

Table A: Structural Capacity Table (SCT) – METRIC VERSION -

Helical Anchors Products	Shaft Size OD** (mm)	Wall Thickness (mm)	Ultimate Tension Strength (kN)	Compression Load limit (kN)	Ultimate Torsional Strength (kN·m)	Installation Torque factor k (m ⁻¹)	Capacity Based on Torsional Strength (kN)
TS238190	60.3	4.8	556	444	8.81	29.5–32.8	289
TS238254	60.3	6.5	556	600	12.20	29.5–32.8	400
TS278217	73.0	5.5	800	622	17.63	26.2–29.5	520
TS278276	73.0	7.0	800	800	21.69	26.2–29.5	640
TS312254	88.9	6.5	1 112	934	24.41	21.3–26.2	640
TS312368	88.9	9.4	1 112	1 290	36.61	21.3–26.2	960
TS412250	114.3	6.4	1 223	1 156	40.68	16.4–21.3	867
TS412337	114.3	8.6	1 601	1 556	65.08	16.4–21.3	1 387
TS500362*	127.0	9.2	1 837	1 837	100.33*	14.8–19.7	1 837
TS512361*	139.7	9.2	2 268	2 072	122.97*	13.1–18.0	2 072
TS700498*	177.8	12.7	4 443	3 620	244.05*	9.8–14.8	3 603

** OD = Outside Diameter

Important Notes:

- HAI recommends only using 85% of the Ultimate Torsional Strength shown above in table A1 for 60.3 – 88.9 mm helical piles. All other diameter helical piles are recommended to be used to 95% of their Ultimate Torsional Strength.
- When using helical piles for tieback or any battered application with more than 10 degrees from vertical, HAI recommends only using 80% of the Ultimate Torsional Strength which will only apply to 60.3 mm and 73.0 mm diameter helical piles.
- * The ultimate torsional strength values shown above were determined by statistical analysis of laboratory testing results except for values with an asterisk next to them. Values with an asterisk next to them are calculated ratings.
- The capacities shown above in table A for ultimate tension strength and compression load limit are calculated ratings not determined by field tests.
- Our unique facility contains a torsion testing machine allowing us to test all our products. Helical Anchor Inc. is committed to testing and improving all our finished products to provide the best quality for the customer. This table will be updated when testing is completed for those products with an asterisk.

Table A: Structural Capacity Table (SCT) - IMPERIAL VERSION -

Helical Anchors Products	Shaft Size (in)	Wall Thickness (in)	Ultimate Tension Strength (lbs)	Compression Load Limit (lbs)	Ultimate Torsional Strength (ft-lb)	Installation Torque Factor K (ft ⁻¹)	Capacity Based on Torsional Strength (lbs)
TS238190	2.375 OD	0.190	125,000	100,000	6,000	9 - 10	60,000
TS238254	2.375 OD	0.254	125,000	135,000	9,000	9 - 10	90,000
TS278217	2.875 OD	0.217	180,000	140,000	13,000	8 - 9	117,000
TS278276	2.875 OD	0.276	180,000	180,000	16,000	8 - 9	144,000
TS312254	3.50 OD	0.254	250,000	210,000	18,000	6.5-8	144,000
TS312368	3.50 OD	0.368	250,000	290,000	27,000	6.5-8	216,000
TS412250	4.50 OD	0.250	275,000	260,000	30,000	5-6.5	195,000
TS412337	4.50 OD	0.337	360,000	350,000	48,000	5-6.5	312,000
TS500362*	5.00 OD	0.362	413,000	413,000	74000*	4.5-6	413,000
TS512361*	5.50 OD	0.361	510,000	466,000	90700*	4-5.5	466,000
TS700498*	7.00 OD	0.498	999,000	814,000	200000*	3-4.5	814,000

Important Notes:

- HAI recommends only using 85% of the Ultimate Torsional Strength shown above in table A1 for 2-3/8 to 3-1/2 helical piles. All other diameter helical piles are recommended to be use to 95% of their Ultimate Torsional Strength.
- When using helical piles for tieback or any battered application with more than 10 degrees from vertical, HAI recommends only using 80% of the Ultimate Torsional Strength which will only apply to 2-3/8 and 2-7/8 diameter helical piles.
- * The ultimate torsional strength values shown above were determined by statistical analysis of laboratory testing results except for values with an asterisk next to them. Values with an asterisk next to them are calculated ratings.
- The capacities shown above in table A for ultimate tension strength and compression load limit are calculated ratings not determined by field tests.
- Our unique facility contains a torsion testing machine allowing us to test all our products. Helical Anchor Inc. is committed to testing and improving all of our finished products to provide the best quality for the customer. This table will be updated when testing is completed for those products with an asterisk.