

# SELECTION TABLE EUROPE

Techno Metal Post	Project Type	Maximum Bearing Capacity				Lateral capacity		Bending resistance	
		Compression		Tension		Natural Soil	Fill Soil	Natural Soil	Fill Soil
		SLS	ULS	SLS	ULS	SLS	SLS	ULS	ULS
		(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN.m)	(kN.m)
<b>P1</b> Ø 48.3 mm (1.9 in)	<b>Small size structure</b> (deck, landing, etc.)	30.0	45.0	15.0	22.5	2.7	2.0	1.4	0.4
<b>P2</b> Ø 60.3 mm (2.4 in)	<b>Medium size structure</b> (terrace, garden shed, deck, etc.)	49.0	73.5	24.5	36.8	4.0	3.0	2.4	0.6
<b>P2.5</b> Ø 73 mm (2.9 in)	<b>Structure with a low horizontal loads</b> (patio, wooden extension, modular, etc.)	89.0	133.5	44.5	66.8	6.5	5.0	4.8	2.4
<b>P3</b> Ø 88.9 mm (3.5 in)	<b>Structure with a limited above ground level</b> (house, pedestrian walkway, industrial structure, etc.)	150.0	225.0	75.0	112.5	9.0	7.0	6.6	2.6
<b>P4</b> Ø 101.6 mm (4 in)	<b>All structure</b> (house, shed, solar panels, etc.)	200.0	300.0	100.0	150.0	12.0	10.5	10.9	6.1
<b>P3HD</b> Ø 88.9 mm (3.5 in)	<b>Structure or soil presenting particular constraints</b>	200.0	300.0	100.0	150.0	10.3	9.9	11.9	8.7
<b>P4HD</b> Ø 101.6 mm (4.0 in)	<b>Structure or soil presenting particular constraints</b>	225.0	337.5	112.5	168.8	13.7	12.0	14.9	10.4
<b>P5</b> Ø 141.3 mm (5.6 in)	<b>All structure generating bending or a horizontal force</b>	225.0	337.0	112.5	168.8	23.3	20.0	27.2	17.9
<b>P6</b> Ø 168.3 mm (6.6 in)	<b>Structure generating significant bending</b>	225.0	337.5	112.5	168.8	32.7	29.0	47.9	35.4

1. The bearing capacity values in the selection table are an indication and must be validated on-site according to the soil conditions encountered and the driving torque attained during installation.

2. The maximum bearing uplift capacity can be obtained, in general, by dividing by 2 the values of bearing capacity in compression. For uplift applications, contact the Europe Engineering Department.

3. The compression load capacity (SLS) is determined by the driving torque which is provided by the installation equipment when installing the piles.

4. When the helical pile is laterally unsupported (very loose soil/soft, liquifiable soil, water and wind), the structural strength of the pile must be approved by the Europe Engineering Department.

5. The lateral capacity values are just indicative. They are based on dense granular soil, a free head condition of the pile, an above-ground height of the piles of 150 mm (6 inches) and with the application of only a lateral load. For applications with lateral loads, contact the Europe TMP Engineering Department.

6. The mechanical characteristics of the soils taken into account for the lateral capacity values correspond to a moderately compact soil. The limit pressure values equal to 0.6 MPa, creep pressure equal to 0.4 MPa and a pressuremeter modulus of 6.0 MPa. The rheological coefficient is 1.0 for embankments and 0.67 for natural soil.

7. The lateral and bending capacity values are given as an indication. They are based on a non-aggressive natural soil and a non-compacted and non-aggressive fill for a lifespan of 50 years.

#### Comments :

- For all technical questions, please contact the Europe TMP Engineering Department.
- Larger diameter Techno Metal Post can be used for applications requiring a lateral or bending resistance higher than shown in the selection table.