

SAE-Y EYEBOLT CONCRETE SCREW ANCHORS

YELLOW ZINC

CERTIFICATION

TECHNICAL DATA



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Eye Bolt Concrete Screw Anchors are a totally removable rotation setting, thread forming anchor, ideal for either temporary or permanent anchoring.

Part of the Allfasteners hex Concrete Screw-Anchor range the Eye Bolt version can be installed into substrates such as concrete, brick, hollow brick or block. The Eye Bolt Concrete Screw-Anchor is particularly well suited to close-to-edge or close-to-anchor fixing as it does not expand and burst the surrounding substrate.

Use with 1/2" SAE-D Eye Bolt Socket Driver.

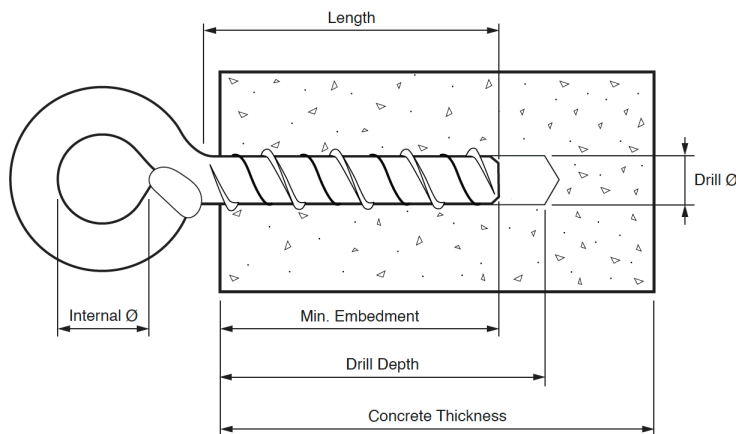


1/2" SAE-D Eye Bolt Socket Driver.

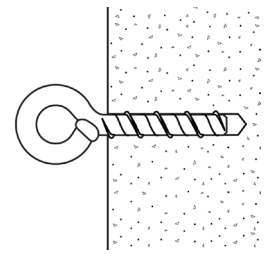
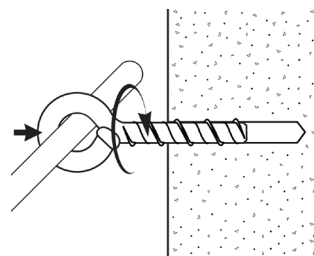
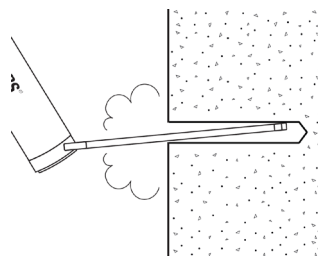
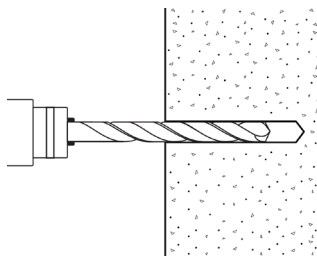
PRODUCT SPECIFICATIONS

Eye Bolt Concrete Screw Anchors are manufactured from a heat treated carbon steel that is zinc plated to a commercial standard coating.

Anchor Body	10B21 Boron Steel
Plating Zinc Clear	5 microns (min.) AS1789-FE/ZN



INSTALLATION INSTRUCTIONS



- Using a 1/2" diameter masonry bit, drill a hole to the recommended depth.
- Clean the hole thoroughly removing debris with a hand pump, compressed air, or vacuum.
- Place the anchor in the hole and commence pressing turning, applying forward pressure to start the self-tapping action. Additional forward pressure may be applied for dense material.
- Use a rod to continue tightening the anchor until the correct embedment is reached.



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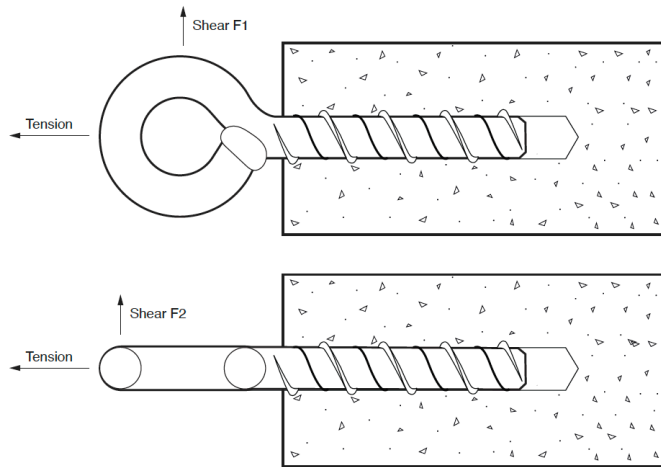


TABLE 1: SAE-Y EYEBOLT ULTIMATE LIMIT STATE DESIGN CAPACITIES IN 5,000 PSI CONCRETE¹

PART #	SIZE	INTERNAL EYE DIAMETER	DRILL HOLE DIAMETER X DEPTH $d_o \times h_1$	MIN. CONCRETE THICKNESS	MIN. EDGE DISTANCE	DESIGN CAPACITY IN 5,000 PSI CONCRETE			ANCHOR FAILURE FROM SHEAR LOAD WITH A CAPACITY REDUCTION FACTOR OF 0.6 ²	
						TENSION	SHEAR F1	SHEAR F2	SHEAR F1 (FAIL)	SHEAR F2 (FAIL)
1SAEY123	1/2" x 3"	27/32"	1/2" x 3-1/2"	5-1/2"	5-1/8"	3,102 lbf	854 lbf	540 lbf	4,050 lbf	4,050 lbf
1SAEY124	1/2" x 4"	27/32"	1/2" x 4-1/2"	6"	5-1/8"	4,050 lbf	854 lbf	540 lbf	4,050 lbf	4,050 lbf

1. A global capacity reduction factor of 0.6 is used.
2. It is not recommended to load anchors to these values. Anchors yield in bending and exhibit deformation under this loading. Therefore, these shear strengths may only apply for a static short-term load, in one direction and without load reversal. Permanent deflection is a few centimeters in magnitude. Shear loads should be limited to the Design or WLL capacities.

TABLE 2: SAE-Y EYEBOLT WORKING LOAD LIMIT CAPACITIES IN 5,000 PSI CONCRETE¹

PART #	SIZE	INTERNAL EYE DIAMETER	DRILL HOLE DIAMETER X DEPTH $d_o \times h_1$	MIN. CONCRETE THICKNESS	MIN. EDGE DISTANCE	WLL CAPACITY IN 5,000 PSI CONCRETE			ANCHOR FAILURE FROM SHEAR LOAD WITH A CAPACITY REDUCTION FACTOR OF 3.0 ²	
						TENSION	SHEAR F1	SHEAR F2	SHEAR F1 (FAIL)	SHEAR F2 (FAIL)
1SAEY123	1/2" x 3"	27/32"	1/2" x 3-1/2"	5-1/2"	5-1/8"	1,731 lbf	427 lbf	270 lbf	2,248 lbf	2,248 lbf
1SAEY124	1/2" x 4"	27/32"	1/2" x 4-1/2"	6"	5-1/8"	2,302 lbf	427 lbf	270 lbf	2,248 lbf	2,248 lbf

1. A global capacity reduction factor of 3.0 is used.
2. It is not recommended to load anchors to these values. Anchors yield in bending and exhibit deformation under this loading. Therefore, these shear strengths may only apply for a static short-term load, in one direction and without load reversal. Permanent deflection is a few centimeters in magnitude. Shear loads should be limited to the Design or WLL capacities.

Notes:

1. The above capacities are for a static load in uncracked concrete. If conditions are different, the responsible engineer should use a higher factor of safety.
2. These anchors are not suitable for fall arrest systems or other similar safety critical applications.
3. If the anchors are closely spaced, anchor spacing influence should be considered. This can be estimated using our AFOS anchor design software by modelling screw anchors of same diameter.
4. Combined actions of shear and tension acting simultaneously should be considered, if applicable. The following equation shall be satisfied:
 $(\text{Tension Load}/\text{Tension Capacity}) + (\text{Shear Load}/\text{Shear Capacity}) \leq 1.2$
 Where $(\text{Tension Load}/\text{Tension Capacity}) \leq 1.0$ and $(\text{Shear Load}/\text{Shear Capacity}) \leq 1.0$



TECHNICAL DATA SHEET:

SAE-Y EYEBOLT CONCRETE SCREW ANCHORS

YELLOW ZINC

ORDERING INFORMATION

TABLE 3: SAE-Y EYEBOLT CONCRETE SCREW ANCHOR YELLOW ZINC ORDERING INFORMATION

PART NUMBER	SIZE	DRILL SIZE	FINISH	QTY/BOX
1SAEY123	1/2 x 3" (M12 x 75mm)	M12	Yellow Zinc	30