

Boa[™] Coil Expansion Anchor



SPECIFIED FOR ANCHORAGE

The Boa[™] Coil is a high performance expansion anchor providing through fixture fastening and easy removal to keep the job moving. It's reusable with the coil replacement anchors making this anchor a low cost solution.

Ideal combination of value, performance and reusability make the Boa Coil the choice for Forming and tilt-wall contractors



Standard replacement coils for 1/2", 5/8", and 3/4" diameter bolts *Replacement coil available for easy re-use with Red Head Boa Coil Anchors only.*

INSTALLATION STEPS



NOTE: To achieve maximum loads the installation process needs to be carried out as follows:

- 1. Using the fixture as a template, drill the correct diameter and depth hole.
- 2. Remove debris with vacuum or hand pump.
- 3. Insert the assembled Boa Coil anchor. (The coil anchor tab points up the anchor.) Tap anchor down to depth set mark and stop.
- 4. Tighten until washer is firmly held to the fixture and stop. Number of turns to set anchor: 1/2" 3-4 turns, 5/8" and 3/4" 4-5 turns. Ensure washer is tight and snug fit.
- 5. The Boa Coil anchor is ready to take load. (The bolt can be removed leaving the coil in the hole.)

The Boa coil anchor can be <u>reused up to 3 times</u> in new holes.

PERFORMANCE TABLES

Boa Coil Anchors Ultimate Concrete/Steel Capacity in Concrete (1)

HOLE DIA.	EFFECTIVE FIXTURE TURNS ULTIMATE CONCRETE CAPACITY (2) (3)									ULTIMATE STEEL STRENGTH (4)								
. (mm) EMBEDMENT HOLE DIA.		TO SET	2,000 PSI (13.8 MPa)		4,000 PSI (27.6 MPa)			6,000 PSI (41.4 MPa)			LBS. (kN)							
DEPTH		In. (mm)	ANCHOR	TENSION (5) SHEAR		TENSI	TENSION (5) SHEAR		TENSION (5)		SHEAR		TENSION		SHEAR			
	In. (mm)			Lbs. (kN) Lbs		.bs. (kN)	Lbs. (kN)		Lbs. (kN)		Lbs. (kN)		Lbs. (kN)		Lbs. (kN)		Lbs. (kN)	
/2 (12.7)	2 (50.8)	9/16 (14.3) 9/16 (14.3)	3-4 3-4	4,039 (17.	e) 6,0	70 (27.0) 32 (53.7)	5,715	(25.4)	8,590 17,089	(38.2)	6,994 12,822	(31.1)	10,516	(46.8)	19,384	(86.2)	14,456	(64.3)
/8 (15.9)	2-3/8 (60.3) 3-7/8 (98.4)	11/16 (17.5)	4-5 4-5	5,291 (23. 10.855 (48.	5) 8,8 3) 19,9	00 (39.1) 09 (89.0)	7,483	(33.3) (68.3)	12,445	(55.4)	9,162	(40.8) (83.6)	15,242	(67.8)	30,152	(134.1)	21,937	(97.6)
8/4 (19.1)	3-1/4 (82.6) 4-1/2 (114.3)	13/16 (20.6) 13/16 (20.6)	4-5 4-5	8,479 (37. 13,555 (60.	7) 16,5 3) 27,2	57 (73.7) 39 (121.2)	11,991 19,171	(53.3) (85.3)	23,427 38,518	(104.2) (171.3)	14,682 23,478	(65.3) (104.4)	28,690 47,173	(127.6) (209.8)	43,360	(192.9)	32,031	(142.5)
7	DLE DIA. (mm) 2 (12.7) 8 (15.9) 4 (19.1)	OLE DIA. EFFECTIVE EMBEDMENT DEPTH 2 (12.7) 2 (50.8) 3 (76.2) 8 (15.9) 2-3/8 (60.3) 3-7/8 (98.4) 4 (19.1) 3-1/4 (82.6) 4-1/2 (114.3)	DLE DIA. EFFECTIVE EMBEDMENT DEPTH FIXTURE HOLE DIA. 2 (12.7) 2 (50.8) 9/16 (14.3) 3 (76.2) 9/16 (14.3) 9/16 (14.3) 8 (15.9) 2-3/8 (60.3) 11/16 (17.5) 3-7/8 (98.4) 11/16 (17.5) 4 (19.1) 3-1/4 (82.6) 13/16 (20.6) 4-1/2 (114.3) 13/16 (20.6)	DLE DIA, I. (mm) EFFECTIVE EMBEDMENT In. (mm) FAITURE HOLE DIA, In. (mm) TO SET ANCHOR 2 (12.7) 2 (50.8) 3 (76.2) 9/16 (14.3) 9/16 (14.3) 3-4 3-4 8 (15.9) 2-3/8 (60.3) 3-7/8 (98.4) 11/16 (17.5) 4-5 4-5 4 (19.1) 3-1/4 (82.6) 13/16 (20.6) 4-5 4-1/2 (114.3)	$ \begin{array}{c} \textbf{DLE DIA,} \\ \textbf{L} (\textbf{mm}) \\$	DLE DIA. I. (mm) EFFECTIVE EMBEDMENT In. (mm) HOLE DIA. In. (mm) TO SET ANCHOR Z,000 PSI (13.8) 2 (12.7) 2 (50.8) 3 (76.2) 9/16 (14.3) 9/16 (14.3) 3-4 3-4 4,039 (17.9) 7,403 (32.9) 6,00 12,003 8 (15.9) 2-3/8 (60.3) 3-7/8 (98.4) 11/16 (17.5) 4-5 4-5 5,291 (23.5) 10,855 (48.3) 8,80 19,99 4 (19.1) 3-1/4 (82.6) 13/16 (20.6) 4-5 4-1/2 (114.3) 8,479 (37.7) (16,50 3,555 (60.3) 27,22	$ \begin{array}{c} \text{DLE DIA,} \\ \textbf{L. (mm)} \\ \textbf{EMBEDMENT} \\ \textbf{In. (mm)} \\ \textbf{2} (12.7) \\ 2 (12.7) \\ 3 (76.2) \\ -3.7/8 \\ (98.4) \\ 11/16 \\ (17.5) \\ 1.5 \\ (17.5) \\ -3.7/8 \\ (19.4) \\ -4.1/2 \\ (114.3) \\ 13/16 \\ (20.6) \\ -4.5 \\ \end{array} \begin{array}{c} \textbf{TO SET} \\ \textbf{TO SET} \\ \textbf{TENSION (5)} \\ \textbf{TENSION (5)} \\ \textbf{Lbs. (kN)} \\ $	DLE DIA. L. (mm) EFFECTIVE BMBEDMENT DEPTH In. (mm) HOLE DIA. In. 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(1) Use lower value of either concrete or steel (2) Concrete capacity based on Concrete Capacity Design method and verified by test data (3) Influence factors must be applied to concrete strength values (4) Steel strength based on .57 Fu Ag for shear and 0.75 Fu Ag for tension (5) Test results when reused four times; maximum 20% reduction in tensile capacity; no reduction in shear

Boa Coil Anchors Allowable Concrete/Steel Capacity in Concrete (1)

ANCHOR	HOLE DIA.	EFFECTIVE	FIXTURE	TURNS		ALLOWABLE STEEL STRENGTH (4)								
DIAMETER	In. (mm)	EMBEDMENT	HOLE DIA.	TO SET	2,000 PSI	(13.8 MPa)	4,000 PS	l (27.6 MPa)	6,000 PSI	(41.4 MPa)	LBS. (kN)			
In. (mm)		DEPTH In. (r		ANCHOR	TENSION (5)	SHEAR	TENSION (5)	SHEAR	TENSION (5)	SHEAR	TENSION	SHEAR		
		In. (mm)			Lbs. (kN)	Lbs. (kN)	Lbs. (kN)	Lbs. (kN)	Lbs. (kN)	Lbs. (kN)	Lbs. (kN)	Lbs. (kN)		
1/2 (12.7)	1/2 (12.7)	2 (50.8)	9/16 (14.3)	3-4	1,011 (4.5)	1,517 (6.7)	1,430 (6.4)	2,147 (9.5)	1,751 (7.8)	2,629 (11.7)	8,529 (37.9)	5,579 (24.8)		
		3 (76.2)	9/16 (14.3)	3-4	1,852 (8.2)	3,020 (13.4)	2,619 (11.6)	4,272 (19.0)	3,208 (14.3)	5,234 (23.3)				
5/8 (15.9)	5/8 (15.9)	2-3/8 (60.3)	11/16 (17.5)	4-5	1,324 (5.9)	2,200 (9.8)	1,872 (8.3)	3,111 (13.8)	2,293 (10.2)	3,810 (16.9)	13,266 (59.0)	8,466 (37.7)		
		3-7/8 (98.4)	11/16 (17.5)	4-5	2,715 (12.1)	5,000 (22.2)	3,840 (17.1)	7,071 (31.5)	4,703 (20.9)	8,660 (38.5)				
3/4 (19.1)	3/4 (19.1)	3-1/4 (82.6)	13/16 (20.6)	4-5	2,121 (9.4)	4,141 (18.4)	2,999 (13.3)	5,556 (24.7)	3,673 (16.3)	7,172 (31.9)	19,078 (84.9)	12,362 (55.0)		
		4-1/2 (114.3)	13/16 (20.6)	4-5	3,390 (15.1)	6,810 (30.3)	4,794 (21.3)	9,630 (42.8)	5,872 (26.2)	11,793 (52.4)				

(1) Use lower value of either concrete or steel (2) Safety factor 4 (3) Influence factors must be applied to concrete strength values (4) Steel strength based on .22 Fu Ag for shear and 0.33 Fu Ag for tension (5) Test results when reused four times; maximum 20% reduction in tensile capacity; no reduction in shear

#7997 **Red Head**® 1-800-899-7890