

MAGNUM® Extended-Duty Helix Foundation System

High-Strength 3" Diameter, 1/4" Wall, Round-Shaft Helix Piers
w/ Single 7/8" Bolt, Dual Sleeve Enhanced 3/8" Thick Rigid Coupler



Description

Magnum® Extended-Duty Helix Piers are similar to the Heavy-Duty version except the couplings are strengthened in tension. Extended-Duty Helix Piers have a working capacity of 50 Kips in compression and tension and are well suited for retaining wall anchors and shoring projects. Double sleeve couplers protect bolt holes from elongation during installation. Rigid coupling increases directional control. Tubular shafts allow for depth and plumbness to be checked after installation. Galvanized coating extends average life expectancy to over 100 years for most soil conditions. Patented Magnum® Dual-Cutting Edge Blades (DCE) enhance penetration through dense soils with occasional cobbles and debris. Custom lengths and blade configurations not shown below are available upon request. See Magnum® Technical Manual for additional information.



PRODUCT DESCRIPTION AND TYPICAL AVAILABILITY

Catalog No.	Length	Blade Diameters	Blade Shape
Extensions			
MHE33ED	3 ft	NA	NA
MHE36ED	6 ft	NA	NA
MHE39ED	9 ft	NA	NA
MHE312ED	12 ft	NA	NA
MHE36ED12S	6 ft	(1) 12"	STD
MHE36ED12D	6 ft	(1) 12"	DCE
MHE36ED14S	6 ft	(1) 14"	STD
MHE36ED14D	6 ft	(1) 14"	DCE
MHE36ED12S12S	6 ft	(2) 12"	STD
MHE36ED12D12D	6 ft	(2) 12"	DCE
MHE36ED14S14S	6 ft	(2) 14"	STD
MHE36ED14D14D	6 ft	(2) 14"	DCE
Leads			
MHL36ED8S	6 ft	(1) 8"	STD
MHL36ED10S	6 ft	(1) 10"	STD
MHL36ED10D	6 ft	(1) 10"	DCE
MHL36ED12S	6 ft	(1) 12"	STD
MHL36ED12D	6 ft	(1) 12"	DCE
MHL36ED8S10S	6 ft	(1) 8"+(1) 10"	STD
MHL36ED8D10D	6 ft	(1) 8"+(1) 10"	DCE
MHL36ED10S12S	6 ft	(1) 10"+(1) 12"	STD
MHL36ED10D12D	6 ft	(1) 10"+(1) 12"	DCE
MHL36ED8S10S12S	6 ft	(1) 8"+(1) 10"+(1) 12"	STD
MHL36ED8D10D12D	6 ft	(1) 8"+(1) 10"+(1) 12"	DCE
MHL36ED10S12S14S	6 ft	(1) 10"+(1) 12"+(1) 14"	STD
MHL36ED10D12D14D	6 ft	(1) 10"+(1) 12"+(1) 14"	DCE
MHL36ED10S12S12S	6 ft	(1) 10"+(2) 12"	STD
MHL36ED10D12D12D	6 ft	(1) 10"+(2) 12"	DCE
MHL36ED12S14S14S	6 ft	(1) 12"+(2) 14"	STD
MHL36ED12D14D14D	6 ft	(1) 12"+(2) 14"	DCE

SPECIFICATIONS

SHAFT	HSS 3.00 x 0.250 wall
	ASTM A500 Grade C, or Equiv.
I	1.95 in ⁴
Ag	2.03 in ²
S	1.30 in ³
COUPLING	Outer 3/8" Sleeve, Inner 1/4" Sleeve
BOLTS	(1) 7/8" Diam. SAE Grade 8 Thru
BLADES	3/8" Thick, Helix Die-Pressed
	ASTM A36, or Better
COATING	Hot-Dip Galvanized to ASTM A152

CAPACITY

8 ft ⁻¹	Ultimate Capacity-to-Torque Ratio
12,500 ft-lbs	Maximum Torsional Strength
Compression/Bearing	
100 Kips	Mechanical Limit
50 Kips	Maximum Allowable Capacity
Tension/Pull-Out	
100 Kips	Mechanical Limit
50 Kips	Maximum Allowable Capacity

Note: Helix piers shall be installed to appropriate depth and into suitable bearing stratum as determined by geotechnical engineer or local practice. Maximum allowable capacity is based on installation to maximum torsional strength. Ultimate capacity is limit state. A minimum factor of safety of 2.0 is recommended for determining allowable capacity from correlations with final installation torque. Deflections of 1" are typical at allowable capacity. A higher factor of safety may be required for tolerable deflections. For tension capacity, blades must be deeply embedded. Load tests are recommended when practical.

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U.S. Patents 6,058,662 and 5,234,287; Other Patents Pending