



## HELICAL FOUNDATION

Our **Helical Foundations** are an excellent method for securing your next project. They utilize a circular tube which maximizes the strength of the steel. With the proper equipment, you can install helicals much faster than other foundations. Helicals come in several different sizes in order to accommodate whatever your project needs. Increased helix sizes enable greater strength and higher resistance to pullout. With onsite anchor testing, we are able to determine the optimal helix configuration to save you money, while keeping your investment safe.

*In business since 2008, APA offers a versatile line of racking and foundation solutions for projects in even the most challenging environments. With projects nationwide, APA is a trusted racking partner.*

## EASY TO INSTALL

Shallow micro helical piles are easy to install without the need for traditional pile driving equipment. They can be installed using a skid steer and chuck attachment, or with a single point. Our helical anchors are a dual post solution that allows for a shallow embedment depth, just below the frost line, making it an ideal choice for challenging sites. The helix creates a large cone effect that allows it to resist high pullout loads and any frost jacking forces.

## ADAPTABLE TO SOIL CONDITIONS

Helicals are the perfect solution for unruly soil conditions that most customers run into. Our proprietary shallow helical piles allow us to be extremely versatile in "less-than-ideal" soil conditions, and provide a stable foundation at a cost effective price. We customize the size and embedment depth per site, based on the performance during onsite anchor testing (load bearing and pullout tests).

# WHY USE A HELICAL FOUNDATION?

## SOFT SOILS

The helix creates a cone effect allowing it to resist high pullout loads.

## SHALLOW BEDROCK

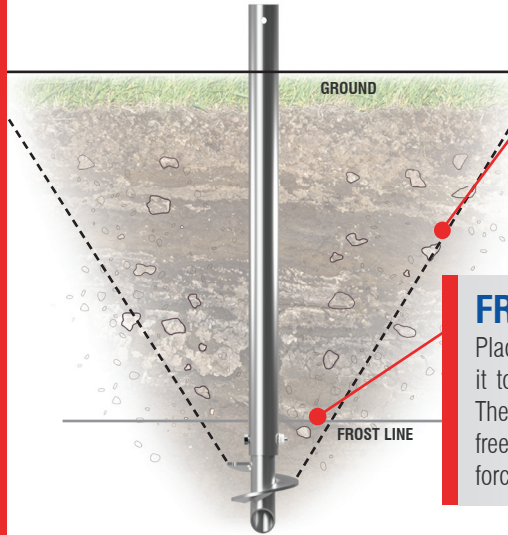
Helicals can be installed as shallow as 28 inches, hovering above bedrock.

## HIGH WATER TABLES

Installation is typically unaffected by groundwater due to shallow embedment depths and helical design.

## SANDY SOILS

Sand is a granular material with a very low friction value, which is why driven piles do not perform well. When a helix is pulled on, the small grains interlock creating maximum holding power.



## SOIL CONE WEIGHT

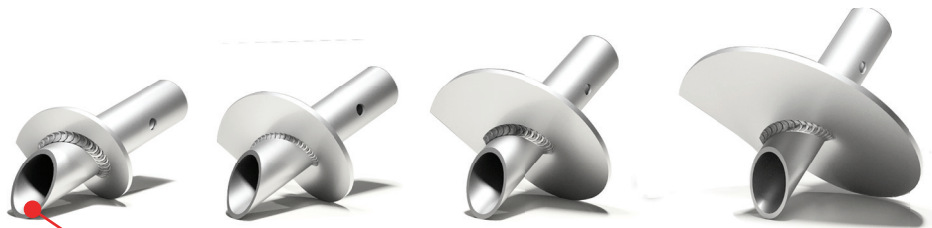
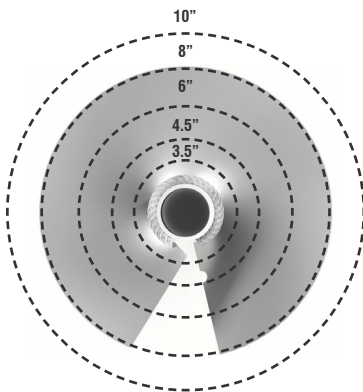
Helical foundations create a cone of weight that allows them to resist large pullout forces at shallow depths.

## FROST HEAVE RESISTANCE

Placing the helix below the frost line allows it to easily overcome frost jacking forces. The foundation tube allows frost to break free from the post, greatly reducing heave force.

## RANGE OF HELIX DIAMETERS

Varying diameter helices and embedment depths allow for install into a wide range of soils.

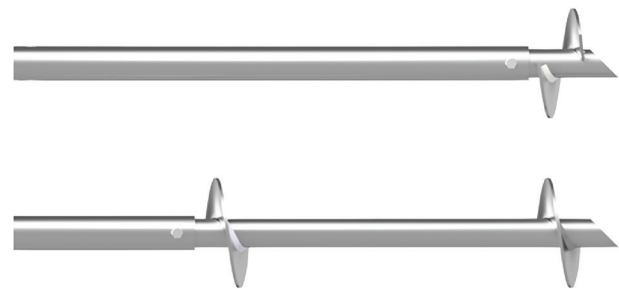


## BIGGER IS NOT ALWAYS BETTER

A large helix may seem like the most obvious choice, however, it is more likely to hit obstructions. A helix, well matched to the site, will provide the balance of drivability and handling to meet the site criteria.

## QUICK CHANGE DESIGN

Bolt-in design allows different size helix inserts to be changed quickly, reducing lead time on projects.



## SINGLE & DOUBLE OPTIONS

A single helix is typical for most sites. The bolt-in design allows for a double helix to be used to match site criteria.