

TITEN HD® MINI *Screw Anchor for Concrete and Masonry*



Sharing the same features as the larger Titen HD® screw anchor (page 119), the Titen HD® Mini anchor provides an easy solution for jobs that call for smaller anchors. The self-undercutting, non-expansion characteristics are ideal for situations where minimum edge distance and reduced spacing is a concern. The patented cutting teeth and thread design enable the Titen HD Mini anchor to be installed quickly and with less effort than many other screw type anchors. Since there are no secondary setting steps involved, the Titen HD Mini screw anchor can be installed much more quickly than traditional expansion anchors.

FEATURES:

- Full-length threads undercut the concrete and effectively transfer loads into the base material.
- Specialized heat-treating process creates high hardness at the tip to facilitate cutting while the body remains ductile.
- Less spacing and edge distance required since the anchor does not exert expansion forces
- No special installation tools required. Holes can be drilled with rotary hammer or hammer drill with ANSI size bit. Anchors are installed with standard size sockets.
- Less installation time translates to lower installed cost.
- Removable, ideal for temporary anchorage.

MATERIAL: Carbon steel, heat treated

FINISH: Zinc plated

TEST CRITERIA:

The Titen HD® Mini anchor has been tested in accordance with ASTM E488 standard test methods for tension and shear.

INSTALLATION:

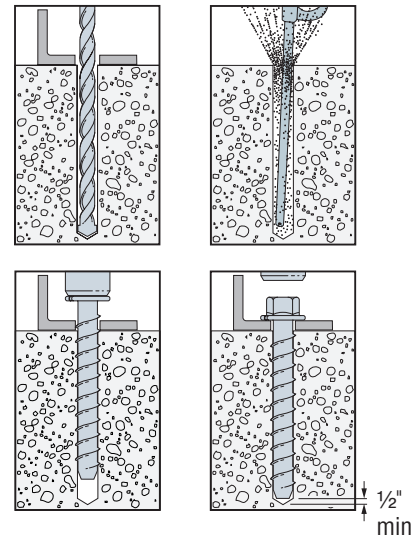
⚠ Caution: Oversized holes in the base material will reduce or eliminate the mechanical interlock of the threads with base material and will reduce the anchor's load capacity. Use a Titen HD Mini screw anchor one time only. Installing the anchor multiple times may result in excessive thread wear and reduce load capacity.

- Drill a hole using the specified diameter carbide bit into the base material to a depth of at least 1/2" deeper than the required embedment depth.
- Blow the hole clean of dust and debris using compressed air.
- Insert the anchor through the fixture and into the hole.
- **IMPORTANT:** Install with an applied torque of 15 ft-lbs for the 1/4" Titen HD Mini and 25 ft-lbs for the 3/8" Titen HD Mini using a torque wrench, driver drill, hammer drill or cordless 1/4" impact driver with a maximum permitted torque rating of 100 ft-lb.



U.S. Patent
5,674,035 &
6,623,228

Installation Sequence



Titen HD® Mini Anchor Product Data

Size	Model No.	Drill Bit Dia (in.)	Wrench Size (in.)	Quantity	
				Box	Ctn
1/4" x 1 3/4"	THD25134H	1/4	3/8	100	500
1/4" x 2 1/4"	THD25214H	1/4	3/8	50	250
1/4" x 3"	THD25300H	1/4	3/8	50	250
3/8" x 1 3/4"	THD37134H	3/8	9/16	50	250
3/8" x 2 1/2"	THD37212H	3/8	9/16	50	200

Tension Loads in Normal-Weight Concrete

Size in. (mm)	Drill Bit Dia. in.	Embed. Depth in. (mm)	Min. Spacing in. (mm)	Min. Edge Dist. in. (mm)	Tension Load			
					f'c ≥ 2000 psi Concrete		f'c ≥ 4000 psi Concrete	
					Ultimate lbs. (kN)	Allowable lbs. (kN)	Ultimate lbs. (kN)	Allowable lbs. (kN)
1/4 (6.4)	1/4	1 (25)	4 (102)	4 (102)	624 (2.8)	155 (0.7)	1,037 (4.6)	260 (1.2)
		1 3/4 (44)			1,768 (7.9)	440 (2.0)	2,255 (10.0)	565 (2.5)
3/8 (9.5)	3/8	1 1/2 (38)	4 (102)	6 (152)	2,070 (9.2)	520 (2.3)	2,974 (13.2)	745 (3.3)

See Notes Below

Shear Loads in Normal-Weight Concrete

Size in. (mm)	Drill Bit Dia. in.	Embed. Depth in. (mm)	Min. Spacing in. (mm)	Min. Edge Dist. in. (mm)	Shear Load			
					f'c ≥ 2000 psi Concrete		f'c ≥ 4000 psi Concrete	
					Ultimate lbs. (kN)	Allowable lbs. (kN)	Ultimate lbs. (kN)	Allowable lbs. (kN)
1/4 (6.4)	1/4	1 (25)	4 (102)	4 (102)	1,104 (4.9)	275 (1.2)	2,135 (9.5)	535 (2.4)
		1 3/4 (44)			2,443 (10.9)	610 (2.7)	•	610 (2.7)
3/8 (9.5)	3/8	1 1/2 (38)	4 (102)	6 (152)	2,912 (13.0)	730 (3.2)	3,668 (16.3)	915 (4.1)

1. The allowable loads are based on a safety factor of 4.0.

2. The minimum concrete thickness is 1 1/2 times the embedment depth.

3. Tension and Shear loads may be combined using the straight line interaction equation (n=1).