

# Single Expansion Shields

## Description

Single Expansion Shields are a corrosion resistant anchor that is designed to be used with a machine bolt in concrete, brick, block, and stone. The anchor comes pre-assembled and consists of a zamac alloy anchor body and an expansion cone. The expansion cone is drawn into the anchor body as the machine bolt is tightened into the anchor. The anchor will retain its holding power even if the mating bolt is removed and replaced.



## Key Features & Benefits

- ▶ Internally threaded anchor allows easy bolt removability and service work
- ▶ Holding power unaffected if bolt is removed and replaced
- ▶ Fully assembled
- ▶ Entire fastener is corrosion-resistant
- ▶ Accepts machine screws
- ▶ Good for static or vibratory loads

## Specifications, Listings and Approvals

### Anchor Thread Diameters:

1/4" - 5/8"

### Anchor Shield and Cone Material:

Zamac Alloy

**Federal Specifications:** GSA FFS-325, Group II, Type 2, Class 2, Style 1

## Applications

- ▶ Removable Applications
- ▶ Outdoor Applications
- ▶ Soft and Hard Work Surfaces
- ▶ Door Frames

## Installation Information

### Instructions

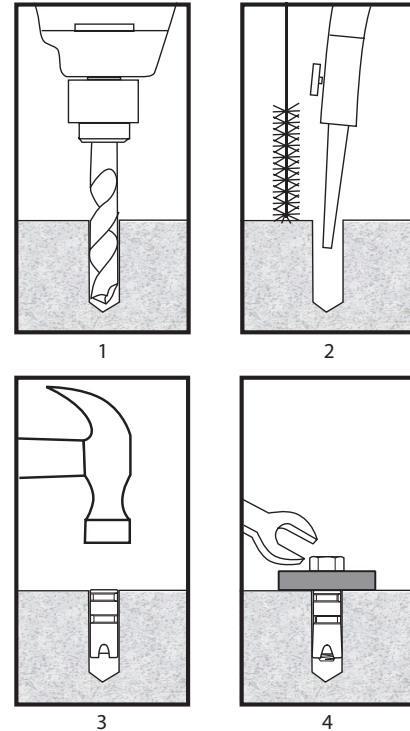
1. Drill the hole perpendicular to the work surface. To assure full holding power, do not ream the hole or allow the drill to wobble.

Drill the hole at least one anchor diameters deeper than the intended embedment, but not closer than two diameters to the bottom (opposite) surface of the concrete.

2. Clean the hole using compressed air and a nylon brush.
3. Install shield flush with surface of hole threaded side down.
4. Position fixture and insert machine screw through fixture into shield and tighten.

**Note:** To determine length of bolt: thickness of fixture plus length of shield = length of bolt

**Always wear safety glasses.** Follow the drill manufacturer's safety instructions. Use only solid carbide-tipped drill bits meeting ANSI B212.15 diameter standards.



## Installation Data

Catalog No.	Anchor Thread Dia. (in.)	Drill Bit Dia. (in.)	Thread Size (UNC)	Anchor Length (in.)	Thread Length In Cone (in.)	Installation Torque Approx. (ft.-lbs.)
SES14	1/4	1/2	1/4-20	1-5/16	5/16	5
SES56	5/16	5/8	5/16-18	1-1/2	5/16	7
SES38	3/8	5/8	3/8-16	1-1/2	5/16	10
SES12	1/2	7/8	1/2-13	2-1/16	7/16	20
SES58	5/8	1	5/8-11	2-5/8	5/8	30

## Performance Data

### Ultimate and Allowable Loads (lbs.) - Normal-Weight Concrete

Anchor Thread Dia. (in.)	Min. Embed. Depth (in.)	Allowable						Ultimate					
		2,000 psi		4,000 psi		6,000 psi		2,000 psi		4,000 psi		6,000 psi	
		Tension	Shear	Tension	Shear	Tension	Shear	Tension	Shear	Tension	Shear	Tension	Shear
1/4	1-3/8	68	150	125	158	158	175	270	600	500	630	630	700
5/16	1-5/8	223	395	328	468	380	515	890	1580	1310	1870	1520	2060
3/8	1-5/8	293	785	520	835	598	1165	1170	3140	2080	3340	2390	4660
1/2	2-1/2	388	905	633	1050	668	1668	1550	3620	2530	4200	2670	6670
5/8	2-3/4	570	1630	943	1748	1038	1985	2280	6520	3770	6990	4150	7940

\*Allowable load capacities are calculated using an applied safety factor of 4:1

Order Information



Single Expansion Shields: Zamac Alloy					
Catalog No.	Drill Bit Dia. (in.)	Thread Size (UNC)	Anchor Length (in.)	Box Quantity	Carton Quantity
SES14	1/2	1/4 - 20	1-5/16	100	1000
SES56	5/8	5/16 - 18	1-1/2	50	500
SES38	5/8	3/8 - 16	1-1/2	50	500
SES12	7/8	1/2 - 13	2	25	200
SES58	1	5/8 - 11	2-5/8	25	200

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