



ICC-ES Listing Report ESL-1241

Reissued July 2023

This listing is subject to renewal July 2024.

CSI: DIVISION: 03 00 00—CONCRETE
Section: 03 16 00—Concrete Anchors

DIVISION: 05 00 00—METALS
Section: 05 05 19—Post-Installed Concrete Anchors

Product Certification System:

The ICC-ES product-certification system includes evaluating reports of tests of standard manufactured product, prepared by accredited testing laboratories and provided by the listee, to verify compliance with applicable codes and standards. The system also involves factory inspections, assessment and surveillance of the listee's quality system.

Product: DOTTIE WEDGE ANCHORS

Listee: L.H. DOTTIE COMPANY

Evaluation: The Dottie Wedge Anchors are torque-controlled expansion anchors. The anchors consist of a stud, nut, washer and expander collar (clip) as illustrated in Figure 1 of this listing and evaluated in accordance with the following standard:

- ASTM E488-15, Test Methods for Strength of Anchors in Concrete and Masonry Elements, ASTM International.

Findings: The Dottie Wedge Anchors have the following tension ultimate load for a single anchor in uncracked concrete as specified in Table 1 of this listing.

Identification:

1. Anchors are packaged in containers labeled with the company logo and name (L.H. Dottie Company), product name, anchor size and length, catalog number and the evaluation report number (ESR-3932) and/or the ICC-ES Listing Report number (ESL-1241), and when applicable, the ICC-ES Listing Mark.
2. The report holder's contact information is the following:

L.H. DOTTIE COMPANY
6131 SOUTH GARFIELD AVENUE
COMMERCE, CALIFORNIA 90040
(323) 725-1000
www.lhdottie.com

Installation: Each anchor must be installed in accordance with L.H. Dottie Company's' published installation instructions. The minimum embedment, concrete requirements and installation parameters must comply with Table 1 and Figure 2.

Conditions of listing:

1. The listing report addresses only conformance with the standard noted above.
2. Approval of the product's use is the sole responsibility of the local code official.
3. The listing report applies only to the materials tested and as submitted for review by ICC-ES.
4. The mean ultimate loads listed in Table 1 are not intended to be used as design values; results of reliability and service-condition tests have not been included in this listing.

TABLE 1—DATA FOR DOTTIE WEDGE ANCHORS FOR USE IN CONCRETE

INSTALLATION INFORMATION	SYMBOL	UNITS	Nominal Anchor Diameter		
			1/4 inch	3/8 inch	1/2 inch
Anchor diameter	d_a	in.	1/4	3/8	1/2
Minimum diameter of hole clearance in fixture	d_h	in.	5/16	7/16	9/16
Nominal drill bit diameter	d_{bit}	in.	1/4	3/8	1/2
Minimum nominal embedment depth	h_{nom}	in.	1 3/4	2 1/2	2 1/2
Minimum effective embedment depth	h_{ef}	in.	1 1/2	2 1/4	2 1/4
Minimum hole depth	h_o	in.	2	2 3/4	2 3/4
Installation torque	T_{inst}	ft-lb	8	25	35
Minimum edge distance	c_{min}	in.	1 3/4	3	6
Minimum concrete thickness	h_{min}	in.	4	4	6
Critical edge distance	c_{ac}	in.	3	6	8
Mean Ultimate Load From Static Tests ³	Symbol	Units	Nominal Anchor Diameter		
			1/4 inch	3/8 inch	1/2 inch
Mean ultimate static tensile load, uncracked low-strength normal-weight concrete ¹	F_m	lb.	2,010	3,690	4,690
Mean ultimate static tensile load, uncracked high-strength normal-weight concrete ²	F_m	lb.	2,260	6,035	9,150

For SI: 1 in = 25.4 mm, 1 in² = 6.451×10⁻⁴ m, 1 ft-lb = 1.356 Nm, 1 lb/in² = 6.895 Pa.

¹ Tabulated values are adjusted to $f'_c=2,500$ psi.

² Tabulated values are adjusted to $f'_c=6,500$ psi.

³ Mean ultimate loads with no safety factors applied differ from, and are higher than, the characteristic capacity as defined in ACI 318, ACI 355.2 and AC 193. Characteristic capacities for design in accordance with ACI 318 must include assessment of reliability and service condition tests, design information for concrete breakout and steel capacity, and applicable strength reduction factors.

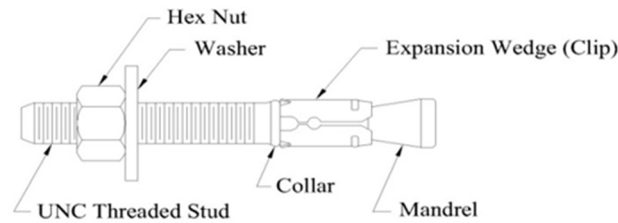


FIGURE 1—DOTTIE WEDGE ANCHOR

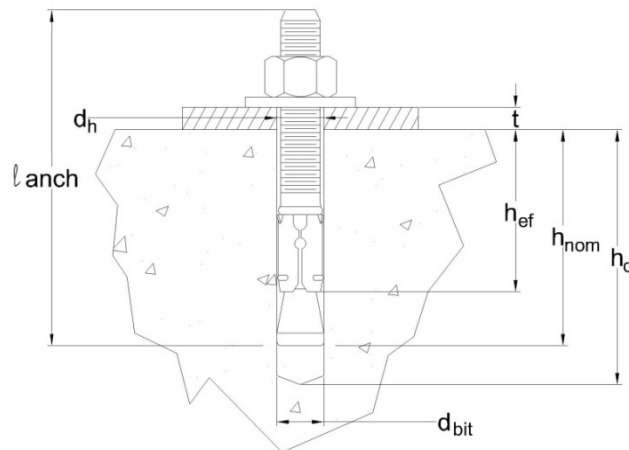


FIGURE 2—DOTTIE WEDGE ANCHOR INSTALLATION