

TABLE 1A—TITEN HD® SCREW ANCHOR INSTALLATION INFORMATION AND ANCHOR DATA<sup>1</sup>

Characteristic	Symbol	Units	Titen HD Screw Anchor Nominal Anchor Diameter (inch)										
			$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	
<b>Installation Information</b>													
Nominal Diameter	$d_a$	in.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$						
Drill Bit Diameter	$d_{bit}$	in.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$						
Minimum Baseplate Clearance Hole Diameter <sup>2</sup>	$d_c$	in.	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$						
Maximum Installation Torque <sup>3</sup>	$T_{inst,max}$	ft-lbf	24	50	65	100	150						
Maximum Impact Wrench Torque Rating	$T_{impact,max}$	ft-lbf	125	150	340	340	385						
Minimum Hole Depth	$h_{hole}$	in.	$1\frac{3}{4}$	$2\frac{5}{8}$	$2\frac{3}{4}$	$3\frac{1}{2}$	$3\frac{3}{4}$	$4\frac{1}{2}$	$4\frac{1}{2}$	6	$4\frac{1}{2}$	6	$6\frac{3}{4}$
Nominal Embedment Depth	$h_{nom}$	in.	$1\frac{5}{8}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$3\frac{1}{4}$	$3\frac{1}{4}$	4	4	$5\frac{1}{2}$	4	$5\frac{1}{2}$	$6\frac{1}{4}$
Effective Embedment Depth	$h_{ef}$	in.	1.19	1.94	1.77	2.40	2.35	2.99	2.97	4.24	2.94	4.22	4.86
Critical Edge Distance	$c_{ac}$	in.	3	6	$2\frac{11}{16}$	$3\frac{5}{8}$	$3\frac{9}{16}$	$4\frac{1}{2}$	$4\frac{1}{2}$	$6\frac{3}{8}$	6	$6\frac{3}{8}$	$7\frac{5}{16}$
Minimum Edge Distance	$c_{min}$	in.	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{3}{4}$						$1\frac{3}{4}$		
Minimum Spacing	$s_{min}$	in.	$1\frac{1}{2}$	$1\frac{1}{2}$	3						$2\frac{3}{4}$	3	
Minimum Concrete Thickness	$h_{min}$	in.	$3\frac{1}{4}$	$3\frac{1}{2}$	4	5	5	$6\frac{1}{4}$	6	$8\frac{1}{2}$	6	$8\frac{3}{4}$	10
<b>Anchor Data</b>													
Yield Strength	$f_{ya}$	psi	100,000				97,000						
Tensile Strength	$f_{uta}$	psi	125,000				110,000						
Minimum Tensile & Shear Stress Area	$A_{se}$ <sup>4</sup>	in <sup>2</sup>	0.042	0.099	0.183	0.276	0.414						
Axial Stiffness in Service Load Range - Uncracked Concrete	$\beta_{uncr}$	lb/in.	202,000				672,000						
Axial Stiffness in Service Load Range - Cracked Concrete	$\beta_{cr}$	lb/in.	173,000				345,000						

For SI: 1 inch = 25.4 mm, 1 ft-lbf = 1.356 N-m, 1 psi = 6.89 kPa, 1 in<sup>2</sup> = 645 mm<sup>2</sup>, 1 lb/in = 0.175 N/mm.

<sup>1</sup>The information presented in this table is to be used in conjunction with the design criteria of [ACI 318-19](#) Chapter 17, [ACI 318-14](#) Chapter 17 or [ACI 318-11](#) Appendix D, as applicable.

<sup>2</sup>The clearance must comply with applicable code requirements for the connected element.

<sup>3</sup> $T_{inst,max}$  applies to installations using a calibrated torque wrench.

<sup>4</sup> $A_{se,N} = A_{se,V} = A_{se}$

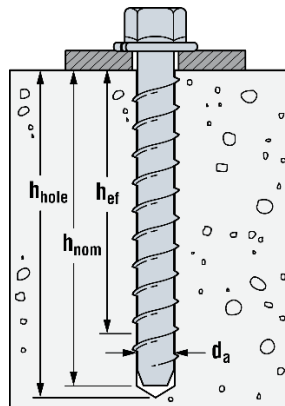


FIGURE 2A—TITEN HD® SCREW ANCHOR INSTALLATION