225	80 (552)	1/2" (13)	60 (267)	---	---	---

The mechanical strength ratings in Table 4 are minimum values. The helix diameter, grade, and thickness along with the shaft series to which an individual helix is connected effect the mechanical strength rating of a helix. A higher mechanical strength rating of an individual helix is possible depending on the combination of these variables.