



Roterra Piling Helical Piles, Tiebacks & Anchors		Ultimate Capacity Based Upon Torque (kips - kN) (1) (2)	Helix Bearing Plate Grade & Thickness (in - mm)	Section Coupling Method	Building Code Certifications
Round Corner Square Bar (RCS) - Special Order					
Model RA SQ150	1.50 in - 38.1 mm Yield Strength = 90 ksi (min)	Compression = 57 kips - 254 kN Tension = 57 kips - 254 kN	ASTM A656 Grade 80 0.375 in - 9.5mm 0.500 - 12.7mm	Bolt	None
Model RA SQ175	1.75 in - 44.5 mm Yield Strength = 90 ksi (min)	Compression = 105 kips - 467 kN Tension = 105 kips - 467 kN	ASTM A656 Grade 80 0.375 in - 9.5mm 0.500 - 12.7mm	Bolt	None
Model RA SQ200	2.00 in - 50.8 mm Yield Strength = 90 ksi (min)	Compression = 150 kips - 667 kN Tension = 150 kips - 667 kN	ASTM A656 Grade 80 0.375 in - 9.5mm 0.500 - 12.7mm	Bolt	None
Round Shaft					
Model RP158-145	O.D. = 1.625 in - 41.3mm Wall = 0.145" - 3.68mm std Yield Strength Range = 45-70 ksi	Compression = 23 kips - 102 kN Tension = 23 kips - 102 kN	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.500 - 12.7mm	Bolt	None
Model RP178-145	O.D. = 1.875 in - 47.6mm Wall = 0.145" - 3.68mm std Yield Strength Range = 45-70 ksi	Compression = 27 kips - 120 kN Tension = 27 kips - 120 kN	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.500 - 12.7mm	Bolt	None
Model RP190-145	O.D. = 1.9 in - 48.3mm Wall = 0.145" - 3.68mm std Yield Strength Range = 45-70 ksi	Compression = 27 kips - 120 kN Tension = 27 kips - 120 kN	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.500 - 12.7mm	Bolt	None
Model RP238-154	O.D. = 2.375 in - 60mm Wall = 0.154" - 3.9mm std Yield Strength Range = 45-70 ksi	Compression = 37 kips - 164 kN Tension = 37 kips - 164 kN	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.500 - 12.7mm	Bolt	None
Model RP238-190	O.D. = 2.375 in - 60mm Wall = 0.190" - 4.8mm std Yield Strength Range = 45-70 ksi	Compression = 44 kips - 195 kN Tension = 44 kips - 195 kN	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.500 - 12.7mm	Bolt	None
Model RP278-217	O.D. = 2.875 in - 73mm Wall = 0.217" - 5.5mm std Yield Strength Range = 45-70 ksi	Compression = 63 kips - 277 kN Tension = 63 kips - 277 kN	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.500 - 12.7mm	Bolt	CCMC 14027-R
Model RP278-276	O.D. = 2.875 in - 73mm Wall = 0.276" - 7.0mm std Yield Strength Range = 45-70 ksi	Compression = 77 kips - 342 kN Tension = 77 kips - 342 kN	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.500 - 12.7mm	Bolt	CCMC 14027-R
Model RP312-216	O.D. = 3.5 in - 89mm Wall = 0.216" - 5.5mm std Yield Strength Range = 45-70 ksi	Compression = 76 kips - 337 kN Tension = 76 kips - 337 kN	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.500 - 12.7mm	Bolt	CCMC 14027-R
Model RP312-254	O.D. = 3.5 in - 89mm Wall = 0.254" - 6.5mm std Yield Strength Range = 45-70 ksi	Compression = 89 kips - 395 kN Tension = 89 kips - 395 kN	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.500 - 12.7mm	Bolt	CCMC 14027-R
Model RP400-250	O.D. = 4.00 in - 101.6mm Wall = 0.250" - 6.35mm std Yield Strength Range = 45-70 ksi	Compression = 101 kips - 450 kN Tension = 101 kips - 450 kN	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.500 - 12.7mm 0.625 in - 15.9mm 0.75 in - 19.1mm	Bolt	None
Model RP412-237	O.D. = 4.50 in - 114mm Wall = 0.237" - 6.02mm std Yield Strength Range = 45-70 ksi	Compression = 110 kips - 489 kN Tension = 115 kips - 489 kN	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.500 - 12.7mm 0.625 in - 15.9mm 0.75 in - 19.1mm	Bolt	CCMC 14027-R
Model RP412-250	O.D. = 4.50 in - 114mm Wall = 0.250" - 6.35mm std Yield Strength Range = 45-70 ksi	Compression = 115 kips - 511 kN Tension = 115 kips - 511 kN	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.500 - 12.7mm 0.625 in - 15.9mm 0.75 in - 19.1mm	Bolt	CCMC 14027-R

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Model RP412-337	O.D. = 4.50 in - 114mm Wall = 0.337" - 8.56mm std Yield Strength Range = 45-70 ksi	Compression = 150 kips - 667 kN Tension = 150 kips - 667 kN	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.500 - 12.7mm 0.625 in - 15.9mm 0.75 in - 19.1mm	Bolt	CCMC 14027-R
Model RPI500-361	O.D. = 5.00 in - 139.7mm Wall = 0.361" - 9.17mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.625 in - 15.9mm 0.75 in - 19.1mm 0.875 in 22.2mm 1.000 in - 25.4mm 1.25 in - 31.8mm	Weld or Bolt	None
Model RP512-275	O.D. = 5.50 in - 139.7mm Wall = 0.275" - 6.9mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.625 in - 15.9mm 0.75 in - 19.1mm 0.875 in 22.2mm 1.000 in - 25.4mm 1.25 in - 31.8mm	Weld or Bolt	None
Model RP5916-375	O.D. = 5.563 in - 141mm Wall = 0.375" - 9.5mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.625 in - 15.9mm 0.75 in - 19.1mm 0.875 in 22.2mm 1.000 in - 25.4mm 1.25 in - 31.8mm	Weld or Bolt	None
Model RP658-280	O.D. = 6.625 in - 168mm Wall = 0.280" - 7.11mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.625 in - 15.9mm 0.75 in - 19.1mm 0.875 in 22.2mm 1.000 in - 25.4mm 1.25 in - 31.8mm	Weld or Bolt	Not Applicable
Model RP658-500	O.D. = 6.625 in - 168mm Wall = 0.500" - 12.7mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.625 in - 15.9mm 0.75 in - 19.1mm 0.875 in 22.2mm 1.000 in - 25.4mm 1.25 in - 31.8mm	Weld or Bolt	Not Applicable
Model RP700-317	O.D. = 7.00 in - 178mm Wall = 0.317" - 8.05mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.625 in - 15.9mm 0.75 in - 19.1mm 0.875 in 22.2mm 1.000 in - 25.4mm 1.25 in - 31.8mm	Weld or Bolt	Not Applicable
Model RP700-362	O.D. = 7.00 in - 178mm Wall = 0.362" - 9.19mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.375 in - 9.5mm 0.625 in - 15.9mm 0.75 in - 19.1mm 0.875 in 22.2mm 1.000 in - 25.4mm 1.25 in - 31.8mm	Weld or Bolt	Not Applicable
Model RP858-322	O.D. = 8.625 in - 218mm Wall = 0.322" - 8.18mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.500 in - 12.7mm 0.625 in - 15.9mm 0.75 in - 19.1mm 0.875 in 22.2mm 1.000 in - 25.4mm 1.25 in - 31.8mm	Weld or Bolt	Not Applicable
Model RP858-500	O.D. = 8.625 in - 218mm Wall = 0.500" - 12.7mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.500 in - 12.7mm 0.625 in - 15.9mm 0.75 in - 19.1mm 0.875 in 22.2mm 1.000 in - 25.4mm 1.25 in - 31.8mm	Weld or Bolt	Not Applicable

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Model RP958-352	O.D. = 9.625 in - 245mm Wall = 0.352" - 8.94mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.500 in - 12.7mm 0.625 in - 15.9mm 0.75 in - 19.1mm 0.875 in 22.2mm 1.000 in - 25.4mm 1.25 in - 31.8mm	Weld or Bolt	Not Applicable
Model RP1034-375	O.D. = 10.75 in - 273mm Wall = 0.375" - 9.5mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.500 in - 12.7mm 0.625 in - 15.9mm 0.75 in - 19.1mm 0.875 in 22.2mm 1.000 in - 25.4mm 1.25 in - 31.8mm	Weld or Bolt	Not Applicable
Model RP1034-500	O.D. = 10.75 in - 273mm Wall = 0.500" - 12.7mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.500 in - 12.7mm 0.625 in - 15.9mm 0.75 in - 19.1mm 0.875 in 22.2mm 1.000 in - 25.4mm 1.25 in - 31.8mm	Weld or Bolt	Not Applicable
Model RP1234-375	O.D. = 12.75 in - 324mm Wall = 0.375" - 9.5mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.625 in - 15.9mm 0.75 in - 19.1mm 0.875 in 22.2mm 1.000 in - 25.4mm 1.25 in - 31.8mm 1.5 in - 38.1mm	Weld or Bolt	Not Applicable
Model RP1234-500	O.D. = 12.75 in - 324mm Wall = 0.500" - 12.7mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.625 in - 15.9mm 0.75 in - 19.1mm 0.875 in 22.2mm 1.000 in - 25.4mm 1.25 in - 31.8mm 1.5 in - 38.1mm	Weld or Bolt	Not Applicable
Model RPI338-330	O.D. = 16.00 in - 406mm Wall = 0.375" - 9.5mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.625 in - 15.9mm 0.75 in - 19.1mm 0.875 in 22.2mm 1.000 in - 25.4mm 1.25 in - 31.8mm 1.5 in - 38.1mm	Weld or Bolt	Not Applicable
Model RP1600-375	O.D. = 16.00 in - 406mm Wall = 0.375" - 9.5mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.75 in - 19.1mm 0.875 in 22.2mm 1.000 in - 25.4mm 1.25 in - 31.8mm 1.5 in - 38.1mm 1.75 in - 44.5mm	Weld or Bolt	Not Applicable
Model RP1800-375	O.D. = 18.00 in - 457mm Wall = 0.375" - 9.5mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.75 in - 19.1mm 0.875 in 22.2mm 1.000 in - 25.4mm 1.25 in - 31.8mm 1.5 in - 38.1mm 1.75 in - 44.5mm	Weld	Not Applicable
Model RP2000-375	O.D. = 20.00 in - 508mm Wall = 0.375" - 9.5mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.75 in - 19.1mm 0.875 in 22.2mm 1.000 in - 25.4mm 1.25 in - 31.8mm 1.5 in - 38.1mm 1.75 in - 44.5mm	Weld	Not Applicable

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Model RP2400-375	O.D. = 24.00 in - 610mm Wall = 0.375" - 9.5mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 0.75 in - 19.1mm 0.875 in 22.2mm 1.000 in - 25.4mm 1.25 in - 31.8mm 1.5 in - 38.1mm 1.75 in - 44.5mm	Weld	Not Applicable
Model RP3000-375	O.D. = 30.00 in - 762mm Wall = 0.375" - 9.5mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 1.000 in - 25.4mm 1.25 in - 31.8mm 1.5 in - 38.1mm 1.75 in - 44.5mm 2.00 in - 50.8mm	Weld	Not Applicable
Model RP3600-375	O.D. = 36.00 in - 914mm Wall = 0.375" - 9.5mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 1.000 in - 25.4mm 1.25 in - 31.8mm 1.5 in - 38.1mm 1.75 in - 44.5mm 2.00 in - 50.8mm	Weld	Not Applicable
Model RP4200-375	O.D. = 42.00 in - 1067mm Wall = 0.375" - 9.5mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 1.000 in - 25.4mm 1.25 in - 31.8mm 1.5 in - 38.1mm 1.75 in - 44.5mm 2.00 in - 50.8mm	Weld	Not Applicable
Model RP4800-375	O.D. = 48.00 in - 1067mm Wall = 0.375" - 9.5mm std Yield Strength Range = 45-70 ksi	(2)	CSA G40.21-13 44W/50W / ASTM A36 / ASTM A572-50 1.000 in - 25.4mm 1.25 in - 31.8mm 1.5 in - 38.1mm 1.75 in - 44.5mm 2.00 in - 50.8mm	Weld	Not Applicable

(1) The values shown only address structural capacity of pile and potential torque correlated soil capacity. Geotechnical failure will most likely occur before this theoretical pile capacity limit. Furthermore, other mechanical limit states of the pile/anchor, its couplers, and its connections to the structure (brackets) may also govern the design capacity. Refer to the manufacturer's technical manual and engineering team for further information."

(2) Large diameter helical piles develop capacity by a combination of both end-bearing and skin friction. The ultimate pile capacity is calculated based on the site-specific soil profile on a case-by-case basis. Load tests are often recommended for larger shaft sizes to identify a site-specific torque correlation factor (Kt), to determine the pile displacement versus load, and to verify the helical pile configuration.