

General Product Rating Sheet

Empire Piers				
Shaft Size	Pile Shaft Designation	Rated Torsional Capacity (ft-lbs)	Ultimate Axial Capacity (lbs)	Installation Torque Factor (K)
2.375" OD - .190" wall	E238190	4,500	45,000	10
2.875" OD - .276" wall	E287276	8,000	72,000	9
2.875" OD - .217" wall	E287217	9,500	85,000	9
3.5" OD - .300" wall	E35300	15,500	108,500	7
3.5" OD - .254" wall	E35254	15,500	108,500	7
4.5" OD - .290" wall	E45290	24,000	144,000	6
4.5" OD - .337" wall	E45337	30,000	180,000	6
5.5" OD - .362" wall	E55362	40,000	200,000	5

- These are our most common shaft sizes, but we can custom manufacture helical piles up to 24" diameter with a .875 wall and up to 72" helix diameter to suit your specified material requirements and standards.
- The capacities shown above for ultimate compression, tension, and torsional strength values are determined by statistical analysis of laboratory testing results. A minimum safety factor of 2.0 is recommended for determining allowable capacity from correlations with final installation. Load tests are recommended when practical.

Empire Piers Manufacturing USA



MacLean Power Systems				
Shaft Size	Pile Shaft Designation	Rated Torsional Capacity (ft-lbs) ¹	Ultimate Axial Capacity (lbs) ²	Installation Torque Factor (K)
1.50" Square Shaft	D6	5,500	68,000	10
1.50" Square Shaft (high str.)	D7	7,000	70,000	10
1.75" Square Shaft	D10	10,400	100,000	10
2.00" Square Shaft	D15	15,000	150,000	10
2.875" OD - .203" wall	P28	7,500	70,000	9
2.875" OD - .276" wall	P28H	8,000	90,000	9
3.5" OD - .216" wall	P35	11,400	100,000	7
3.5" OD - .300" wall	P35H	15,000	120,000	7
4.5" OD - .237" wall	P45	20,000	130,000	6
4.5" OD - .337" wall	P45H	26,000	180,000	6
8.625" OD - .1875" wall	R86L	40,000	200,000 compression ³ / 120,000 tension	4

- Rated torsional capacity is based on strength of materials resisting torsional forces.
- Mechanical capacity for axial loads are based on strength of materials of the pile to resist axial (compression and tension) loading. Actual in place loads may not reach the ultimate mechanical capacities due to soil types, helix configuration or design methodology.
- Higher axial resistance may require filling the pile shaft with grout and possibly rebar following installation.

