

# MAGNUM® MHT1848-9B Transition Piles

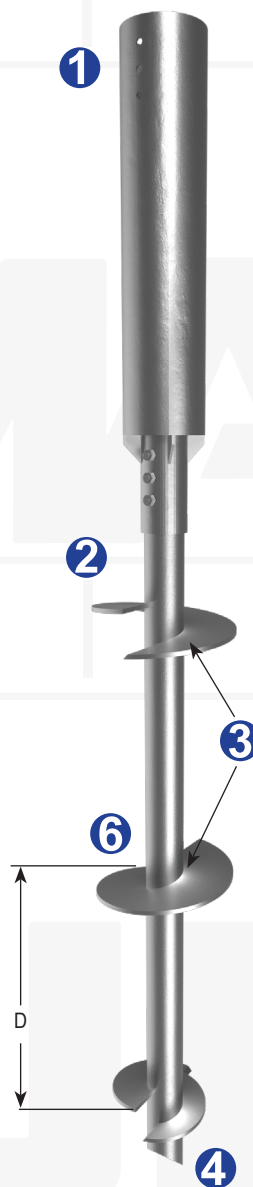
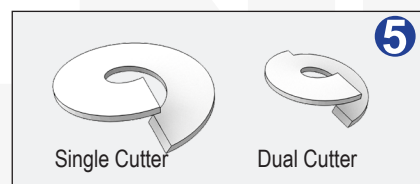
## 280 Ton Ultimate - 140 Ton Allowable Capacity

High-Strength 18.63" Diameter x 0.48" Top Segment & 9.63" Diameter x 0.39" Round-Shaft with Rigid Couplers

**Description:** MAGNUM® Helical Transition Piles offer significant increase in lateral capacity and all the advantages of MAGNUM® Helical Piles. MAGNUM® products are manufactured in the USA according to our ISO 9001 approved Quality Program. Our Helical Transition Piles utilize large diameter top segments and rigid bolted couplings to join smaller diameter extensions and the lead section, extending the helical bearing plates down to the desired bearing stratum while providing increased lateral and overturning capacity. Ideal for deep soil formations. Structural capacities are developed according to AISC 360 and ICC-AC308 considering buckling of 5 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. Large diameter top segment provides significant increase to lateral and overturning capacities.
2. Smaller diameter lead sections provide economical axial capacity.
3. Patented alternating helix pattern reduces wobble and improves plumbness and tracking.
4. 45-degree miter pilot point aids pile positioning and advancement.
5. Patented MAGNUM® Dual-Cutting Edge helical bearing plates (DCE) enhance penetration through dense soils with occasional cobbles and debris.
6. Sharpened edge on each helix slices through problem soils. Conforming helix shape limits auguring and provides better quality assurance through valid capacity to torque correlations.

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



| Specifications       |   |
|----------------------|---|
| Shaft                | 18.63" x 0.48" & 9.63" x 0.39" Nominal Pipe<br>ASTM A252, Fy = 50 ksi & Fy = 80 ksi, or Better            |
| Bolts                | (3) 1-1/2" Diameter ASTM A193 B7<br>Zinc Coated to ASTM B695/F1941  |
| Helices              | 5/8" Thick, Helix Die-Pressed<br>ASTM A36, or Better<br>16", 20", 24", 30", 36" & 42" Diameters Available |
| Spacing 'D'          | * 69" TYP   |
| Pitch                | 6"  |
| Coating              | Galvanized (G), Bare Steel (NG),<br>Epoxy Powder Coated (EP)  |
| Properties           |   |
| 3.0 ft <sup>-1</sup> | Ultimate Capacity-to-Torque Ratio   |
| ** 186,700 ft-lbs    | Maximum Installation Torque   |
| Capacity by Torque   |   |
| **** 280 Tons        | Ultimate Capacity   |
| 140 Tons             | Allowable Capacity  |
| Structural Capacity  |   |
| *** 280 Tons         | Ultimate Capacity   |
| 140 Tons             | Allowable Capacity  |

**Notes:** Helical screw piles 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 pile 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..

\* Spacing = 87" with 30", 36" & 42" Ø helices.

\*\* Maximum Installation Torque rating considers Maximum Driving Stress per ASCE 20.

\*\*\* 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 188 Tons.

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