Evaluation Service®

PER-17114

Pei **Evaluation Service** is an accredited **ISO Standard 17065** Product Certifier, accredited by the IAS. This **Product Evaluation Report** represents a product that *Pei* **ES** has Evaluated and this product has a Follow-up Service / Inspection Agreement. This **Product Evaluation Report** in no way implies warranty for this product or relieves **SPRINGBOLT CONCRETE ANCHOR, LLC** of their liabilities for this product. This **PER** is an official document if it is within one year of the initial or re-approval date.

Initial Approval January, 2018

Re-Approved

See all Pei **ES** *Listings at: www.p-e-i.com*

Report Owner

SPRINGBOLT CONCRETE ANCHOR, LLC
4444 Sharpe Road
Anacortes, WA 98221

Approved Manufacturing Locations

No Manufacturer is approved at this time pending PEI's quality control inspection of the manufacturing facility

Product

SPRINGBOLT CONCRETE ANCHOR **Model #P6R**

Evaluation Report Information

Contact: Lynn Toedte - (360) 941-0269

General Details

The **SPRINGBOLT** anchor is developed by **SPRINGBOLT CONCRETE ANCHOR, LLC** and tested by *Progressive Engineering Inc. (Pei)* **SPRINGBOLT CONCRETE ANCHOR, LLC** has an Evaluation Agreement with *Pei* **Evaluation Service.**

Product Description

The **SPRINGBOLT** anchor is a mechanical anchor device, designed to be cast in concrete for wood-formed construction projects. The device is attached to wood formwork with fasteners prior to pouring concrete. Following the removal of the formwork, the plastic cap protecting the bolt shall be removed and the threaded end of the bolt is rotated by a screwdriver. This rotation allows the bolt threads to eject from the housing, thereby revealing an anchor for attachments. Depending on the type of attachment called for, the device can be used in a horizontal or a vertical position (see Figure 1).

SPRINGBOLT Model #P6R anchor consist of the following components:

1. 5/8"-11 x 4-1/4" lg. Grade 5 Square Head Bolt, Hot Dipped Galvanized
2. Retention Washer - .116" tk. x 1-1/2" outside dia. x 13/16" inside dia. Grade 8 yellow zinc coated
3. Mounting base - 3"x3" Material: Glass filled Nylon
4. Housing body - 6" long Material: Glass filled Nylon
5. Spring 7/16" OD x 3" Long with a 9.6 lbs. Spring Load

The bolt and spring are placed in the housing body. The housing body is then pressed onto the mounting base until it snaps into position. The washer is then installed on the outside of the housing body.

General Product Use

1. The **SPRINGBOLT CONCRETE ANCHOR** shall be installed in accordance with the Horizontal or Vertical application Installation Instructions supplied by **SPRINGBOLT CONCRETE ANCHOR, LLC** and the conditions of this **PER**. A copy of the Installation Instructions shall be made easily available to the installer.
2. All concrete forming and associated connections needed to support the **SPRINGBOLT CONCRETE ANCHOR** are outside the scope of this **PER**.
3. When not in use, the bolt can be reinserted into the housing.
4. The **SPRINGBOLT CONCRETE ANCHOR** has not been tested for use in highly corrosive environments. Anchor maybe used in exterior applications. If pressure treated wood is used, a hot dipped galvanized fastener must be used.
5. The **SPRINGBOLT CONCRETE ANCHOR** is not meant to be installed in a cut out and path situation. The concrete must be sufficient to carry the loads as shown in Table 1.

6. The **SPRINGBOLT CONCRETE ANCHOR** is not rated for fatigue, shock loading, or use in Seismic Design Category C, D, E, or F. Anchors may be used in Seismic Design Category A or B only.

Code Compliance

2012 International Residential Code	2012 International Building Code
Section R104.11	Section 104.11 Section 1909 - Compliance per ACI 318-11 Appendix D Section 1705.1.1 & 1705.3 - Special Inspections Required

ACI 318-11 - Building Code Requirements for Structural Concrete and Commentary.
ASTM E488 / E488M - 10 - Standard Test Methods for Strength of Anchors in Concrete Elements.

Table 1. SPRINGBOLT CONCRETE ANCHOR Tested Value in "Un-Cracked" Concrete

Concrete Anchor	Anchor Bolt Diameter	Concrete Strength	Large Barrel Housing Outside Diameter	Effective Embedment Depth, h_{ef}	Minimum Fastener Spacing	Minimum Anchor Edge Distance (in)	Ultimate Tension Strength of Single Anchor
#P6R	5/8"	5000psi	1.55"	2.42"	7.26"	3.63"	12,807 Lbs.

Notes:

1. Concrete must be normal weight concrete as required for structural concrete in accordance with ACI 318-11 Section 5.1.1.
2. The Test value was achieved by using an **"Un-Cracked"** test specimen.
3. The Ultimate Load value listed is an average of (5) test samples. A safety factor must be determined and applied to develope a Design Load.
4. Recommend using ACI 318 - Appendix D for design Capacities.

Table 2. SPRINGBOLT CONCRETE ANCHOR Calculated Design considering "Un-Cracked" Concrete

Concrete Anchor	Anchor Bolt Diameter	Concrete Strength	Large Barrel Housing Outside Diameter	Effective Embedment Depth, h_{ef}	Minimum Fastener Spacing	Minimum Anchor Edge Distance (in)	Nominal Tension Strength of Single Anchor in Tension, N_n (lb.)	Nominal Shear Strength of Single Anchor in Shear, V_n (lb.)
#P6R	5/8"	3000psi	1.55"	2.42"	7.26"	3.63"	6,188	3,850
#P6R	5/8"	3500psi	1.55"	2.42"	7.26"	3.63"	6,681	4,155
#P6R	5/8"	5000psi	1.55"	2.42"	7.26"	3.63"	7,986	4,967

Notes:

1. Concrete must be normal weight concrete as required for structural concrete in accordance with ACI 318-11 Section 5.1.1.
2. Nominal tension and shear strength values based on calculations per ACI 318-11 Appendix D.
3. The strength reduction factors as governed by steel strength shall be taken as 0.70 for tension and shear loads, load combination of 9.2.
4. **SPRINGBOLT CONCRETE ANCHOR** installation requires periodic special inspections in accordance with the 2012 IBC sections 1705.1.1 and 1705.3. Installation shall be verified in accordance with the manufacturer's installation instructions and the applicable code provisions.

Table 3. SPRINGBOLT CONCRETE ANCHOR Calculated Design considering "Cracked" Concrete

Concrete Anchor	Anchor Bolt Diameter	Concrete Strength	Large Barrel Housing Outside Diameter	Effective Embedment Depth, h_{ef}	Minimum Fastener Spacing	Minimum Anchor Edge Distance (in)	Nominal Tension Strength of Single Anchor in Tension, N_n (lb.)	Nominal Shear Strength of Single Anchor in Shear, V_n (lb.)
#P6R	5/8"	3000psi	1.55"	2.42"	7.26"	3.63"	4,950	2,750
#P6R	5/8"	3500psi	1.55"	2.42"	7.26"	3.63"	5,345	2,968
#P6R	5/8"	5000psi	1.55"	2.42"	7.26"	3.63"	6,389	3,548

Notes:

1. Concrete must be normal weight concrete as required for structural concrete in accordance with ACI 318-11 Section 5.1.1.
2. Nominal tension and shear strength values based on calculations per ACI 318-11 Appendix D.
3. The strength reduction factors as governed by steel strength shall be taken as 0.70 for tension and shear loads, load combination of 9.2.
4. **SPRINGBOLT CONCRETE ANCHOR** installation requires periodic special inspections in accordance with the 2012 IBC sections 1705.1.1 and 1705.3. Installation shall be verified in accordance with the manufacturer's installation instructions and the applicable code provisions.

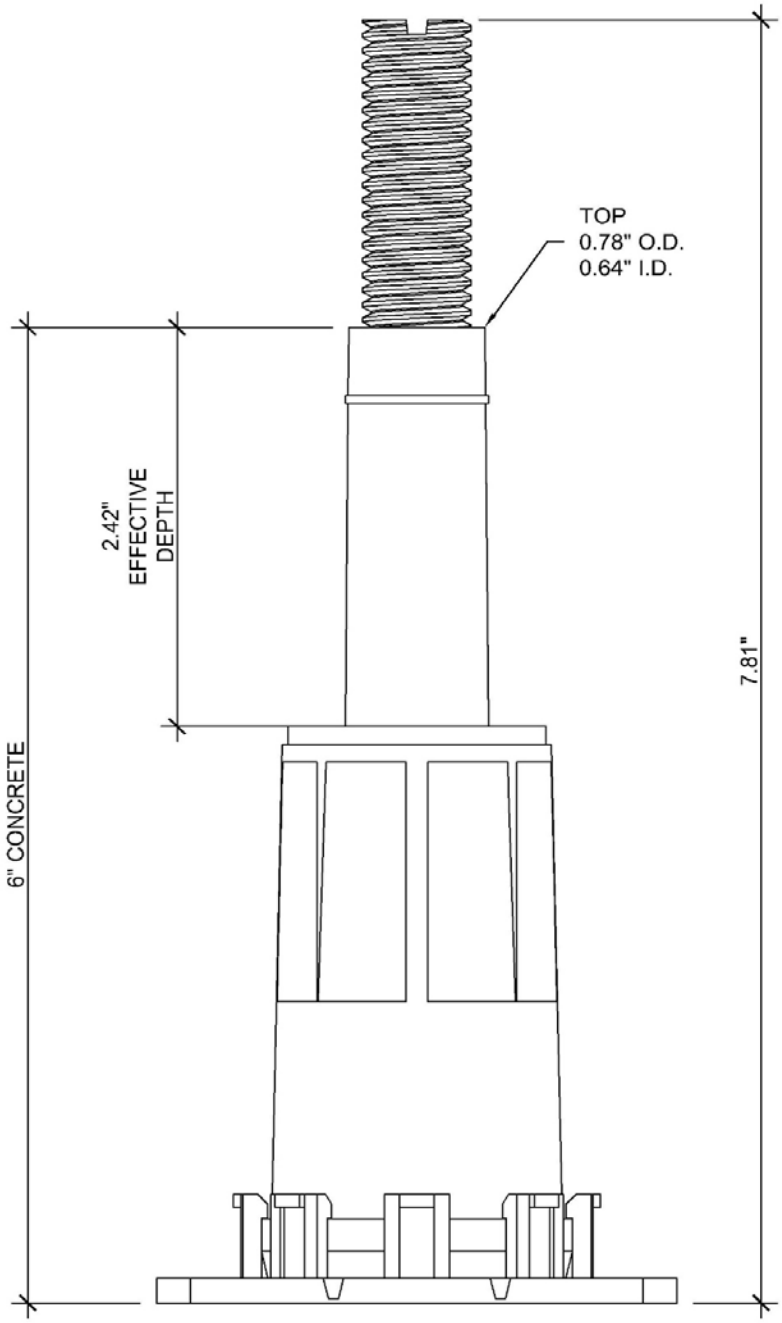

Figure 1.

Product Labeling

Each shipment of the **SPRINGBOLT CONCRETE ANCHOR**, that is covered by this **PER**, must have a label attached with at least the following information:

1. Manufacturer Name and Address
2. Date of Manufacture
3. This **PER** Number and *Pei* **Evaluation Service** Logo
4. Product Name and/or Lot Number

Acceptable Evaluation Marks

Product Documentation

An Evaluation Agreement between *Pei* **Evaluation Service** and **SPRINGBOLT CONCRETE ANCHOR, LLC**
A Follow-up Service Agreement between *Progressive Engineering, Inc.* and **SPRINGBOLT CONCRETE ANCHOR, LLC**
SPRINGBOLT CONCRETE ANCHOR Installation Instructions for Horizontal and Vertical Placement
A Data Submittal Sheet - Description of **SPRINGBOLT ANCHOR**
A Data Submittal Sheet - Features of The **SPRINGBOLT CONCRETE ANCHOR**
A Data Submittal Sheet - **SPRINGBOLT CONCRETE ANCHOR**: Material Specifications
A *Pei* Test Report No. 2017-6087 - ASTM E488 Fastener Tension and Shear Testing using Model# P6R **SPRINGBOLT CONCRETE ANCHORS** - Dated: 8/16/2017
Calculations for 3,000, 3,500 and 5,000psi Concrete, Dated 12/5/2017.