

PRODUCT CATALOG

Email Orders To:
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PRODUCT PROPERTIES TECHNICAL KEY

Grip-Tite has been manufacturing high-quality, earth anchoring and foundation repair products in Winterset, IA continuously since 1921. We can proudly state that all of our products are “Made in the USA”. Certified welders, constant quality improvement programs and exacting quality control procedures ensures the highest quality products with proven performance for over 90 years.

A network of certified installers/dealers, effectively cover all 50 states, Canada and Mexico. These installers undergo an extensive, in-house training and certification in order to provide safe and effective product installations. Those products are tested in-house, at third party, independent, certified laboratories and in the field before they are put into production. You can be assured of a pre-engineered, reliable solution to your earth anchoring and foundation repair needs with Grip-Tite.

Grip-Tite has obtained, and maintained, ICC Legacy Evaluation Service Reports and IAPMO Evaluation reports for both Helical & Push Pier Systems. We have also tested both products in accordance with ICC Test Criteria AC308 through an ICC certified laboratory.

Our support staff provides engineering, product and customer support to the dealer network and the engineering and building communities. Our field support includes job site and installation oversight, load tests and product development. We look forward to the opportunity to serve your earth anchoring and foundation repair needs.

Grip-Tite performance.....over 90 years and counting!

Grip-Tite® Foundation Helical Pier Properties

Standard and Heavy Duty Series

Helical piers (aka helical piles) are either square or round shafts with one or more helix bearing plates welded to the shaft. Helical piers are hydraulically “screwed” into load bearing soils. Grip-Tite’s helical piers have a true helix, meaning, the second and/or third helical plate follows the same path as the first when “screwed” into the soil. This minimizes the disruption of soil.

Helical piers can be used to repair an existing structure or for new construction as an alternative to micropiles, caissons, geopiers or other deep foundation systems. They can also be used instead of an over-excavation and soil replacement. The helical pier can be both time and cost effective.

When helical piers are used to repair an existing structure, they are “screwed” into the soil until a pre-determined torque is reached. A bracket is then placed on the steel shaft and positioned under the footing of the structure, transferring the load of the structure to the helical piers. The structure can then be stabilized or lifted back level.

Helical Piers have been in use for almost 200 years, and more recently have become more popular with engineers and contractors and used often in place of more costly alternatives.

*Retrofit
(Standard Duty)
Bracket*



*Retrofit
(Heavy Duty)
Bracket*



*New Construction
Bracket*



Advantages

- * Lead sections and extensions can be configured to achieve design depth and capacity
- * Lead sections available in 2, 5 and 7-foot lengths
- * Extensions available in 3, 5 and 7-foot length
- * Helical piers available with single, double and triple helix lead sections
- * Helix blade diameters of 8, 10, 12 and 14 inches
- * Available with hot-dipped galvanized coating for added corrosion resistance

Retrofit

- * Lead sections of pier can be configured to achieve design depths and capacities
- * Minimal excavation required around foundation area
- * Installs quickly with lightweight or portable equipment
- * Vibration-free installation
- * No wait – piers installed in any or all weather
- * Installs in areas with limited or tight access (without generating spoils)
- * Pier system installed below grade – not visible once installation is complete
- * Cost-effective (gets a structure back on solid ground)
- * Permanent solution – prevents further vertical movement

New Construction

- * All-weather installation
- * Can be installed with either portable or “small” equipment
- * Can be installed in areas of limited or tight access
- * Foundation concrete can be poured immediately following installation
- * Lead sections can be configured to achieve design depth and capacity
- * Cost-competitive versus other deep foundation alternatives
- * Vibration-free installation
- * Installs quickly without generating spoils

Grip-Tite®
Foundation Pier System

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GTSQ3x3-0313 SERIES

HSS SQUARE TUBE HELICAL PILES

120 kip Ult. Compressive Capacity Torque

STEEL SPECIFICATIONS

Shaft (ASTM A500 Grade C)	HSS 3" x 3" x 5/16" wall Fy = 50 ksi min., Fu = 62 ksi min.
Cross-Sectional Area A	2.94 in ²
Moment of Inertia, I	3.45 in ⁴
Section of Modulus, S	2.30 in ³
Circumference, c	12.0 in
Radius of Gyration, r	1.08 in
Coupling (ASTM A500 Grade B)	HSS 4" x 4" x 3/8" wall x 7" long Fy = 50 ksi min., Fu = 62 ksi min.
Connecting Bolt (Zinc coated per ASTM B633 or B695)	
Helices (ASTM A36)	Thickness - 0.375" and 0.50"; 8", 10", 12" 14" Diam Fy = 36ksi min., Fu = 58 ksi min.
Corrosion Protection	Hot-Dip Galvanized per ASTM A123

Ultimate Capacity-to-Torque Ratio, K	10 ft-1
Recommended Torsional Strength, T	12,000 ft-lbs
Ultimate Mechanical Capacity Compression and Tension	Compression 160 kips, Tension 80 kips (10)
Allowable Mechanical Capacity Compression and Tension	Compression 80 kips, Tension 40 kips (1) (2)
Allowable Shear Capacity	25 kips
Allowable Bending Capacity	5 ft-kips
Ultimate Capacity - by Torque Compression and Tension	Compression 120 kips, Tension 70 kips (1)
Allowable Capacity - by Torque Compression and Tension	Compression 60 kips, Tension 35 kips (1) (2)

HELIX DIAMETERS	NET HELIX AREA AND ULTIMATE HELIX MECHANICAL CAPACITY
8	0.25 ft ² , 70 kips
10	0.45 ft ² , 70 kips
12	0.70 ft ² , 70 kips
14	0.96 ft ² , 56 kips

(1) Load test may be required to verify actual geotechnical capacities. A factor of safety greater than 2 may be necessary to meet project settlement and deflection tolerances. Settlements and deflections are estimated to be less than 1/2 inch for helical piles designed using the above allowable capacities. The actual capacity of the pile should take in account the bracket, eccentricity of the load, unbraced length of the pile (above and below ground) and soil strength conditions along the entire shaft length.

(2) Minimum factor of safety of 2 is recommended.

(3) The above capacities represent Helical Piles supporting a fully braced foundation in stiff soils. Estimated minimum 50 year design capacities for galvanized material.

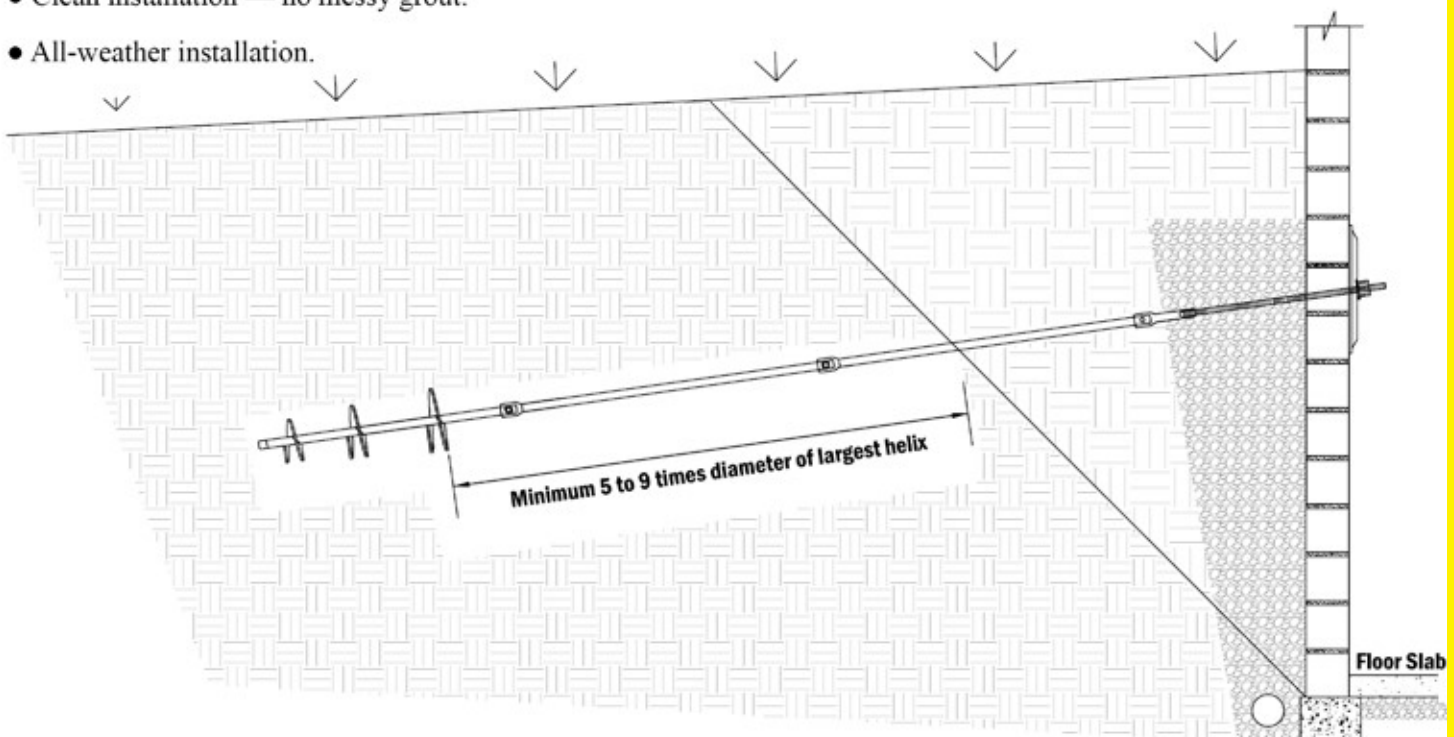
GTRDS150/GTRDS175 SERIES SQUARE SHAFT HELICAL TIEBACKS



1" Threadbar Adapter

ADVANTAGES

- Predictable capacity.
- No excavation required on the high-grade side of foundation or retaining walls.
- Extensions added as necessary to achieve pre-determined capacity.
- Installs with either portable or "small" equipment.
- Installs in areas of limited or tight access.
- Load test can be conducted immediately after installation.
- Generates no spoils.
- Clean installation — no messy grout.
- All-weather installation.



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