

NEW FOUNDATION CONSTRUCTION WITH MPS HELICAL PILES



APPLICATIONS

- **COMMERICAL**
- **INDUSTRIAL**
- **SOLAR**
- **DATA CENTERS**
- **TIEBACKS**
- **RETAINING WALLS**
- **RESIDENTIAL**
- **PIPE RACKS**
- **FABRIC STRUCTURES**

Installs with readily available equipment
Substantial time and cost savings
Reduces or eliminates the need for concrete



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WHAT IS A HELICAL PILE?

Often referred to as a helical pile, helical pier, and screw pile, to name a few. A helical pile consists of a termination bracket to transfer load from the structure to the pile, steel shaft consisting of multiple extensions which extend through non load bearing soil, and a helical lead section which transfers the load to dense soil.

BEFORE YOU BEGIN

For the preliminary design of a helical pile foundation, the following information should be collected:

- Axial and Lateral loading conditions at the footings/pile locations
- Subsurface geotechnical report detailing the soil characteristics through the site

TERMINATION BRACKET SELECTION

Helical termination brackets consist of a square top plate and pipe sleeve or coupling to connect to the pile shaft. The termination can be cast into the concrete footings or otherwise connected mechanically to the structure it is supporting.

Common Brackets

Pile Type	Plate Dimensions (in)	Capacity (lbs)	
		Compression	Tension
1.5" Square Bar & 2.875" Pipe	6 X 6 X 1/2	90,000	72,000
1.75" Square Bar & 3.5" Pipe	8 X 8 X 3/4	120,000	105,000
2" Square Bar & 4.5" Pipe	10 X 10 X 3/4	180,000	156,000



Battered piles with termination brackets installed adjacent to an existing pipe.

PILE SELECTION

Our engineering staff can assist you with selecting the correct pile type to best fit the requirements of your project. Extra consideration is taken for laterally loaded piles.

Pile Types

Pile Dimensions	Designation	Torque Rating (ft-lbs)	Capacity (lbs)
1.5" Square Bar	D6	5,500	68,000
High Strength 1.5" Square Bar	D7	7,000	70,000
1.75" Square Bar	D10	10,400	100,000
2" Square Bar	D15	15,000	150,000
2.875" X 0.203" Pipe	P28	7,500	70,000
2.875" X 0.276" Pipe	P28H	8,000	90,000
3.5" X 0.216" Pipe	P35	11,400	100,000
3.5" X 0.300" Pipe	P35H	15,000	120,000
4.5" X 0.337" Pipe	P45H	26,000	180,000

COMBINATION PILES

MPS is the only manufacturer producing combo piles that do not require additional specialty parts thanks to our innovative Strength Squared coupling system. Combo piles feature a solid square helical lead followed by pipe extensions, giving you the following benefits:

- Solid square lead can penetrate tougher soils
- Pipe extensions provide superior lateral and buckling capacity
- Larger helical bearing surface area
- Lower required minimum installation torque



Seamlessly couple square bar leads to pipe extensions.

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INFORMATION ON HELICALS,
GROUTED PILES OR OTHER
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