

Boa Coil Expansion Anchor - Technical Data

PERFORMANCE TABLES

Boa Coil Anchors *Ultimate concrete/steel capacity in concrete¹*

ANCHOR DIAMETER In. (mm)	HOLE DIA. In. (mm)	EFFECTIVE EMBEDMENT DEPTH In. (mm)	FIXTURE HOLE DIA. In. (mm)	TURNS TO SET ANCHOR	ULTIMATE CONCRETE CAPACITY (2) (3)						ULTIMATE STEEL STRENGTH (4)	
					2,000 PSI (13.8 MPa)		4,000 PSI (27.6 MPa)		6,000 PSI (41.4 MPa)		LBS. (kN)	
					TENSION (5) Lbs. (kN)	SHEAR Lbs. (kN)	TENSION (5) Lbs. (kN)	SHEAR Lbs. (kN)	TENSION (5) Lbs. (kN)	SHEAR Lbs. (kN)	TENSION Lbs. (kN)	SHEAR Lbs. (kN)
1/2 (12.7)	1/2 (12.7)	2 (50.8)	9/16 (14.3)	3-4	4,039 (17.9)	6,070 (27.0)	5,715 (25.4)	8,590 (38.2)	6,994 (31.1)	10,516 (46.8)	19,384 (86.2)	14,456 (64.3)
		3 (76.2)	9/16 (14.3)	3-4	7,403 (32.9)	12,082 (53.7)	10,471 (46.6)	17,089 (76.0)	12,822 (57.0)	20,937 (93.1)		
5/8 (15.9)	5/8 (15.9)	2-3/8 (60.3)	11/16 (17.5)	4-5	5,291 (23.5)	8,800 (39.1)	7,483 (33.3)	12,445 (55.4)	9,162 (40.8)	15,242 (67.8)	30,152 (134.1)	21,937 (97.6)
		3-7/8 (98.4)	11/16 (17.5)	4-5	10,855 (48.3)	19,999 (89.0)	15,355 (68.3)	28,285 (125.8)	18,802 (83.6)	34,636 (154.0)		
3/4 (19.1)	3/4 (19.1)	3-1/4 (82.6)	13/16 (20.6)	4-5	8,479 (37.7)	16,567 (73.7)	11,991 (53.3)	23,427 (104.2)	14,682 (65.3)	28,690 (127.6)	43,360 (192.9)	32,031 (142.5)
		4-1/2 (114.3)	13/16 (20.6)	4-5	13,555 (60.3)	27,239 (121.2)	19,171 (85.3)	38,518 (171.3)	23,478 (104.4)	47,173 (209.8)		

(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 concrete¹*

ANCHOR DIAMETER In. (mm)	HOLE DIA. In. (mm)	EFFECTIVE EMBEDMENT DEPTH In. (mm)	FIXTURE HOLE DIA. In. (mm)	TURNS TO SET ANCHOR	RECOMMENDED WORKING LOADS IN CONCRETE (2) (3)						ALLOWABLE STEEL STRENGTH (4)	
					2,000 PSI (13.8 MPa)		4,000 PSI (27.6 MPa)		6,000 PSI (41.4 MPa)		LBS. (kN)	
					TENSION (5) Lbs. (kN)	SHEAR Lbs. (kN)	TENSION (5) Lbs. (kN)	SHEAR Lbs. (kN)	TENSION (5) Lbs. (kN)	SHEAR Lbs. (kN)	TENSION Lbs. (kN)	SHEAR 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