



Concrete Threaded Rod Anchors - Ultimate Load Capacities when Installed in Normal-Weight

Anchor Size / Rod Diameter (in.)	Direction	Screw Size & Length (in.)	ANSI Drill Bit Diameter (in.)	Embed. Depth (in.)	Minimum Concrete Compressive Strength					
					2,000 psi		4,000 psi		6,000 psi	
					Tension (lbs.)	Shear (lbs.)	Tension (lbs.)	Shear (lbs.)	Tension (lbs.)	Shear (lbs.)
1/4	Vertical	1/4" x 1-1/4"	1/4"	1-1/4"	1,245	1,630	1,745	2,195	1,860	2,315
3/8	Vertical	1/4" x 1-1/2"	1/4"	1-1/2"	1,580	2,320	2,325	2,375	2,490	2,430
1/2	Vertical	3/8" x 2-3/4"	3/8"	2-3/4"	4,785	4,725	5,440	7,755	7,755	6,670

1. The figures provided above represent maximum capacities. It is essential to reduce them by a minimum safety factor of 4.0 or higher to establish the permissible working load.
2. For intermediate compressive strength, linear interpolation can be employed to calculate ultimate loads.
3. Depending on specific applications, like those involving sustained tensile loading, it may be prudent to consider safety factors of 20 or more.
4. It's worth noting that state-specific design codes may acknowledge lower allowable loads. Be sure to consult your local codes to determine any relevant regulations.

Concrete Threaded Rod Anchors - Allowable Load Capacities when Installed in Normal-Weight

Anchor Size / Rod Diameter (in.)	Direction	Screw Size & Length (in.)	ANSI Drill Bit Diameter (in.)	Embed. Depth (in.)	Minimum Concrete Compressive Strength					
					2,000 psi		4,000 psi		6,000 psi	
					Tension (lbs.)	Shear (lbs.)	Tension (lbs.)	Shear (lbs.)	Tension (lbs.)	Shear (lbs.)
1/4	Vertical	1/4" x 1-1/4"	1/4"	1-1/4"	310	405	435	550	465	575
3/8	Vertical	1/4" x 1-1/2"	1/4"	1-1/2"	390	580	580	595	620	620
1/2	Vertical	3/8" x 2-3/4"	3/8"	2-3/4"	1,195	1,180	1,360	1,420	1,935	1,665

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