

# SELECTION TABLE



Model (Outside Diameter)	Project Type	Maximum Bearing Capacity								Lateral Capacity <sup>5</sup>		Factored Bending Resistance	
		Compression <sup>2 3 4</sup>				Tension <sup>1 2</sup>				SLS			
		SLS <sup>6</sup>		ULS <sup>7</sup>		SLS <sup>6</sup>		ULS <sup>7</sup>					
		(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(lb)	(kN)	(ft-lb)	(kN-m)
<b>P1</b> 48.3 mm (1.9 in)	<b>Light Residential</b> (deck without roof, stairs, etc.)	6 800	30	9 520	42	3 400	15	4 760	21	500	2.2	1 010	1.4
<b>P2</b> 60.3 mm (2.4 in)	<b>Medium Residential and Light Commercial</b> (deck, carport, sunroom, single-story residential addition, etc.)	11 000	49	15 400	69	5 500	24	7 700	34	1 000	4.4	1 785	2.4
<b>P3</b> 88.9 mm (3.5 in)	<b>Heavy Residential, Light to Medium Commercial and Industrial</b> (two-story residential addition, cottage, sign, carport, solar panel, new construction, underpinning, boardwalk, tie-back, etc.)	33 750	150	47 250	210	16 875	75	23 625	105	2 250	10	6 454	8.8
<b>P4</b> 101.6 mm (4 in)	<b>Heavy Residential, Light to Medium Commercial and Industrial</b> (cottage, sign, light post, solar panel, new construction, boardwalk, tie-back, bollard, etc.)	45 000	200	63 000	280	22 500	100	31 500	140	2 700	12	9 057	12.3
<b>P3-HD</b> 88.9 mm (3.5 in)	<b>Heavy Residential, Light to Heavy Commercial and Industrial</b> (new construction, underpinning, tie-back, etc.)	45 000	200	63 000	280	22 500	100	31 500	140	2 250	10	9 411	12.8
<b>P4-HD</b> 101.6 mm (4 in)	<b>Heavy Residential, Light to Heavy Commercial and Industrial</b> (new construction, retaining wall, tie-back, etc.)	50 625	225	70 875	315	25 313	113	35 438	158	2 700	12	13 165	17.9
<b>P5</b> 141.3 mm (5.6 in)	<b>Heavy Residential, Light to Heavy Commercial and Industrial</b> (cottage, sign, light post, new construction, boardwalk, solar panel, bollard, retaining wall, etc.)	50 625	225	70 875	315	25 313	113	35 438	158	4 500	20	21 507	29.2
<b>P6</b> 168.3 mm (6.6 in)	<b>Heavy Residential, Light to Heavy Commercial and Industrial</b> (sign, light post, new construction, solar panel, bollard, retaining wall, etc.)	50 625	225	70 875	315	25 313	113	35 438	158	5 625	25	33 876	45.9

- The tension load capacity can be obtained, conservatively, by halving the values of compression bearing capacity. Contact TMP Engineering department for tension applications.
- The maximum compression/tension load (SLS) shown in the selection table limit the settlements to 12 mm (0.5 inch).
- The maximum compressive bearing capacity (SLS) is determined by the maximum torque applied by the installation equipment.
- When the helical pile is laterally unsupported (very loose or soft soils, liquefiable soils, water current, and wind), the structural strength of the helical pile must be approved by TMP engineering department.

- Lateral capacity shown is based on dense soil with free head condition. Contact TMP Engineering department for other conditions.
- SLS values are based on a minimum safety factor of 2 on the ultimate geotechnical resistance.
- Factored geotechnical resistance at ULS.

**Comments:**

- For any technical questions, please contact TMP Engineering department, 418 338-8735.
- Larger Techno Metal Posts can be used for applications requiring a lateral or bending resistance higher than shown in the selection table.