

## Anchors, Toggle Bolt, Spring



### 1. Scope

This standard covers the requirements for spring toggle-bolt anchors. Toggle bolt anchors are also known as hollow-wall anchors or butterfly anchors.

This standard applies to the following Seattle City Light (SCL) stock numbers:

Stock No.	Size (Diameter x Length) (in)
780131	3/16 x 3
780136	1/4 x 3
780146	3/8 x 3
780148	3/8 x 5

### 2. Application

Spring toggle-bolt anchors are light- to medium-duty anchors intended for use in hollow block, wallboard, plaster, plywood, and other hollow-base materials. Once fully opened, toggle bolt anchors significantly expand the surface area, making contact with the back of the hollow wall. This spreads out the load of the fastened object, thus increasing the weight that can be secured. The maximum weight a toggle-bolt anchor can support depends on the size of the bolt and the thickness of the substrate.

To install, drill a hole of the appropriate diameter, as shown in Table 2, and insert the anchor into the hole until the wings open.

**Table 2. Drill Hole Size**

Bolt Diameter (in)	Hole Diameter (in), Minimum
3/16	1/2
1/4	11/16
3/8	7/8

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### 3. Industry Standards

Spring toggle-bolt anchors shall meet the applicable requirements of the following industry standards:

**ASTM A153/A153M**; Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware

**ASTM B633/A668M**; Standard Specification for Steel Forgings, Carbon and Alloy for General Industrial Use

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### 4. Requirements

Spring toggle bolt anchors shall be made of steel and be zinc plated.

The anchors shall have a round slotted head.

The anchors shall have the minimum strengths used in 1/2-inch dry wall as shown in Table 4.

**Table 4. Anchor Requirements**

<b>Bolt Diameter (in)</b>	<b>Anchor Length (in)</b>	<b>Tension (lb)</b>	<b>Shear (lb)</b>
3/16	3	45	50
1/4	3	60	60
3/8	3 or 5	65	75

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### 5. Packaging

Standard package quantity shall be 25 or 50 per box.

Each standard package shall be legibly marked with the following information:

- Manufacturer identification
- Product description
- Seattle City Light stock number
- Quantity

Each shipping container shall be legibly marked with the following information:

- Manufacturer identification
- Country of origin
- Product description
- Seattle City Light purchase order number
- Seattle City Light stock number

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### 6. Issuance

Stock Unit: EA

### 7. Approved Manufacturers

<b>Stock No.</b>	<b>MKT Fastening</b>	<b>Dewalt (Powers)</b>	<b>L.H. Dottie</b>
780131	8315000	04131-PWR	TBC363
780136	8335000	04231-PWR	TBC43
780146	8370000	04431-PWR	TB383

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### 8. Sources

[anchors.dewalt.com](http://anchors.dewalt.com)

**lhdottie.com**

**Lu, Curtis**; SCL Standards Engineer and originator of 7801.40

**www.mktfastening.com**