

TOGGLER® ANCHOR SYSTEM

Technical Bulletin



SNAPTOGGLE® HEAVY-DUTY HOLLOW-WALL ANCHORS

The latest generation of the ever-evolving TOGGLER hollow-wall anchor technology...

The SNAPTOGGLE anchor is a heavy-duty hollow-wall anchor for use in walls, ceilings, or floors of materials such as gypsum board, drywall with a steel stud, concrete block, tile over drywall, etc. The anchor is pre-assembled and ready for immediate use. The ratcheting strap / locking cap assembly positions the one-piece zinc-plated (or stainless) steel anchoring channel flush against the rear of the wall. The cap slides down the straps to lock flush against the front of the wall. The straps on the outside of the wall are then easily and quickly snapped off by hand flush with the surface of the wall (no extra tools required). Holding is dependent only on a metal bolt to metal channel connection. *The SNAPTOGGLE anchor complies with all existing fire codes for critical applications.*

Benefits compared to wing toggles:

- Holds up to 2x the load
- Solid metal channel resists vibration & shock
- Pre-assembled and ready for immediate use
- Pre-installs without fixture or bolt
- Installs in a significantly smaller hole
- Automatically adjusts to thickness of wall, ceiling, or floor
- Does NOT spin—bolt installs with a screw gun
- Uses a shorter bolt—no need to carry a wing
- New plating is 7 times more corrosion-resistant
- Does NOT fall behind wall when bolt is removed; fixture can be removed and reinstalled as often as desired

ULTIMATE TENSILE PULL-OUT VALUES [lb]

Anchor	UNC thread	Drill dia.	1/2" Drywall	5/8" Drywall	*1/2" with 25 gauge stud	*5/8" with 25 gauge stud	Concrete block	1/2" steel plate	Stainless in 1/2" steel ³
BA	3/16"-24	1/2"	238	356	412	462	802	918 ¹	1,193 ¹
BB	1/4"-20	1/2"	265	356	425	464	1,080	1,288 ²	1,735 ¹
BE	5/16"-18	3/4"	270	480	439	477	1,400	1,680	2,118
BC	3/8"-16	3/4"	275	576	466	488	1,745	1,692	2,523 ¹
BD	1/2"-13	3/4"	275	576	468	513	**2,038 ²	2,605	3,150

ULTIMATE SHEAR [lb]

Anchor	UNC thread	Drill dia.	1/2" Drywall	5/8" Drywall
BA	3/16"-24	1/2"	247	298
BB	1/4"-20	1/2"	241	324
BC	3/8"-16	3/4"	292	406

* Failure measured as breakage of drywall portion

** Failure of block

¹ Stainless steel bolts used

² Hardened bolts used

³ Stainless steel channel tested with stainless bolts in 1/2" steel plate

- Industry standards recommend 1/4 of ultimate test load.
- Holding strength for a SNAPTOGGLE heavy-duty hollow-wall anchor varies directly with the strength and condition of the substrate and the bolt size—and inversely with variations in hole diameter and the distance of the load from the wall.
- All figures in pounds. Pull-out values based on independent laboratory tests done according to U.S. Government standards. They should be used as guides only and cannot be guaranteed. The age, condition, and capacity of the substrate must be considered.

SNAPTOGGLE® HEAVY-DUTY HOLLOW-WALL ANCHORS

Specifications

Description — SNAPTOGGLE Heavy-Duty Hollow-Wall Anchors (Toggle Bolts)

Material — zinc-plated 1010 cold rolled steel (or 300 series stainless steel) metal channel, high-impact polystyrene straps and handle, translucent polypropylene copolymer cap

Screw specification — UNC-thread machine screw (bolt) to match thread in metal channel

Minimum screw length — thickness of wall or ceiling + thickness of item being fastened + 1/2"

Minimum clearance behind wall — 1 7/8"

Minimum drywall thickness — 3/8"

Maximum drywall thickness — 3 5/8" for BA & BB anchors
2 1/2" for BC, BD & BE anchors
9 1/2" for BAL & BBL anchors

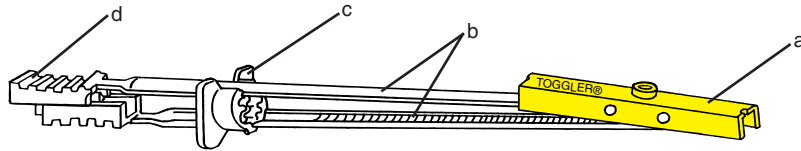
Also available:

- metric-threaded channels [M5, M6, M8 & M10]
- RoHS-compliant channels
- stainless steel channels

The plastic straps and cap washer are positioning and retention elements only. They do not otherwise function as anchoring elements. Holding is dependent only on a metal bolt to metal channel connection.

The SNAPTOGGLE anchor complies with all existing fire codes for critical applications.

a = anchoring channel /
zinc-plated cold rolled steel or
300 series stainless steel
b = straps / high-impact polystyrene / locking ratchet
c = cap / translucent polypropylene copolymer
d = ergonomic handle / same as straps



Code	Bolt thread	Drill Diameter	Grip Range
BA	3/16"-24 (#10-24)	1/2"	3/8" - 3 5/8"
BB	1/4"-20	1/2"	3/8" - 3 5/8"
BE	5/16"-18	3/4"	3/8" - 2 1/2"
BC	3/8"-16	3/4"	3/8" - 2 1/2"
BD	1/2"-13	3/4"	3/8" - 2 1/2"
BAL*	3/16"-24 (#10-24)	1/2"	2" - 9 1/2"
BBL*	1/4"-20	1/2"	2" - 9 1/2"

The same product codes with an "S" at the end indicate stainless steel, e.g.,

BB = 1/4"-20 thread in the zinc-plated channel

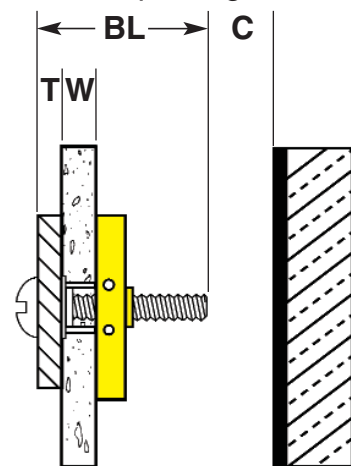
BBS = 1/4"-20 thread in a stainless steel channel

* Long straps (L) for roofing and for very thick walls or ceilings

- Gently hand engage at least one thread of bolt with channel before using screw gun to avoid cross threading the bolt.
- For maximum shear holding, orient channels vertically to floor.
- Use hardened or stainless bolts for maximum weight load.
- Enlargement of specified insertion holes size will reduce anchor effectiveness.
- Remove anchor by removing bolt, inserting screwdriver and popping channel behind wall off plastic straps with a sharp blow.
- All SNAPTOGGLE anchors meet the requirements of Type V anchors in Federal Specification FF-B-588-D (superseded).
- All bolts and threaded rods used with SNAPTOGGLE anchors must meet ANSI or HR 3000 standards to ensure safety and effectiveness.

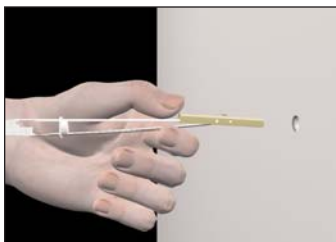
$$BL = T + W + 1/2"$$

[For min. W & max. W., see "Grip Range" at left]

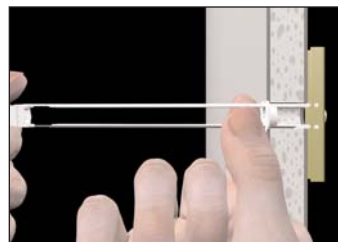


$$C = 1 7/8"$$

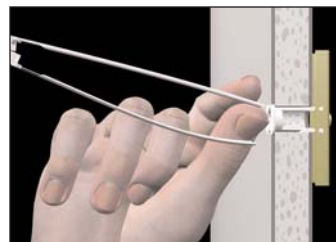
Installation Instructions



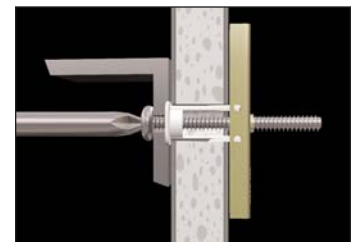
Drill appropriate size hole. Hold metal channel flat alongside plastic straps & slide channel through the hole. Minimum clearance behind wall: only 1 7/8".



Hold ends of straps together between thumb & forefinger and pull toward you until channel rests behind wall. Ratchet cap along straps with other hand until flange of cap is flush with wall.



Place thumb between straps at wall. Push thumb side to side, snapping off straps level with flange of cap.



Place item over flange. Insert bolt and tighten until snug against item, then stop. Use machine screw or bolt to match thread in metal channel.

SNAPTOGGLE® HEAVY-DUTY HOLLOW-WALL ANCHORS

Applications

- | | | | |
|-----------------------|--------------------|----------------|-------------------|
| • Flat panel TV's | • Hand rails | • Partitions | • Sinks |
| • TV mounts | • Grab bars | • Cabinets | • Heavy fans |
| • Lighting fixtures | • ADA hardware | • Shelving | • DSS antennas |
| • Window treatments | • Office furniture | • Solar panels | • Reinstallations |
| • Marine applications | • Heavy machinery | • Garage doors | • Roofs & decking |

For maximum holding in

- | | | | |
|------------------|---------------------|--------------|----------------------|
| • Cinder block | • Tile over drywall | • Greenboard | • Plywood |
| • Concrete block | • Plasterboard | • Plaster | • Steel plate |
| • Gypsum board | • Composite panels | • Stucco | • Plastic |
| • Drywall | • Cement board | • Fiberglass | • Wood studs / beams |

Benefits

- **Strong**—up to **2x the load** of an old-fashioned wing toggle
- Solid metal channel **resists vibration and shock**
 - bolt is centered in channel and positioned for precise installation
 - bolt threads never touch interior surface of hole and so can't saw through substrate
- **Save time**—at least **6 minutes** per anchor versus wing toggles
- Can use a screw gun—anchor does not spin
- **Save money**—turn a 2-person job into a 1-person job
- Use a **shorter bolt**—no need to carry a wing through the wall
- New, patented strap design with sturdier straps and smaller ratchet interval:
 - adjusts more precisely and **snaps off flush** to wall, ceiling, or floor
 - does **not break** prematurely
 - pushes aside insulation
- **Smallest installation hole** for each bolt size—
 - maintains integrity of wall, ceiling, or floor, **strengthening the anchoring**
 - ends the need to patch an oversized hole[a 1/4" wing toggle requires a 3/4" diameter hole: **50% larger** than the 1/2" diameter hole used by the 1/4" SNAPTOGGLE anchor]
- New plating is **7x more corrosion-resistant** than B633-85 Type III/SC 1 government spec high quality zinc plating [350 hours to red rust in salt spray test versus only 48 hours for government spec]
- **Pre-installs without the bolt** to make handling of fixture easier
- **Reusable** in the same hole—remove the bolt without losing the anchor
- New **ergonomic design**—fingers grip straps more naturally and more easily with **no slipping**



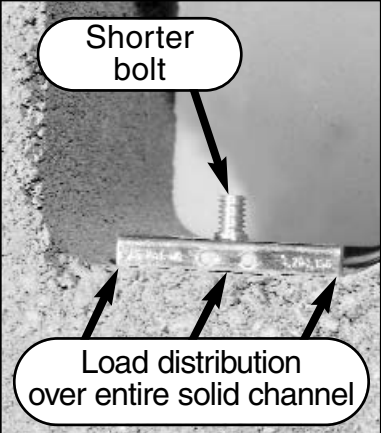
TOGGLER Anchor System
USA



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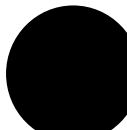
How to Anchor Heavy Loads in Hollow Materials

TOGGLER® BRAND SNAPTOGGLE® Toggle Bolts — new and improved!

What we tell you...	What this means to you...	
• TOGGLER® BRAND toggle bolts pre-install without the bolt (prior to mounting the fixture). • Use a screw gun for fast, easy installation. They do not spin in the wall. • Increased grip range now 3/8" - 3 5/8" (9-95mm). • Use a shorter bolt, because the bolt does not have to carry the anchor through the wall. • New golden plating resists corrosion much longer.	• TOGGLER BRAND toggle bolts do NOT fall behind the wall when the bolt is removed! • Save 3 to 10 minutes with each toggle bolt installed. This reduces labor cost enough to pay for the anchor many times over. • Shorter bolt is less expensive and takes less time to install. Allows one-person installation, not two. • 7x longer than government standard zinc plating.	
What we tell you...	What this means to you...	
• Our toggle bolts have a solid metal channel that distributes the load over its entire length. • TOGGLER BRAND toggle bolts require a smaller hole than the old-fashioned spring-wing toggle. • New patented, ergonomic strap design with smaller ratchet interval prevents premature breakage and guarantees flush fit to wall.	• The highest strength design available — over 2x stronger than toggle wings the same bolt size. • TOGGLER BRAND toggle bolts leave more of the wall intact, resulting in • increased holding power, and • neater, quicker, lower-cost installation. • Reliable installation eliminates callbacks & rework.	

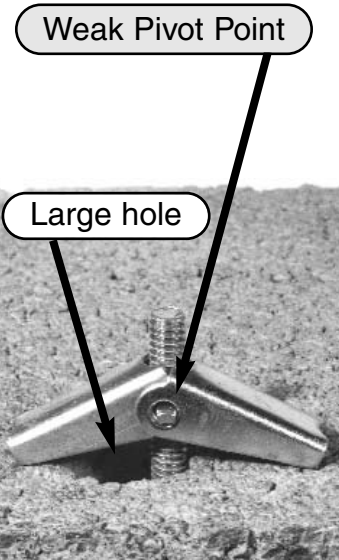
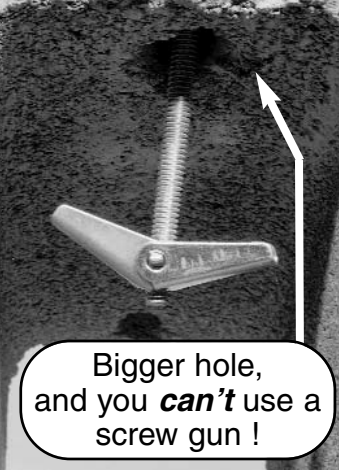
Smaller hole is easier and cheaper to drill !
Smaller hole leaves more of the wall intact for better holding power !


 1/2" hole
 TOGGLER BRAND

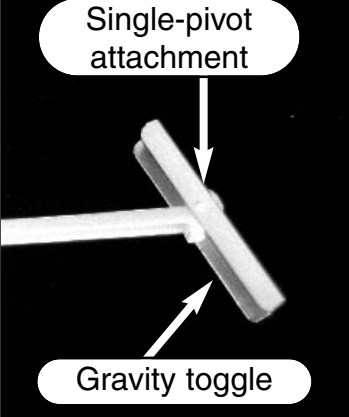
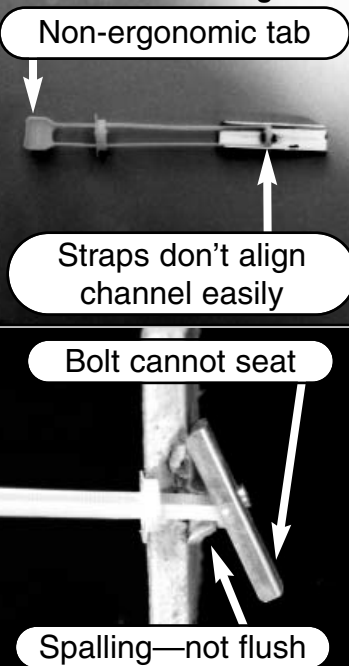

 3/4" hole
 Spring-wing toggle

1/4" spring-wing toggle requires 50% larger hole

Spring-Wing Toggle Bolts

What they tell you...	What they don't tell you...	
They normally show you only a picture of the spring-wing anchor already installed.	• Spring-wing anchors are extremely difficult, time-consuming and complicated to install. • It is impossible to use a screw gun for installation. • Spring-wing anchors can't handle heavy or high-stress loads. Their weakest point, the "pivot", holds the bulk of the load. • Spring-wing anchors require up to 50% larger holes than TOGGLER BRAND toggle bolts. • Many simple jobs with spring-wing anchors require two people—one person must hold the fixture in place while the other fiddles with the spring wing.	 Weak Pivot Point Large hole
What this means to you...		
• You will need a lot more time and patience (and often 2 more hands) to install spring-wing anchors. • Because you have to pull back on the bolt as you tighten it, you cannot use a screw gun. • If you are installing a sink, cabinet or other heavy item, you will need someone to help you because you'll need both hands to set the spring wings and tighten the screw. This means that the installation will not only take more time, but you will have to pay for additional help as well. • The spring-wing toggle is relatively weak. • Any vibration will cause its screw to "saw" through the wall. • When these anchors fail, it is usually with catastrophic results.		 Bigger hole, and you can't use a screw gun !

KapToggle® Hollow Wall Fasteners

What they tell you...	What they don't tell you....	Figure 1 
"The strongest, hassle-free way to hang almost anything on hollow surfaces, such as sheetrock, cinder block, metal, fiberglass, panelled walls and ceilings."	Actually a big hassle and clumsy to install: • cuts fingers—no easy-to-use pull ring • made like a toy—cap slips off in box or in hand • none for bolts bigger than 1/4" diameter • not available with metric threads—TOGGLER BRAND has M5, M6, M8, and M10 • not available in stainless steel—all TOGGLER BRAND available in 300 series stainless steel	
What they don't tell you...	What this means to you...	Figure 2 
• Single-pivot attachment of plastic straps to metal channel directly in line with axis of pull v. stronger off-axis double-pivot TOGGLER attachment. • 1/4" KapToggle fastener needs a hole 25% bigger than same size TOGGLER BRAND. • KapToggle is a gravity toggle (see Figure 1)—does <i>NOT</i> spring into place automatically. • Spalling, a stud or debris prevent KapToggle's metal channel from seating flush against rear of wall—cannot easily control channel's position behind wall.	• Pierced metal on axis of pull substantially weakens KapToggle fastener, and • misaligned or bumped bolt pushes metal channel off plastic straps—can't use a screw gun. • Larger hole means weaker holding—TOGGLER BRAND outholds KapToggle fasteners by as much as 2.5 times (published results). • Won't work in ceilings, or when channel faces wrong way when inserted into wall (see Figure 2). • Non-flush seating of metal channel prevents bolt from seating properly in threaded hole of KapToggle channel.	