



Specifications, Listings and Approvals

Diameters: 1/4" – 1"

Material: Carbon steel

Finish: Zinc plating ASTM B633, Type III, SC1

Federal Specifications:

- QQZ-325C, Type II, Class 3 (clear chromate added)
- GSA FFS-325, Group II, Type 4, Class 1

Code Compliance:

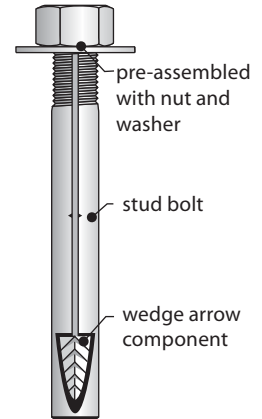
- Formerly ICC-ES Legacy Report #1821
- 1997 Uniform Building Code (UBC)
- 2000 International Building Code (IBC)
- 2000 International Residents Code
- Data Test in accordance with the ICC-ES criteria for Expansion Anchors in Concrete and Masonry Elements (ACOI) dated April 2002. Available upon request.
- State DOT: Please call Customer Service for specific approval information by state

60 years of proven performance

Key Features and Benefits

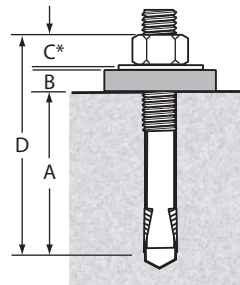
- Time-tested, proven reliability
 - An industry standard for over 60 years
- Fully assembled and ready to use
- Unparalleled job-site convenience
 - No fixture-moving required
- **Bolt Size is Hole Size®** eases installation
 - Allows precision placement of equipment through pre-drilled holes
- Exclusive **"positive wedge connections"**
 - Minimizes wedge loosening due to vibratory loads

Code Compliance:
Formerly ICC-ES Legacy Report #1821



Expansion Anchors

Length Selection



Minimum Embedment (A)
+ Attached Material Thickness (B)
+ Nut Height* (C)
= Total Anchor Length (D)
*Nut height equals anchor diameter.

Order Information

Catalog Number	Anchor Size (in.)	Min. Embedment (in.)	Thread Length (in.)	Quantity Box /Carton
1413	1/4 x 1-3/4	1	1/2	100/600
1423	1/4 x 2-3/4	1	1/2	100/600
1430	1/4 x 3	1	1/2	100/600
5620	5/16 x 2	1-1/4	5/8	100/600
5630	5/16 x 3	1-1/4	5/8	100/600
3820	3/8 x 2	1-1/2	3/4	100/600
3823	3/8 x 2-3/4	1-1/2	3/4	100/600
3832	3/8 x 3-1/2	1-1/2	3/4	50/300
3850	3/8 x 5	1-1/2	3/4	50/300
3860	3/8 x 6	1-1/2	3/4	50/300
1223	1/2 x 2-3/4	2	1	50/300
1232	1/2 x 3-1/2	2	1	50/300
1250	1/2 x 5	2	1	25/150
1260	1/2 x 6	2	1	25/150
1270	1/2 x 7	2	1	25/150
5832	5/8 x 3-1/2	3	1-1/4	25/150
5842	5/8 x 4-1/2	3	1-1/4	25/150

Order information continued on following page

Order Information, continued

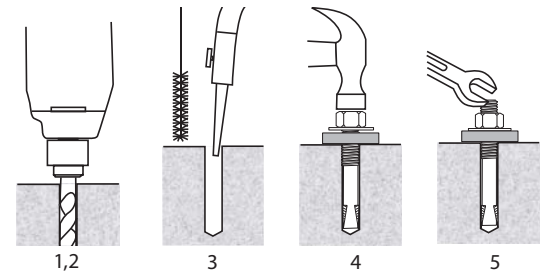
Catalog Number	Anchor Size (in.)	Min. Embedment (in.)	Thread Length (in.)	Quantity Box /Carton
5850	5/8 x 5	3	1-1/4	20/120
5860	5/8 x 6	3	1-1/4	15/90
5870	5/8 x 7	3	1-1/4	15/90
3440	3/4 x 4	3	1-1/2	18/108
3450	3/4 x 5	3	1-1/2	12/72
3460	3/4 x 6	3	1-1/2	12/72
3470	3/4 x 7	3	1-1/2	10/60
3482	3/4 x 8-1/2	3	1-1/2	10/30
3410	3/4 x 10	3	1-1/2	10/30
7880	7/8 x 8	4-1/2	1-3/4	10/30
7810	7/8 x 10	4-1/2	1-3/4	10/30
7812	7/8 x 12	4-1/2	1-3/4	5/15
1080	1 x 8	5-1/2	2	10/30
1010	1 x 10	5-1/2	2	5/15
1012	1 x 12	5-1/2	2	5/15

Edge Distance & Spacing Requirements

Embedment (E) in Anchor Diameters	Spacing	Edge Distance
$E < 6d$ (shallow)	3.5E	1.75E
$6d \leq E \leq 8d$ (standard)	2.00E	1.00E
$8d < E$ (deep)	1.50E	0.75E

Recommended Edge Distance & Spacing

Anchor Diameter (in.)	Embedment Depth	Edge Distance Requirements	Spacing Requirements
1/4	1-1/8	1-31/32	3-15/16
	1-1/2	2-5/8	5-1/4
5/16	1-1/4	2-3/16	4-3/8
	1-3/4	3-1/16	6-1/8
3/8	1-1/2	2-5/8	5-1/4
	4	3	6
1/2	2-1/4	3-15/16	7-7/8
	5	3-3/4	7-1/2
5/8	3-1/2	6-1/8	12-1/4
	4-3/4	8-5/16	16-5/8
3/4	3	5-1/4	10-1/2
	7	5-1/4	10-1/2
7/8	4-1/2	7-7/8	15-3/4
	7	7	14
1	5-1/2	9-5/8	19-1/4
	7	7	14



Installation Instructions

1. Drill the hole perpendicular to the work surface with a solid carbide bit that meets ANSI B212.5 specifications. The drill bit diameter will be the same as the anchor diameter that you are installing. To assure full holding power, do not ream the hole or allow the drill to wobble.
2. Drill the hole one diameter deeper than the intended embedment of the anchor, but not closer than two diameters to the bottom (opposite) surface of the concrete.
3. Clean the hole using compressed air and a nylon brush. A clean hole is necessary for proper performance.
4. Insert anchor into hole until washer rests solidly against fixture.
5. Tighten 1-1/2 to 3 turns past hand tight position but to a maximum torque as listed in the table below.

NOTE: Always wear safety glasses. Follow drill manufacturer's instructions. Use only solid carbide-tipped drill bits meeting ANSI B212.15 diameter standards.

Torque Values

Anchor Dia. (in.)	Recommended Setting Torque (ft lb.)	Recommended Minimum Embedment (in.)
1/4	8	1
5/16	15	1-1/4
3/8	25	1-1/2
1/2	55	2
5/8	95	3
3/4	170	3
7/8	250	4-1/2
1	300	5-1/2

Maximum Tensile and Shear Capacity For Static Loads

Anchor & Hole Size	Limestone Aggregate			Unreinforced Stone Aggregate Concrete							Unreinforced Lightweight (Idealite)		
	Embed. (in.)	2000 psi		Embed. (in.)	3000 psi		5000 psi		7000 psi		Embed. (in.)	5000 psi	
		Tension (lb.)	Shear (lb.)		Tension (lb.)	Shear (lb.)	Tension (lb.)	Shear (lb.)	Tension (lb.)	Shear (lb.)		Tension (lb.)	Shear (lb.)
1/4	1-1/8	1132	1211	1-1/8	1320	1751	1760	2316	2464	2494	1-1/2	1861	1947
1/4	1-3/4	1256	1211	1-1/2	1856	1751	2473	2316	3462	2494	-	-	-
5/16	1-1/4	1308	1210	1-1/4	2057	1839	2742	2530	3939	3439	1-1/2	2493	3064
5/16	2	1181	1210	1-3/4	2389	1839	3185	2530	4459	3439	-	-	-
3/8	1-1/4	994	1223	1-1/2	2876	4286	3834	5213	5368	5658	1-3/4	3125	4289
3/8	4	1728	1223	4	3488	4286	4650	5213	6510	5658	-	-	-
1/2	1-3/4	1542	3009	2-1/4	3473	7138	5789	10748	8105	11550	2-1/4	4778	9833
1/2	6	2695	3009	5	4809	7138	8015	10748	11221	11550	-	-	-
5/8	-	-	-	3-1/2	7582	10719	12636	15583	17690	16700	2-1/2	6455	12500
5/8	-	-	-	4-3/4	9179	10719	15299	15583	21419	16700	-	-	-
3/4	-	-	-	3	11579	15537	19299	21000	27019	23103	3-1/2	17293	19050
3/4	-	-	-	7	15444	15537	25740	21000	36036	23103	-	-	-
7/8	-	-	-	4-1/2	15266	-	25444	25099	33622	28718	-	-	-
7/8	-	-	-	7	16992	-	28320	25099	39648	28718	-	-	-
1	-	-	-	5-1/2	16351	-	27252	33083	38153	35700	4-1/2	21616	31666
1	-	-	-	7	17837	-	29728	33083	41619	35700	-	-	-
Source	1			2							2		

Sources (available upon request):

1. University of Texas, Austin, TX (using ICBO-ES testing criteria); 1993.
2. AA Engineers & Associates, Inc., Denver, CO; 1981.

NOTES:

- Information provided only for the use of a qualified design engineer. Use of technical data by persons not qualified could cause serious damage, injury, or even death.
- Ultimate values shown. For static loads, use one-fourth of the maximum tensile and shear capacities for the recommended 4:1 safety factor.
- Tested to ASTM E488 Test Standard
- Sources (available upon request): U.S. Testing Co., Tulsa, OK



Wej-It Tie Wire WTW Anchor

- For bracing and hanging acoustical ceiling tile, hanging electrical lights or other lightweight applications

Order Information

Catalog Number	Anchor Dia. & Length (in.)	Min. Embedment (in.)	Eye Diameter	Quantity: Cards Per Box/Carton
WTW1421	1/4 x 2 1/4	1 1/4	9/32	100/1000

Edge Distance

Embedment (E) in Anchor Diameters	Edge Distance
E < 6d (shallow)	1.75E
6d ≤ E ≤ 8d (standard)	1.00E
8d < E (deep)	0.75E