American Earth Anchors

The best screw you will have in the dirt™

LOAD CAPACITY

Penetrators

PENETRATORS®

LOAD CAPACITY
Pounds

Field-tested pullout resistance

SOIL CLASSIFICATION
per ASTM D-2487/2488

		9"	10"	14"	18"	26"	36"	46"
		PE9 PE-T9	PE10	PE14 PE14-STD	PE18 PE18-SQ	PE26	PE36	PE46-Hex PE46-Hex8 PE46-Guy
1	Hardpan Asphalt	400	1,000	2,500		4,500	8,400	14,000
2	Sandy gravel Very dense sand	200	700	1,700		3,100	6,000	9,500
3	Silty or clayey sand Silty gravel	100	350	600		1,100	2,100	3,300
4	Loose to med dense sands Loose sands Firm clays	Less than 100	200	350		630	1,000	2,000
5	Uncompacted fill	Less than 100	100	200		360	550	750

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LOAD CAPACITY

Cabled Anchors

Bullets and Arrowheads

CABLED ANCHORS

LOAD CAPACITY
Pounds

Field-tested pullout resistance

SOIL CLASSIFICATION
per ASTM D-2487/2488

		Bullets		Steel arrowheads				Aluminum mil-spec arrowheads			
		Thimble loop or cable clamps	Quickvise or disk + Quickvise	Thimble loop or cable clamps	Quickvise or disk + Quickvise	Thimble loop or cable clamps	Quickvise or disk + Quickvise	Thimble loop or cable clamps	Thimble loop or cable clamps	Thimble loop or cable clamps	Thimble loop or cable clamps
		Minimum depth 2'	Minimum depth 2'	Minimum depth 2'	Minimum depth 2'	Minimum depth 2.5'	Minimum depth 2.5'	Minimum depth 2.5'	Minimum depth 3.5'	Minimum depth 4'	Minimum depth 5'
		3"	3"	3"	3"	4"	4"	4"	6"	8"	10"
1	Hardpan Asphalt	2,000 lb	1,100 lb	2,000 lb	1,100 lb	3,500 lb	3,150 lb	3,500 lb	5,000 lb	9,000 lb	14,000 lb
2	Sandy gravel Very dense sand	1,800 lb	1,100 lb	1,800 lb	1,100 lb	2,200 lb	2,200 lb	2,200 lb	3,000 lb	6,500 lb	11,000 lb
3	Silty or clayey sand Silty gravel	1,700 lb	1,100 lb	1,700 lb	1,100 lb	1,900 lb	1,900 lb	1,900 lb	2,000 lb	3,500 lb	7,000 lb
4	Loose to med dense sands Loose sands Firm clays	600 lb	600 lb	600 lb	600 lb	900 lb	900 lb	900 lb	1,200 lb	2,200 lb	4,000 lb
5	Uncompacted fill	350 lb	350 lb	350 lb	350 lb	475 lb	475 lb	475 lb	600 lb	1,250 lb	2,400 lb

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About LOAD CAPACITY

Determining load capacity is an inexact science limited by an inexact environment, but carefully conducted testing can provide useful decision-making data. A further awareness of the many variables involved can guide an informed choice of an effective anchoring solution.

Due to the array of unknowns both below and above the surface of any anchoring application – the soil medium, installation method, local climate, connections to the anchored structure – no one can guarantee a specific holding strength. Our published load capacity numbers, tested in actual field conditions to the best standards that real dirt can provide, are offered as an informed guideline, not a guarantee.

Load capacity is not a simple function of "soil class" (the general type of soil, listed at the lower left of these strength charts) but also of real-time moisture content, compaction, root penetration, installation method, pullout load angle, and other factors unique to the installation's time and place.

The only method of accurately predicting the load capacity of an anchor at a specific site is by an on-site proof test of the anchor under local conditions, installed and loaded in the same manner as the intended application.

Please contact us with any questions you may have about the challenges, unknowns, and choices involved in your anchoring application.