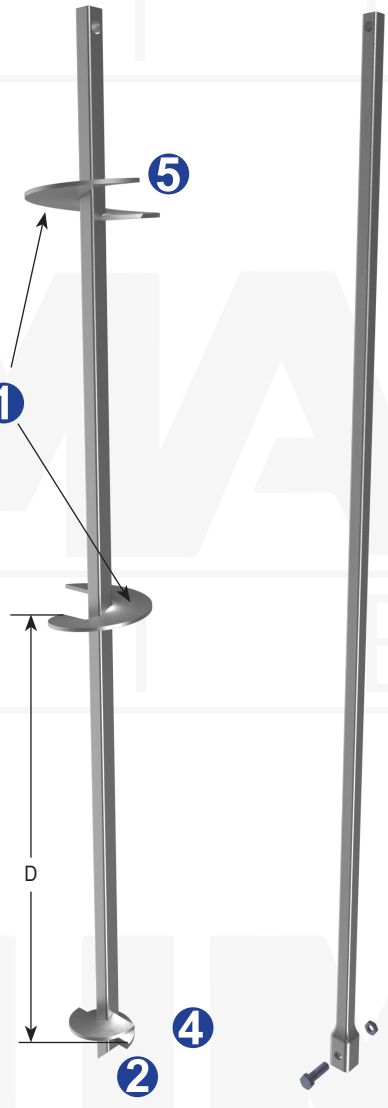
MAGNUM® MS175B Helical Pier

52 Ton Ultimate - 26 Ton Allowable Capacity

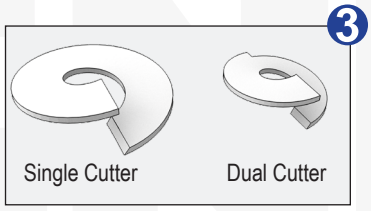
High-Strength 1.75” Round-Corner Square Shaft with Forged Upset Coupler

Description: MAGNUM® Helical Piers offer a number of unique advantages as shown below. MAGNUM® products are manufactured in the USA according to our ISO 9001 approved Quality Program. Our Helical Piers utilize rigid bolted couplings to join extension sections and the lead section, extending the helical bearing plates down to the desired bearing stratum. Structural capacities are developed according to AISC 360 and ICC-AC358 considering buckling of 1 ft unbraced length after 75 years of corrosion in moderate to high aggressive soils. Various coatings, custom lengths and helix configurations are available upon request. See Magnum Technical Reference Manual for additional information.

1. **Patented alternating helix pattern reduces wobble and improves plumbness and tracking.**
2. **45-degree miter pilot point aids pier positioning and advancement.**
3. **Patented MAGNUM® Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris.**
4. **Sharpened edge on each helix slices through problem soils.**
5. **Conforming helix shape limits auguring and provides better quality assurance through valid capacity to torque correlations.**



Drawing shows an example pier lead and extension section. Section lengths and number of helices vary with project requirements and soil conditions.



Specifications	
Shaft	RCSS 1.75” x 1.75” ASTM A29 Fy = 90 ksi, or Better
Bolts	(1) 1″ Diameter SAE J429 Grade 8 Zinc Coated to ASTM B695/F1941
Helices	1/2" Thick, Helix Die-Pressed ASTM A36, or Better 8", 10", 12" & 14" Diameters Available
Spacing ‘D’	25-1/2” TYP
Pitch	3"
Coating	Galvanized (G), Bare Steel (NG), Epoxy Powder Coated (EP)
Properties	
10 ft^{-1}	Ultimate Capacity-to-Torque Ratio
10,500 ft-lbs	Maximum Installation Torque
Capacity by Torque	
** 52 Tons	Ultimate Capacity
26 Tons	Allowable Capacity
Structural Capacity	
* 58 Tons	Ultimate Capacity
29 Tons	Allowable Capacity

Notes: Helical piers shall be installed to appropriate depth into suitable bearing stratum as determined by geotechnical engineer or local practice. Capacity by torque is based on advancing pier to maximum installation torque. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 0.5” are typical at allowable capacity; a higher factor of safety may be required to achieve smaller deflections. For tension capacity, helical bearing plates must be deeply embedded (5 ~ 7 x ave. helix diameter or as specified by geotechnical engineer). Load tests are recommended when practical.

* Structural capacity of square-shaft helical piers equals gross area times steel strength. For compression applications, pile shafts must be fully braced to prevent buckling in order to achieve this capacity. Structural capacity is shown for bare steel product after 75 years of corrosion. Structural capacity of galvanized product is more due to decrease in corrosion losses.

** Capacity shown is for multi-helix configurations. For single helix, limit ultimate capacity to 34 Tons.

U.S. Patents 6,058,662, D612,954, Other Patents Pending

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