

# Boa™ Coil

## EXPANSION ANCHOR

### Heavy-Duty, Reusable Fastening



- Easy installation
- Removable
- Reusable
- Grade 5 bolt
- High shear strength

#### APPLICATIONS:

- Concrete formwork
- Load bearing angles, beams and columns
- Machinery holddown
- Jersey barrier
- Glare screens
- Light rail/commuter work



Standard replacement coils for  
1/2", 5/8" and 3/4" diameter  
bolts, to be used with Red  
Head Boa Coil anchors only



*The ideal combination of value,  
performance and reusability make  
the Boa Coil the choice for contractors*

# Selection Chart

Part No.	Anchor Dia In. (mm)	Socket Size	Drill Bit Diameter (In. (mm))	Effective Length In. (mm)	Fixture Thickness at Minimum Embedment to be Fastened In. (mm)	Qty/Wt Per Box Lbs.	Qty/Wt Per Master Carton Lbs.
<b>RHCA-1230</b>	1/2 (12.7)	3/4	1/2 (12.7)	3 (76.2)	3/8 (9.5)	25 / 4.5	150 / 27.2
<b>RHCA-1240</b>	1/2 (12.7)	3/4	1/2 (12.7)	4 (101.6)	1-3/8 (35.0)	25 / 5.9	150 / 35.6
<b>RHCA-1254</b>	1/2 (12.7)	3/4	1/2 (12.7)	5-1/2 (139.7)	2-7/8 (73.0)	25 / 7.8	150 / 46.9
<b>RHCA-5834</b>	5/8 (15.9)	15/16	5/8 (15.9)	3-1/2 (88.9)	3/8 (9.5)	20 / 8.8	120 / 52.5
<b>RHCA-5850</b>	5/8 (15.9)	15/16	5/8 (15.9)	5 (127.0)	1-7/8 (47.6)	15 / 8.5	90 / 51.0
<b>RHCA-3444</b>	3/4 (19.1)	1-1/8	3/4 (19.1)	4-1/2 (114.3)	1/4 (6.4)	10 / 6.4	60 / 38.3
<b>RHCA-3460</b>	3/4 (19.1)	1-1/8	3/4 (19.1)	6 (152.4)	1-3/4 (44.5)	10 / 8.2	60 / 49.1



**Replacement coil available for easy re-use with Red Head Boa Coil Anchors only.**

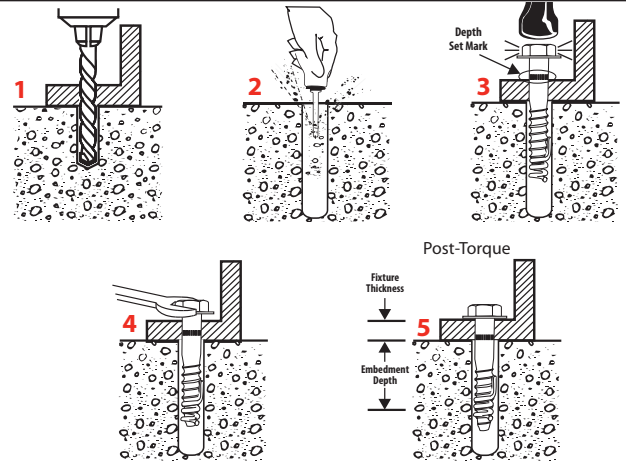
Coil Replacement Part No.	Qty/Wt Per Box	Qty/Wt Per Master Carton
RHC-12 (1/2")	100 / 2.8	600 / 16.9
RHC-58 (5/8")	100 / 2.2	600 / 13.1
RHC-34 (3/4")	100 / 1.3	600 / 7.5

## 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 reused up to 3 times in new holes.**



## Installation and Performance Data

**Boa coil anchor ultimate concrete/steel capacity in concrete (1)**

Anchor Size 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) Lbs. (kN)	
					2,000 PSI (13.8 MPa)		4,000 PSI (27.6 MPa)		6,000 PSI (41.4 MPa)		Tension Lbs. (kN)	Shear Lbs. (kN)
					Tension (5) Lbs. (kN)	Shear Lbs. (kN)	Tension (5) Lbs. (kN)	Shear Lbs. (kN)	Tension (5) 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)	(86.2)	(64.3)
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)	(134.1)	(97.6)
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)	(192.9)	(142.5)

(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 anchor allowable concrete/steel capacity in concrete (1)**

Anchor Dia. 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) Lbs. (kN)	
					2,000 PSI (13.8 MPa)		4,000 PSI (27.6 MPa)		6,000 PSI (41.4 MPa)		Tension Lbs. (kN)	Shear Lbs. (kN)
					Tension (5) Lbs. (kN)	Shear Lbs. (kN)	Tension (5) Lbs. (kN)	Shear Lbs. (kN)	Tension (5) 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)	(37.9)	(24.8)
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)	(59.0)	(37.7)
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)	(84.9)	(55.0)

(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

Because applications vary, ITW Red Head cannot guarantee the performance of this product. Each customer assumes all responsibility and risk for the use of this product. The safe handling and the suitability of this product for use is the sole responsibility of the customer. Specific job site conditions should be considered when selecting the proper product. Should you have any questions, please call the Technical Assistance Department at 800-899-7890.

**ITW Red Head®**  
**800-899-7890**  
**www.itwredhead.com**  
 2171 Executive Drive, Suite 100  
 Addison, IL 60101