

Product Image



Threaded Rod Spike

The threaded rod spike is designed for hanging threaded rod from concrete ceilings. Using a special manufacturing process, the anchor forms an "S" shaped configuration at the working end of the anchor to create an expansion mechanism. As the anchor is driven into the hole, the expansion mechanism is compressed and flexes to the size of the hole. It is intended to be used for light weight hanging applications.

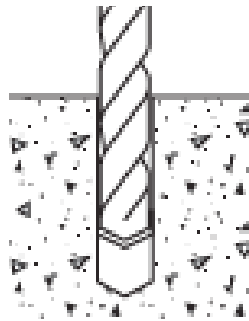
Features:

- One-piece design
- Vibration resistant
- Approved for overhead

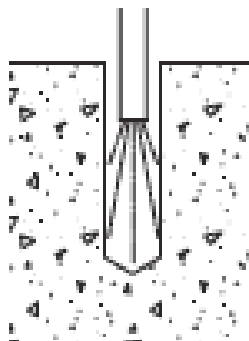
Product Dimensions

Dimension	Nominal Anchor Size, d	
	PS25 (1/4")	PS38 (3/8")
ANSI Drill Size, dbit (in.)	3/16	1/4
UNC Thread Size	1/4-20	3/8-16
Head Height (in.)	1/2	5/8
Head Size, O.D. (in.)	13/32	35/64

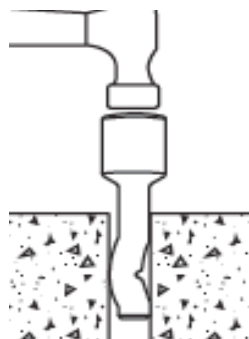
Installation Instructions



1. Drill a hole into the base material to a depth of at least 1/2" or one anchor diameter deeper than the embedment required. The tolerances of the drill bit used must meet the requirements of ANSI Standard B212.15



2. Blow the hole clean of dust & other material



3. Drive the anchor into the hole until the head is firmly seated against the base material. Be sure the anchor is driven to the required embedment depth

Ultimate Load Capacities for Carbon Steel Threaded Rod Spike in Normal Weight Concrete^{1,2}

Anchor Diameter d in. (mm)	Drill Bit Diameter d _{bit} in.	Minimum Embedment Depth h _v in. (mm)	Minimum Concrete Compressive Strength (f'c)							
			2,000 psi (13.8 MPa)		3,000 psi (20.7 MPa)		4,000 psi (27.6 MPa)		5,000 psi (34.5 MPa)	
			Tension lbs. (kN)	Shear lbs. (kN)	Tension lbs. (kN)	Shear lbs. (kN)	Tension lbs. (kN)	Shear lbs. (kN)	Tension lbs. (kN)	Shear lbs. (kN)
1/4 (6.4)	3/16	1-1/4 (31.8)	780 (3.5)	975 (4.4)	1,260 (5.7)	975 (4.4)	1,260 (5.7)	975 (4.4)	1,260 (5.7)	975 (4.4)
3/8 (9.5)	1/4	1-3/4 (44.5)	1,100 (5.0)	1,815 (8.2)	1,660 (7.5)	2,020 (9.1)	2,000 (9.0)	2,100 (9.5)	2,000 (9.0)	2,180 (9.8)

1. Tabulated load values are for anchors installed in concrete. Concrete compressive strength must be at the specified minimum at the time of installation.
2. Ultimate load capacities must be reduced by a minimum safety factor of 4.0 or greater to determine allowable working load. Consideration of safety factors of 10 or higher may be necessary depending upon the application such as life safety or overhead.

Working Load for Carbon Steel Threaded Rod Spike in Normal-Weight Concrete^{1,2,3}

Anchor Diameter d in. (mm)	Drill Bit Diameter d _{bit} in.	Minimum Embedment Depth h _v in. (mm)	Minimum Concrete Compressive Strength (f'c)							
			2,000 psi (13.8 MPa)		3,000 psi (20.7 MPa)		4,000 psi (27.6 MPa)		5,000 psi (34.5 MPa)	
			Tension lbs. (kN)	Shear lbs. (kN)	Tension lbs. (kN)	Shear lbs. (kN)	Tension lbs. (kN)	Shear lbs. (kN)	Tension lbs. (kN)	Shear lbs. (kN)
1/4 (6.4)	3/16	1-1/4 (31.8)	195 (0.9)	245 (1.1)	315 (1.4)	245 (1.1)	315 (1.4)	245 (1.1)	315 (1.4)	245 (1.1)
3/8 (9.5)	1/4	1-3/4 (44.5)	275 (1.2)	455 (2.0)	415 (1.9)	505 (2.3)	500 (2.3)	525 (2.4)	500 (2.3)	545 (2.5)

1. Allowable load capacities are calculated using an applied safety factor of 4.0. Consideration of safety factors of 10 or higher may be necessary depending on the application, such as life safety or overhead.
2. Linear interpolation may be used to determine allowable loads for intermediate compressive strengths.
3. Allowable load capacities are multiplied by reduction factors found in the Design Criteria section when anchor spacing or edge distances are less than critical distances.

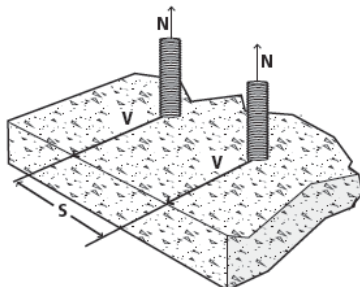
Spacing, Tension (F_{NS}) & Shear (F_{VS})					
Dia. (in.)	1/4			3/8	
h_s (in.)	7/8	1	1-1/4	2-1/2	
s_{ct} (in.)	1-3/4	2	2-1/2	5	
s_{min} (in.)	7/8	1	1-1/4	2-1/2	
Spacing Distance (inches)	7/8	0.50			
	1	0.57	0.50		
	1-1/4	0.71	0.63	0.50	
	1-1/2	0.86	0.75	0.60	
	1-3/4	1.00	0.88	0.70	
	2		1.00	0.80	
	2-1/2			1.00	0.50
	2-3/4				0.55
	3				0.60
	4				0.80
5				1.00	

Edge Distance, Tension (F_{NC})				
Dia. (in.)	1/4	3/8		
c_{cr} (in.)	3-1/2	5-1/4		
c_{min} (in.)	1-1/4	1-7/8		
Spacing Distance (inches)	1			
	1-1/4	0.50		
	1-7/8	0.64	0.50	
	2	0.67	0.52	
	2-1/2	0.78	0.59	
	2-5/8	0.81	0.61	
	3	0.89	0.67	
	3-1/2	1.00	0.74	
	4		0.81	
	5		0.96	
5-1/4		1.00		

Edge Distance, Shear (F_{VC})				
Dia. (in.)	1/4	3/8		
c_{cr} (in.)	3-1/2	5-1/4		
c_{min} (in.)	1-1/4	1-7/8		
Spacing Distance (inches)	1			
	1-1/4	0.25		
	1-7/8	0.46	0.25	
	2	0.50	0.28	
	2-1/2	0.67	0.39	
	2-5/8	0.71	0.42	
	3	0.83	0.50	
	3-1/2	1.00	0.61	
	4		0.72	
	5		0.94	
5-1/4		1.00		

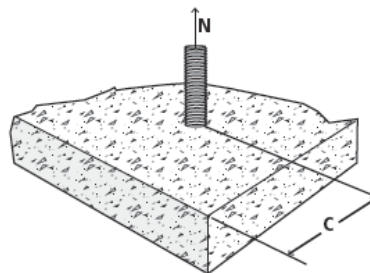
Notes: For anchors loaded in tension and shear, the critical spacing (s_{cr}) is equal to 2 embedment depths ($2h_v$) at which the anchor achieves 100% of load.

Minimum spacing (s_{min}) is equal to 1 embedment depth (h_v) at which the anchor achieves 50% of load.



Notes: For anchors loaded in tension, the critical edge distance (c_{cr}) is equal to 14 anchor diameters ($14d$) at which the anchor achieves 100% of load.

Minimum edge distance (c_{min}) is equal to 5 anchor diameters ($5d$) at which the anchor achieves 50% of load.



Notes: For anchors loaded in shear, the critical edge distance (c_{cr}) is equal to 14 anchor diameters ($14d$) at which the anchor achieves 100% of load.

Minimum edge distance (c_{min}) is equal to 5 anchor diameters ($5d$) at which the anchor achieves 25% of load.

