How to Anchor in Solid Materials

TOGGLER[®] BRAND ALLIGATOR[®] Solid-Wall Anchors

What we tell you	What this means to you	Figure 3
ALLIGATOR [®] anchors provide the installer with the highest, vibration-proof holding values of any anchor —metal or chemical— of equal diameter.	ALLIGATOR anchors provide you with secure anchoring in any type of building material.	Bonds with wall !

What we tell you	What this means to you		Figure 4
 This is a result of their unique ability to mold to the wall and create an extremely effective bond between the wall and the screw. (see Figure 3) When there is a hollow space, the ALLIGATOR anchor wedges securely, too, with a positive, vibration-proof lock between the anchor's teeth and the threads of the screw. (see Figure 4) 	 ALLIGATOR anchors work in problem materials— materials with a hollow space in which many other anchors simply don't work, or materials with a hollow space in which many other anchors simply don't work. 	Works in hollow	v brick

TOGGLER[®] BRAND ALLIGATOR[®] Solid-Wall Anchors (continued)

What we tell you	What this means to you	Conical
ALLIGATOR anchors exert pressure 360° outward along the <i>entire length</i> of the screw.	"Blow-out" or conical failure often happens with other anchors but does not occur with ALLIGATOR anchors.	Failure
What we tell you	What this means to you	Kest
ALLIGATOR anchors	Unlike many other anchors used in solid	L-IL-
 don't spin in the hole, and 	materials, ALLIGATOR anchors work in all kinds	In Committee
 have teeth <i>inside</i> that actively engage the screw thread for a positive lock. 		Teeth engage

screw thread

What we tell you	What this means to you
 ALLIGATOR anchors accept a wide range of	 You don't need a large stock of different
screw diameters.	anchors.
• For maximum holding:	 In addition, ALLIGATOR anchors supply
the screw diameter, the anchor diameter, and the	extremely high holding values in high PSI
diameter of the hole should be approximately	concrete at a price significantly lower than
equal.	metal or chemical anchors.

Sleeve, Wedge, and Drop-in Anchors

What they tell you	What this means to you	Figure 5
 They usually show you only a picture of the anchor before it has been installed and then an illustration after installation. They don't show you all the time-consuming steps needed for installation. 	 You need a torque wrench, which is expensive and time consuming to use. You also need to drill an exact hole which, under job site conditions, is not usually possible. As the building material is questionable in composition, thickness and density, you have to make an educated guess, which is risky. 	Improper Hole

What they don't tell you...

To install one of these anchors properly, you need:

- a calibrated torque wrench
- a hole drilled to exact specifications
- an anchor designed specifically for the type and thickness of the building material you are drilling into.

A number of problems often occur:

- If the hole is not drilled to the exact diameter, the anchor will remain loose. (see Figure 5)
- If the anchor is over-tightened, the building material will crack or conical failure will occur. (see Figure 6)
- If the thickness of the material is not known when choosing the anchor, the anchor may not engage. (see Figure 7)



Shield or Expansion Anchors		
What they tell you	What this means to you	Before
 "Lead anchors thread easily, so that the screw can expand them against the wall of the hole." They tell you that metal anchors are strong. 	• Because lead is a soft metal, it is not resistant to shock or vibration. Anything anchored with lead will not hold a vibratory load, because the vibrations will permanently loosen the screw.	
 They usually show you only a picture of the un- installed anchor. 	• If the anchored screw experiences any sort of shock, the lead is permanently distorted and will not retain the screw.	former and the second s
	Other facts they don't tell you about lead anchors:	Will work of the
	 Lead is not resistant to shock or vibration. 	
	 Lead has very little strength. 	and the second sec
	 Lead is harmful to the environment. 	After a Shock
	• Lead is toxic.	Lead Shield Anchor

What they don't tell you	What this means to you	Expansion Anchor
Because the anchor's holding power relies entirely upon a relatively small surface area and the type of building material:	• Unless the hole is drilled to exact specifications, expansion anchors will not work.	
• The hole must be precisely drilled.	 Metal does not form any sort of bond with the building material—metal acts only as a wedge. They have minimal tensile strength and will not hold much. Even double wedge anchors grip only 4 small places in the drilled hole. 	
 The building material must also be extremely hard and uniform. 		
 Wedges are usually die cast zinc, which has limited tensile strength. 		Acts only as a wedge

Chemical or Epoxy Anchors

What they tell you	What this means to you
"Chemical and epoxy anchors bond with the wall."	The many complicated steps, in combination with waiting for the anchor to "set", make this type of anchor very time-consuming and expensive to install.

What they don't tell you	What this means to you
 In addition to being extremely expensive, these anchors have a limited shelf life. 	 You must pay a very high price for an anchor that is expensive, difficult and time-consuming to install.
 They are also very time-consuming to install, because you must use many special tools and wait for the mixture to "set." 	 These anchors require additional special tools and complicated instructions that must be followed precisely.
 Chemical anchors give off an offensive odor. 	
 If the ratio of chemical or adhesive components is incorrect, the mixture will never set properly. 	
 Most of these anchors require a specific temperature to set properly. 	

Masonry Screws

What they tell you	What this means to you
"You do not need to install anything other than a screw to anchor into all types of masonry, including concrete, brick, etc."	 It is extremely difficult to drill a precise hole under actual job site conditions. Unless the hole is drilled to exact specifications, masonry screws will not work. In a real world installation, shock and vibratory loads are always present. Unless your load is minimal and is not subject to shock or significant vibration, these anchors should not be used.
 What they don't tell you As the holding power for masonry screws relies entirely upon a few screw threads gripping the building material: The hole must be precisely drilled. The building material must also be extremely hard and uniform. Even if the hole is properly drilled, which is extremely difficult to accomplish, masonry screws are not vibration-proof and provide only minimal tensile holding power if subjected to sudden shock or vibratory loads. 	Little contact between screw thread and wall Oversized hole
TOGGLER BRAND SolutionALLIGATOR anchors won't spin in the hole, allowing installation with a screw gun.ALLIGATOR anchors provide a reinforcing interface between the screw and the substrate.They also accept a wide range of screw diameters.	Anti- rotation fins Bonds to wall the entire length of the screw

Plastic Conical Anchors

What they tell you	What they don't tell you
"Simple and easy to use."	 Conical anchors do not work together with the building material and the screw. They are merely a thin, brittle plastic wedge. Even lightweight anchoring is a problem with these anchors. Nylon shrinks or swells depending on the humidity. Also, most conical anchors are made of recycled plastics that lose their strength when recycled.



Doesn't work in unison with wall or screw !

TOGGLER BRAND Solution...

- ALLIGATOR anchors are made from a **special polymer**, in conjunction with an innovative patented design, providing the installer with high, vibration-proof holding values.
- TOGGLER BRAND ALLIGATOR anchors mold to the wall, creating an extremely high-strength bond between the substrate and the screw.

Before installation After installation