

## Crash Bollards: FSB & DSB - Installation Instructions



### Notice:

Installers and/or Store Personnel must provide this document to the manager or person responsible for the maintenance and use of the product. Read the Installation Instructions completely before installation of the product. If there are any questions, call Alvarado at (909) 591-8431 or toll free at (800) 423-4143, Monday through Friday, 6:00 AM to 4:30 PM PST. The following steps assume that no modifications have been made to the product and that it's ready for installation on level concrete.

### Materials Enclosed:

#### FSB 3.0"

1. FSB Bollard  
Base Cover
2. *SB-14*  
Anchor Package

#### DSB 3.0"

1. DSB Bollard
2. *SB-14*  
Anchor Package

#### DSB 4.5"

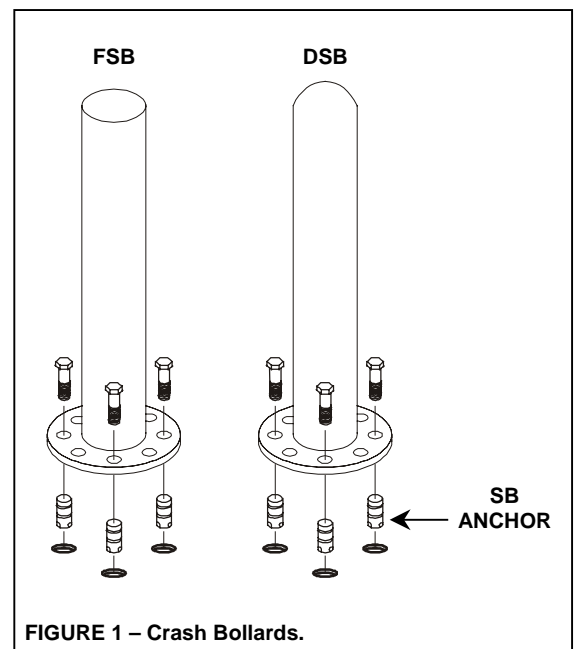
1. DSB  
Base Cover
2. *SB-14*  
Anchor Package

### Tools Required:

- Hammer Drill & Shop VAC
- 5/8" Concrete Drill Bits
- Ratchet w/ a 9/16" Socket
- Torque Wrench
- Tape Measure & Marker
- Rubber Mallet

### Follow the Instructions to Install a FSB & DSB Crash Bollards:

1. Snap a chalk line on the floor in the desired location of the Bollard to determine the proper centerline of the unit. A tile line may be substituted for the chalk line. Mark the center of each unit location along the centerline.
2. Place a Bollard on each marked position so that it's center is aligned with the mark. Mark the locations of the (4) outer anchor holes with equal spacing. *For additional security, Bollards may be installed using (8) anchors. An additional Anchoring Package is required.*
3. Using the impact drill and a 5/8" drill bit, drill a minimum 3" deep hole at the center of each of the four marked outer anchor locations. Vacuum ALL dust and debris from the holes. **If this is not done correctly, the anchors will not seat properly.**
4. Place a SB Anchor, thread side down, in each hole. Make sure the top of the anchor is flush with the floor.
5. Reposition the Bollard and align the holes on the flange with the holes on the floor. Insert a 3/8" Bolt and Washer through the flange into each of the SB Anchors. Verify that the Bollard is straight and level, tighten the 3/8" Bolts to 20-ft-lbs. torque.
6. If an optional Base Cover is provided with the unit, slide the Base Cover over the Bollard and secure it with a rubber mallet. To prevent dents, lightly tap the Base Cover.



**Maintenance:**

Follow the instructions below for the corresponding finish:

**Chrome:**

Use a general all-purpose cleaner with a soft cloth.

**Stainless Steel:**

Use a Stainless Steel polish or cleaner. If a heavy scratch or mark is apparent, use a metal blend or finish pad for Satin Finishes.

**Powder Coat:**

Use a soft damp cloth. Any deep scratches or chips should be touched up to prevent rust.

*(If rust is untreated, rust will spread under the surface of the material.)*

Replace any sharp, bent, or broken pieces IMMEDIATELY.

Tighten any loose pieces IMMEDIATELY.

**Warranty:**

Alvarado Manufacturing Company warrants the equipment being sold against defects in material and workmanship, for the period of one (1) year from the date of purchase, providing recommended installation and maintenance procedures are followed. This warranty is void if damage was due to improper installation, maintenance, or use. The manufacturer will not be responsible for any shipping or labor charges incurred in the removal or replacement of defective parts.