



**Star Hanger**  
**SYSTEMS**  
 "Hidden Fastener Specialists" | [www.starhanger.com](http://www.starhanger.com)

# Manufacturer of Innovative, Panel-Hanging Hardware

## 2021 Catalog



Image Credit:  
 Metrolina Woodworks Inc., NC



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### INTRODUCTION

Construction has radically changed over the last few decades. Traditional fasteners have not kept up with the realities of CNC fabrication or the installation constraints that limit both design options and efficiency. Star Hanger Systems designs and manufactures a line of ultra-high performance, synthetic fasteners made right here in the United States. Our fasteners provide unlimited design options, increased strength and accuracy, and reduced installation time.

The Star Hanger Systems Catalog 2021 shows more mounting options than ever. We are moving steadily toward our goal of providing all the hardware needed to mount any product of any shape and size, quickly and precisely to any surface. Star Hanger has reorganized all fasteners into categories by SERIES in order to make our compatible products easier to navigate. We hope this makes it easier to find solutions and new ideas.

The **200 SERIES** is a set of unique, strong, and versatile fasteners, they allow for 1/8" of movement. For obvious reasons we call it the Galaxy. The 200 Series has four different Galaxy designs, the number of arms determines the strength. At only 5/16", thin enough for 1/2" thick panels. There is a set of 1/8" mounting screws for direct installation to sheetrock, furring, steel, and concrete..

The **300 SERIES** includes a variety of inserts that work straight-in at 90 Degrees or with CNC cut and prefabricated installations. The 5/16" double-head mounts are longer and easier to install than the 200 Series. The 300 Series also has a growing variety of mounting screws and bolts that work with wood, composites, steel, concrete, sheetrock and more.

The **400 SERIES** includes two styles of S Clips, which are for vertical panel installation. We have traditional aluminum S Clips and our modern nylon NZ Clip that can be stapled into place. These are super-fast and strong!

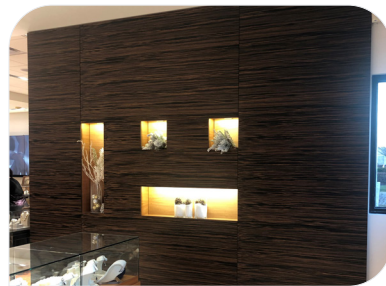
The **500 SERIES** provides a safe and efficient method to mount overhead panels to ceiling furring. There are a variety of compatible components that allow the user to choose single clips, clip pairs or full-length bars. There is also a Reveal Lock designed to lock panels into place.

The **600 SERIES** designed to safely secure panels, clouds, signs, art and slats directly from 1/8" steel aircraft cable. Star Hanger supplies all of the necessary components required to attached from the support structure all the way to the finished product on display. We offer a wide range of attractive hardware options to be used with various materials on both the support structure and panel.

**For Product Specifications / Installation Guides / CAD Drawings / Animation & Instruction Videos visit the Video/Download section of [www.starhanger.com](http://www.starhanger.com)**  
[www.starhanger.com/pages/downloads](http://www.starhanger.com/pages/downloads)



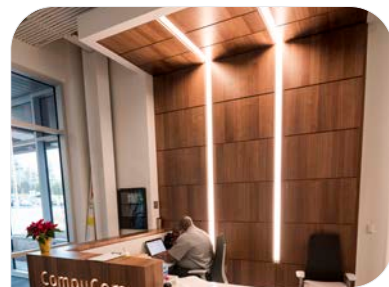
Salon Interiors, NJ



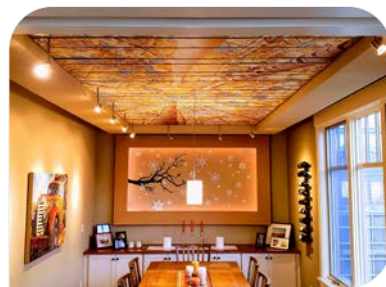
Benchmark Woodworks, OH



Metrolina Woodworks Inc., NC



Metrolina Woodworks Inc., NC



Barker Rinker, CO



Astro Sheet Metal, TX

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#### SALES & GENERAL QUESTIONS:

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# 200 SERIES: Thin High Strength Fastener, with 1/8" Mounts

The Galaxy is a set of unique, strong, and versatile fasteners. The 200 Series has four different Galaxy designs, the number of arms determines the strength. At only 5/16" thick the Galaxy thin enough for 1/2" thick panels. There are 1/8" mounting screws for direct installation to sheetrock, furring, steel, and concrete.

224 Galaxy



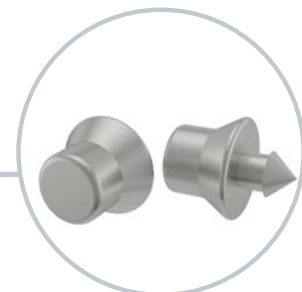
225 Galaxy



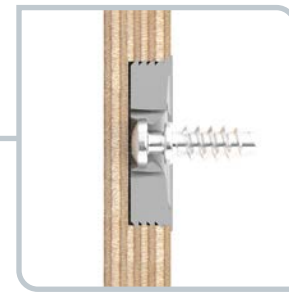
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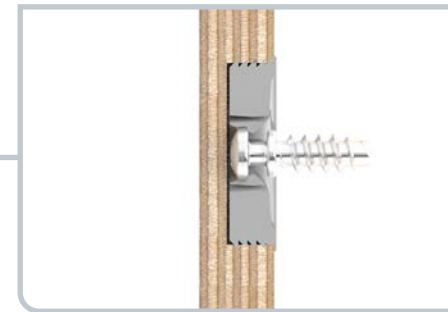
227 Galaxy



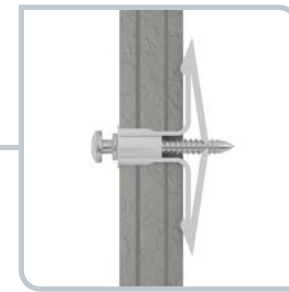
229 Galaxy Alignment Pins



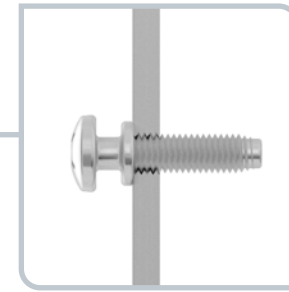
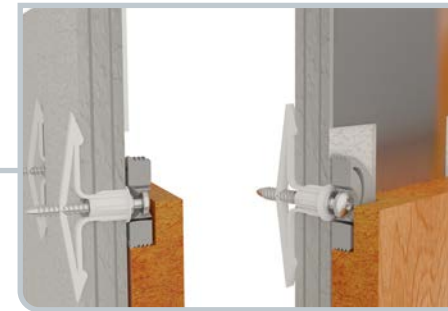
234 Euro Screw



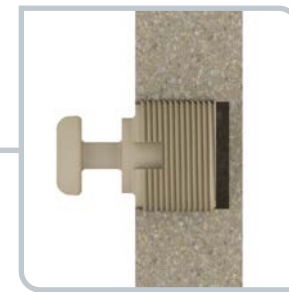
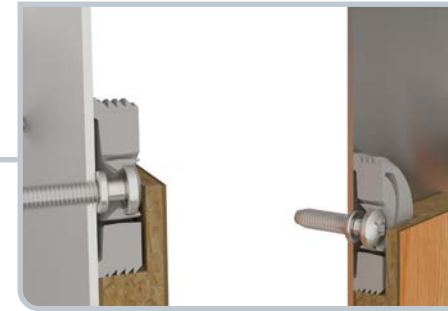
224 Galaxy



236 Combination Screw



239 Machine 10-24 Screw



243 Thin Mounts



# 224, 225, 226, 227 Galaxy

## APPLICATION

The Galaxies are a set of unique, strong, and versatile fasteners. The high strength and small size are possible because the arms grip from the sides. These long arms allow for up to 1/8" of movement at the connection between the panel and the mounting point for expansion and contract of the panel. This means the Galaxies will hold larger panel that have more movement. The Galaxy works well with larger wood panels, plywood, particle board MDF, plastics, solid surface and more. Like the popular Zero there is no requirement to drop and lock, the panel snaps straight onto place.

## DESCRIPTION

There are four different Galaxy designs, the number of arms determines their strength. The thicker the arms are the harder it is to pull the fasteners away from the wall. Like the popular Zero there is no requirement to drop and lock, the panel snaps straight onto place.

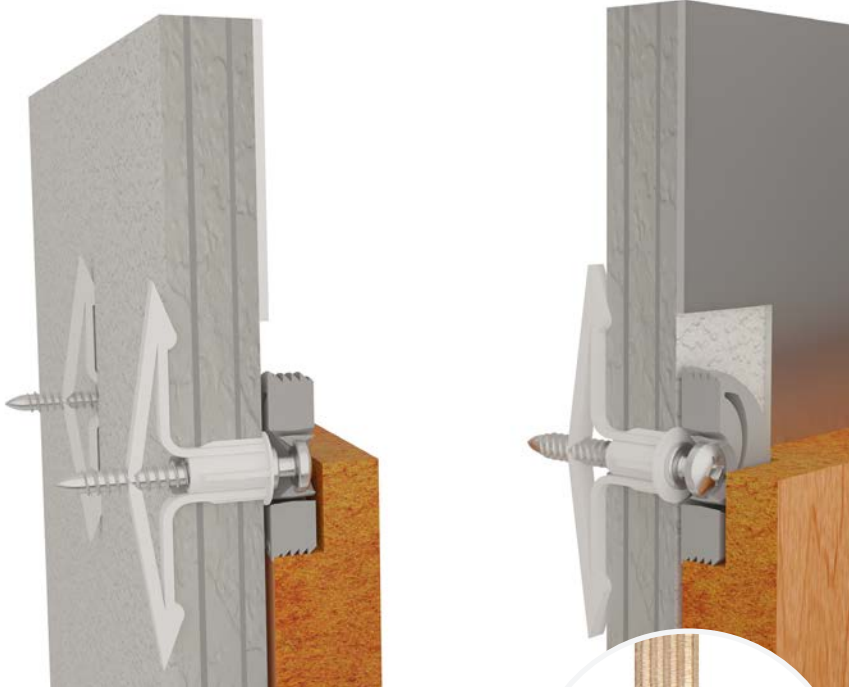
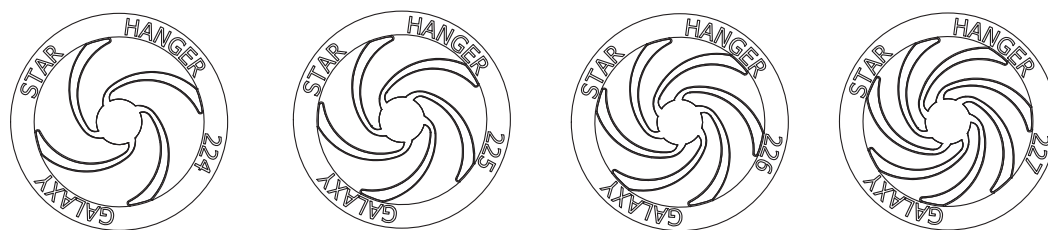
The Galaxy is a compression fit, the center snap inserts grip into a 1-1/4" drilled hole, and the 234 mounting screws use a 5 mm hole. The Galaxy can be quickly inserted into place with a hammer or press, there is a small rim that indents the surface of the wood to help stop the insert flush with the surface. The engineered plastic body and steel mounting screw on Galaxy can withstand repeated removal. At only 5/16", thin enough for 1/2" thick panels.

## COST/BENEFIT ESTIMATE

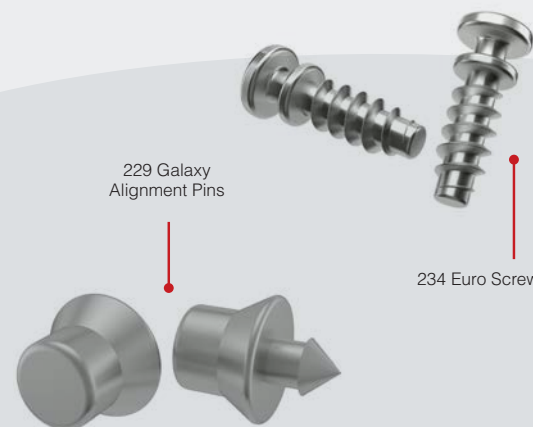
The Galaxy can be drilled and installed in under a minute. This is notably faster than traditional clips with a similar cost.

## HOLDING POWER

The innovative design of the Galaxy allows us to adjust their holding power. By lowering the number of locking arms, we can increase their strength. We are introducing the 4 varieties below, all of which have descending levels of strength as the number of arms increases.



225 Silver Galaxy



229 Galaxy Alignment Pins

234 Euro Screw

## QUICK SPEC, GALAXY

**Application:** Mounts Wood, Steel, Glass, Solid Surface to Wood

**Key Advantages:** Flush, Strong, Thin, Center Snap

**Fastener Type:** Center Snap Insert

**Holding Type:** Friction Catch

**Alignment Method:** 229 Galaxy Alignment Pins

**Fastener Preparation:** Drill 1-1/4" Hole x 3/8" Deep

**Maximum Panel Size:** 4' x 10'

**Template:** N/A

## ACCESSORIES FOR MOUNTING

229 Galaxy Alignment Pins

234 Mounting Euro Screw, 9-16" Thread Length

235 Mounting Euro Screw, 5-16" Thread Length

236 Mounting Wood Screws, 9/16" Thread Length

237 Mounting Wood Screws, 1-1-2" Thread Length

238 Mounting Bolts, 9/16", Thread Length, 10 x 24 Thread

239 Mounting Bolts, 1-1/2", Thread Length, 10 x 24 Thread

## ACCESSORIES - TOOLS

911 Carbide Tipped, 1-1/4" Forstner Bit

913 Pilot Drill & Stop, 5mm Center Point

919 Bosch 5/16" x 6" Carbide Tipped Drill

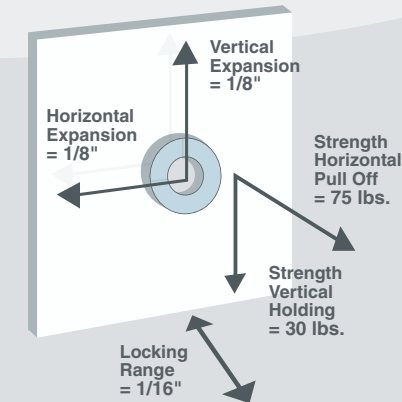
920 Panel Adjuster

960 Pneumatic Insert Hammer

964 Galaxy Hammer for All Galaxies

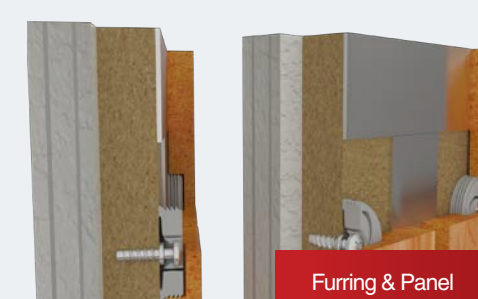
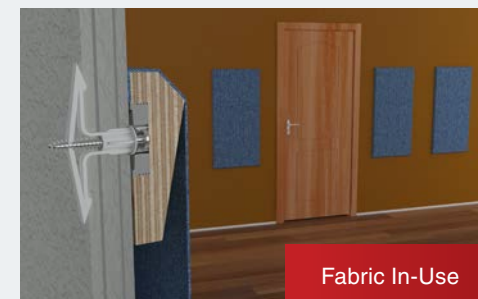
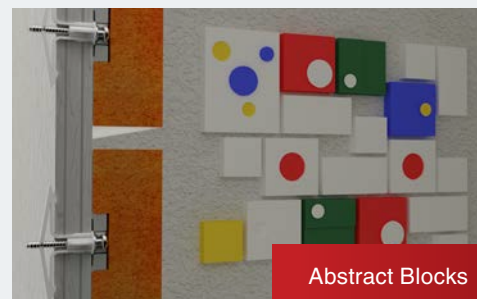
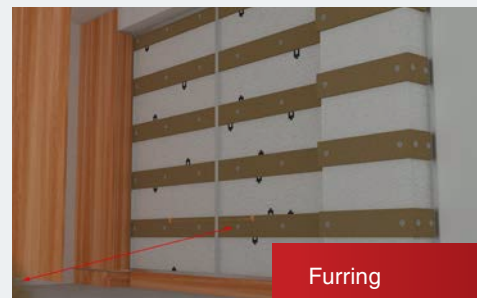
969 Galaxy Retrofit Insertion Fixture

## STRENGTH TESTING



Colors: Brown

## WHAT CAN YOU DO WITH A GALAXY?



## 200 SERIES MOUNTING OPTIONS

### 211 LOCK & HANGER ALIGNMENT PINS 3/16"



#### APPLICATION

The 211 Lock Alignment Pin 3/16" is designed to fit into a 3/16" key-slot facing. This is a marking device for the 200 Hanger 1-3/8" and 210 Lock. Removable and reusable.

### 229 GALAXY ALIGNMENT PINS



#### APPLICATION

The 229 Galaxy Alignment Pin is designed to fit snugly into any Galaxy Fastener. This pin pushes into the front friction catch creating a marker for the Screw Mount. Removable and reusable.

### 234 EURO SCREW, 9/16" LONG, 1/8" HEAD GAP



#### APPLICATION

The 234 Mounting Euro Screw has 1/8" between the head and the collar. The threads are 9/16" long and work well with 3/4" plywood, MDF and particle board with a 5mm pilot hole. These screws require a 5mm pilot hole. Compatible with all Galaxy fasteners.

### 235 EURO SCREW, 5/16" LONG, 1/8" HEAD GAP



#### APPLICATION

The 235 Mounting Euro Screw has 1/8" between the head and the collar. The threads are 5/16" long for 1/2" composite panel material with a 5mm pilot hole. Compatible with all Galaxy fasteners.

### 236 COMBINATION SCREW, 1-3/8" LONG, 1/8" HEAD GAP



#### APPLICATION

The 236 Combination Screw has 1/8" between the head and the collar; it has 16 threads per inch, at 1-3/8" long with a 1/8" pilot hole. The combination screws work well in both wood and with plastic anchors like the 952 Pop Toggle TC. Compatible with all Galaxy fasteners.

### 237 COMBINATION SCREW, 9/16" LONG, 1/8" HEAD GAP



#### APPLICATION

The 237 Combination Screw has 1/8" between the head and the collar; it has 16 threads per inch, at 9/16" long with a 1/8" pilot hole. The combination screws work well in wood, plastic and with variety of commercially available anchors. Compatible with all Galaxy fasteners.

### 238 MACHINE BOLT, 10-24, 1-3/8" LONG, SELF-TAPPING, 1/8" HEAD GAP



#### APPLICATION

The 238 Mounting Bolt has 1/8" between the head and the collar; it has 24 threads per inch, at 1-3/8" long. The machine bolt is typically tapped, light-gauge steel gauge steel and aluminum, 1/8" to 0.149" pilot hole. The 10-24 thread is common and can be used with the 945 Rivnut, 950 Snaptoggle, and a variety of commercially available anchors. Compatible with all Galaxy fasteners.

## 200 SERIES MOUNTING OPTIONS

### 239 MACHINE BOLT, 10-24, 9/16" LONG, SELF-TAPPING, 1/8" HEAD GAP



#### APPLICATION

The 239 Mounting Bolt has 1/8" between the head and the collar, the threads are 9/16" long.

The machine bolt is typically used in light gauge steel and aluminum, 1/8" to 0.149" pilot hole. The 10-24 thread is common and can be used with the 945 Rivnut and a variety of commercially available anchors. Compatible with all Galaxy fasteners.

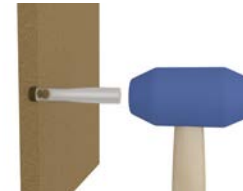
### 243 THIN MOUNTS 3/16"



#### APPLICATION

The 243 Thin Mount is designed for thin panels made of plywood, particle board composites, plastics and solid surfaces. The 243 Thin Mount inserts into a drilled or routed 1/2" hole. The Thin Mounts are made with an engineered, automotive plastic that is slightly pliable and will not void the solid surface fabrication warranty.

### 905 THIN MOUNT DRIVER



#### APPLICATION

The 905 Thin Mount Driver is used to install any of the 343 Thin 5/16" Mount, 243 Thin 3/16" Mount and the 349 Upholstery Mounts.

## MOUNTING ACCESSORIES

### 722 DOUBLE-SIDED THIN DOWEL



#### APPLICATION

The 722 Double-Sided Thin Mount is an inexpensive method to attach two thin panels together, permanently. They work well on plywood, particle board composites, plastics and solid surfaces. The 722 Double-Sided Thin Mount inserts into a drilled or routed 1/2" hole. The mounts are made of engineered, automotive plastic that is slightly pliable and will not void the solid surface fabrication warranty.

### 945 RIVNUT® 10-24 STEEL NUT - STEEL INSERTS FOR SHEET METAL



#### APPLICATION

The 945 Rivnut® is basically a threaded 'Pop Rivet' and can be fitted into a small hole from only one side of a steel panel. The 945 Rivnut® work as nuts for the 237 and 337 Mounting Bolts for use in many applications, like connecting wood panels to steel panels.



### 911 CARBIDE TIPPED, 1-1/4" FORSTNER BIT

The 911 Carbide Tipped, 1-1/4" Forstner Bit is compatible with the 224 Galaxy. The Galaxy insert is 5/16" thick; we recommend a 3/8" hole depth, leaving a 1/16" space to ensure the insert does not bottom-out. This gap also allows for expansion and contraction of the panel without bubbling the surface.

### 952 POP TOGGLE TC FOR 5/8" SHEETROCK



#### APPLICATION

The 952 Pop TC Toggle® is a Medium Duty sheetrock wall anchor. It works very well with our 236 and 336 Mounting Screws. The Pop Toggle in combination with the appropriate screws and fasteners allows for multiple applications.

### 950 STEEL TOGGLES - STEEL INSERTS FOR ANY CAVITY

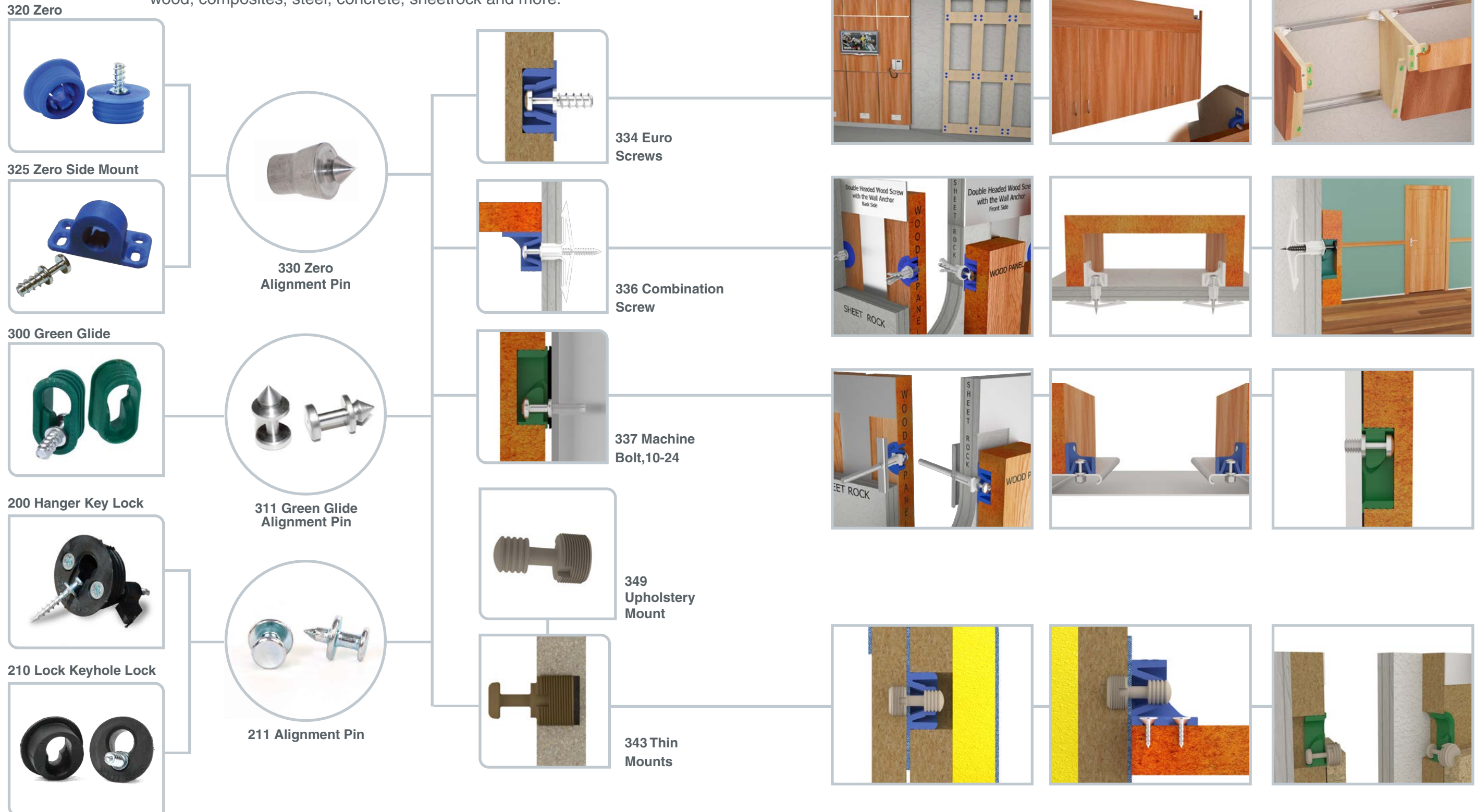


#### APPLICATION

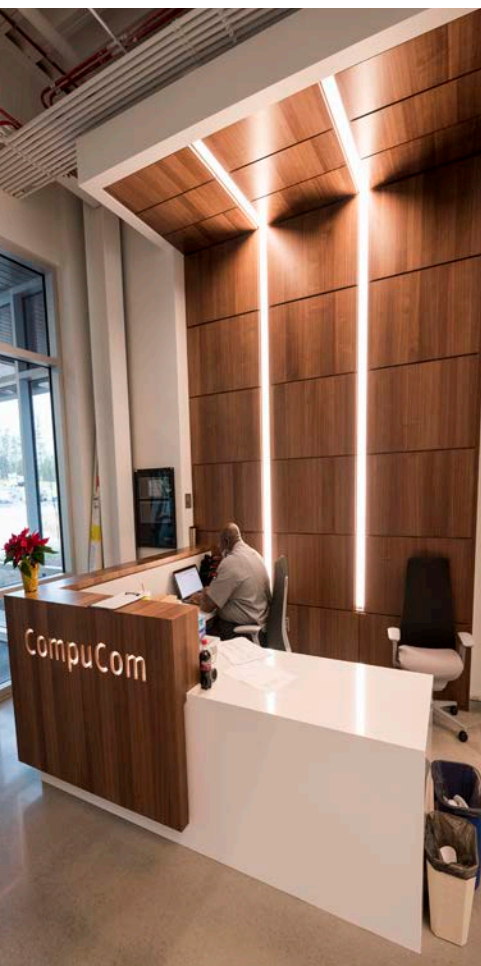
The 950 Steel Toggle is a zip-action, hollow-cavity anchor designed to work with our 237 Mounting Bolt and 337 Mounting Bolt. Perfect for concrete blocks, sheetrock, steel and more.

# 300 SERIES: Thick Insert Chart, 5/16" Mounts

The 300 Series includes a variety of inserts that work straight-in, at 90 degrees or CNC cut and prefabricated installations. The head of the 5/16" mounting screw is longer and easier to install. The 300 Series has a growing variety of mounting screws and bolts that work with wood, composites, steel, concrete, sheetrock and more.



# 320 Zero



Metrolina Woodworks Inc., NC

## APPLICATION

The 320 Zero is a hidden fastener with a fast and easy installation for "zero" reveal designs. The 320 was traditionally made to be used with a furring system, but with the use of its many mount options the application possibilities are endless. (See pages 22-23) The simple installation works well in both the field or shop, with prefabricated furring systems or with our alignment pins.

(Examples include: ADA panels, soffit panels, panels with no reveal, fabric panels and wood panels.)

## DESCRIPTION

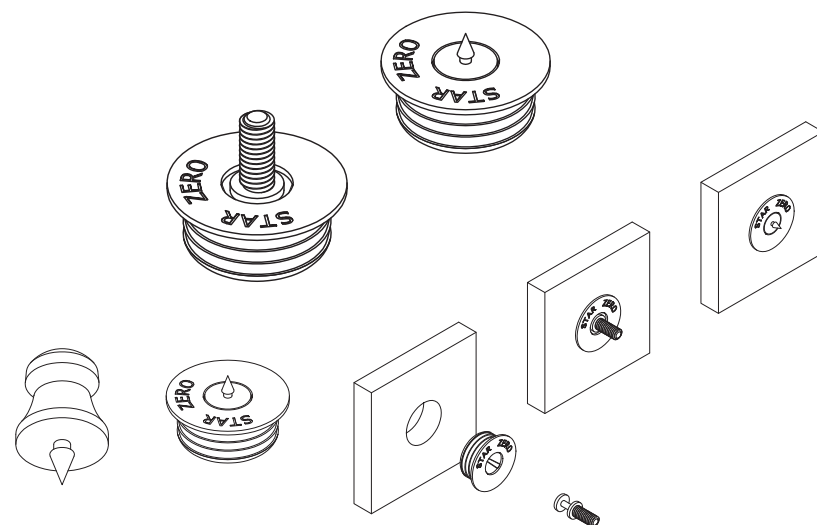
The 320 Zero is a medium-duty, insert fastener, with a center-snap facing, compatible with our 5/16" Mounting Options. (See pages 22-23) The center snap design allows panels to be removed at about 35lbs force. The 320 Zero is designed with a compression fit and is installed in a 1" hole drilled in any hard substrate. It allows for 1/16" expansion once installed.

The 320 Zero allows for 1/16" expansion.

**Note:** The 320 Zero should not be used overhead unless reinforced with mechanically locked hardware.

## COST/BENEFIT ESTIMATE

The 320 Zero can be drilled and installed in under a minute. This is notably faster than traditional clips with a similar cost.



330 Zero Alignment Pin (10 Pins Per Pack)



320 Zero w/ 5/16" Mounting Screw



## QUICK SPEC, 320 ZERO

**Application:** Mounts Wood, Steel, Glass, Solid Surface to Wood

**Key Advantages:** Flush, Smooth, Center Snap

**Fastener Type:** Center Snap Insert

**Holding Type:** Friction Catch

**Alignment Method:** 330 Zero Alignment Pins

**Fastener Preparation:** Drill 1" Hole x 1/2" Deep

**Maximum Panel Size:** 4' x 4'

**Template:** 306 Drill Template

## ACCESSORIES FOR MOUNTING

334 Mounting Euro Screws, 9/16" Thread

336 Mounting Wood Screws, 1-1/2" Thread

337 Mounting Bolts, 5/16" x 2-1/4"

349 Thin Upholstery Mount

341 Epoxy Mount, Nylon

## ACCESSORIES - TOOLS

910 Carbide Tipped, 1" Forstner Drill, Center Point Drill

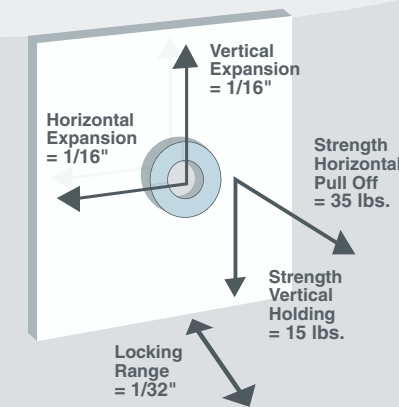
913 Pilot Drill, 5mm Center Point Drill & Stop

920 Panel Adjuster

960 Pneumatic Insert Hammer

963 Hammer Head for 320 Zero

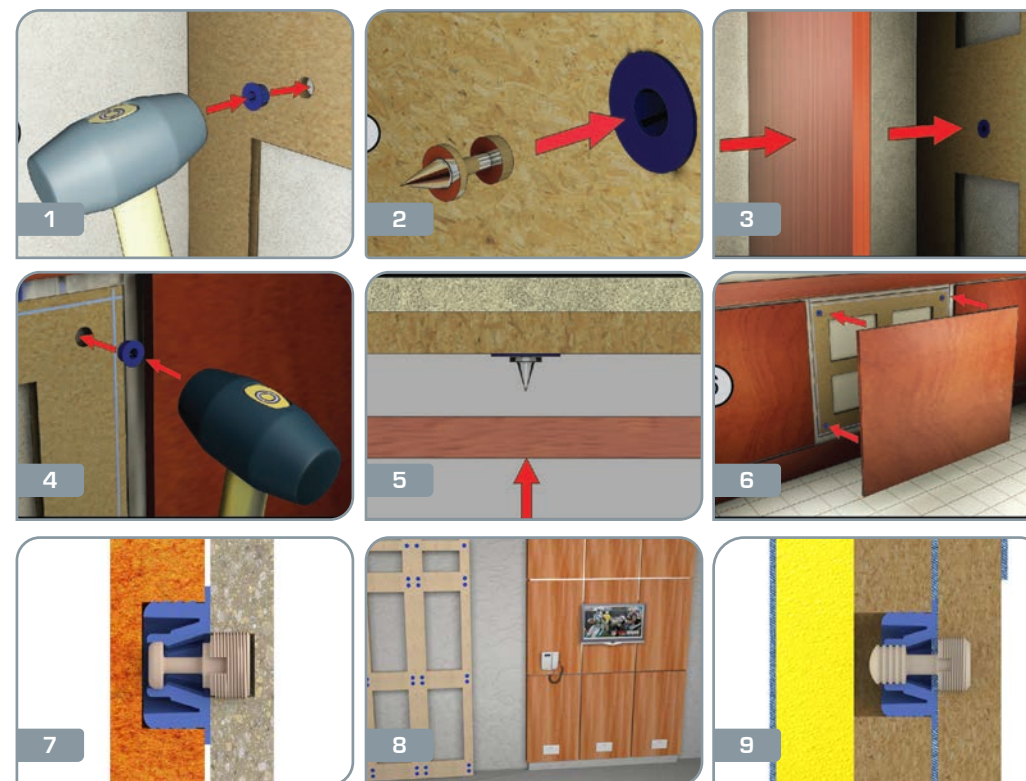
## STRENGTH TESTING



Colors: Blue

## 320 ZERO, HOW IT WORKS

Wood panels mounted to a wall, an ADA unit and an L-shaped soffit.



1. Zero installs the same way as our other inserted fasteners. Drill a 1" hole and hammer the Zero into place.
2. The steel alignment pins mark exact screw locations.
3. After installing the double-headed screw, the panel can be pressed straight into place.
4. Zero works well for installing hidden access panels.
5. Steel alignment pins in place.
6. Zero snaps straight into place.
7. The Zero & 375 Thin Mount works well with solid surfaces.
8. The Zero & 336 Wood Screw works well on hospital headboards.
9. The 320 Zero & 349 Upholstery Mount, works well with upholstery.

# 325 Zero Side Mount

## APPLICATION

The 325 Zero Side Mount (35 lbs. Blue) provides a nice balance between holding the panel firmly in place and remaining removable without requiring the use of tools. This combination makes them very useful for false drawers, end scribes, cabinet soffits and ADA under-sink units. The assembly of a reception desk can be significantly streamlined using the 325 Zero Side Mount for tack panels, toe kicks and removable access panels.

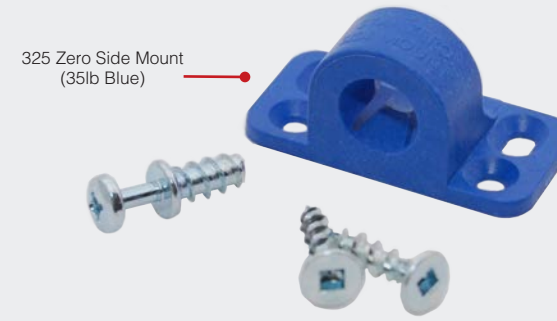
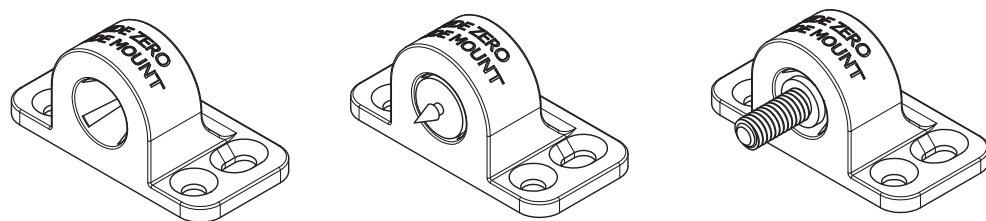
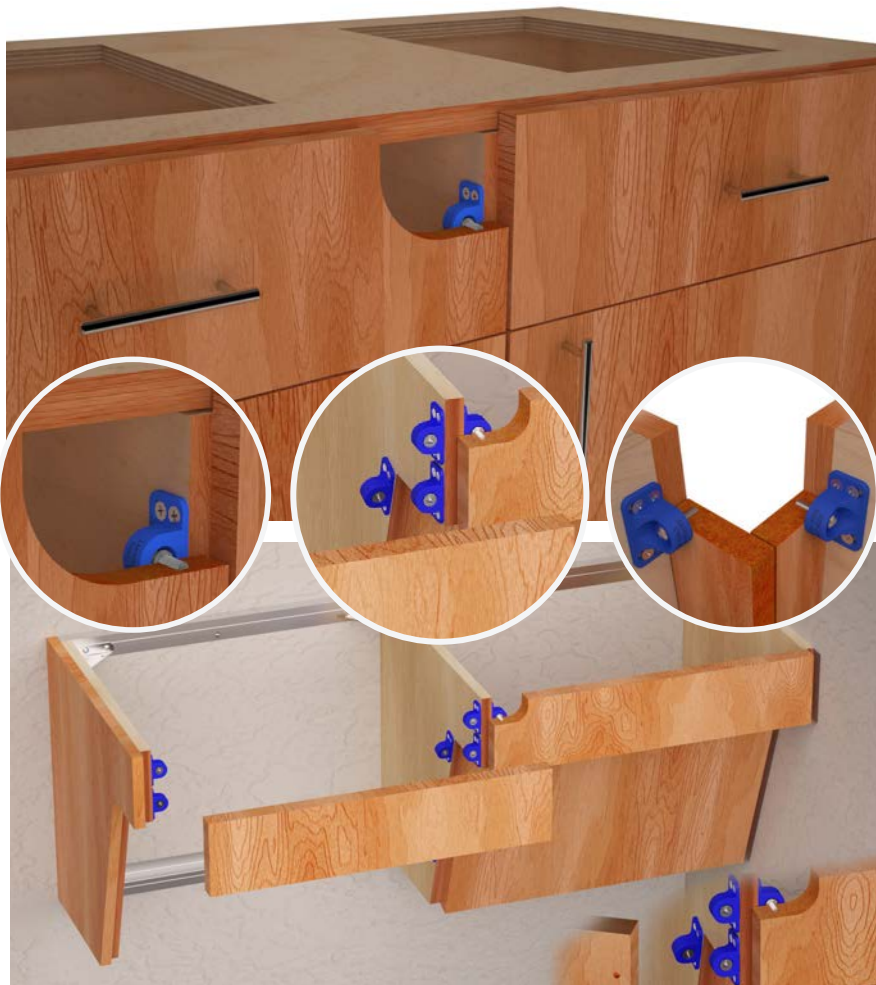
## DESCRIPTION

The 325 Zero Side Mount is a hidden, panel-mounting clip designed to snap removable panels firmly in place at right angles to an adjacent side panel. With four screws, the Side Mount installs quickly. Once the included 5/16" mounting screws are snapped into place with about 10 lbs of pressure, they can be pulled loose with about 25 lbs of force. The 325 Zero Side Mounts are made from durable, engineered plastic, allowing for repeated panel removal and outdoor use.

Note: Adding the 330 Zero Alignment Pin enables fast and easy location and insertion of the 5/16" mounting screw.

## COST/BENEFIT ESTIMATE

325 Zero Side Mounts can be drilled and installed in under a minute. This is faster than using traditional methods that have a higher cost.



## QUICK SPEC, 320 ZERO

**Application:** Mounts Wood, Steel, Glass, Solid Surface to Wood

**Key Advantages:** 90 Degree, Smooth, Center Snap

**Fastener Type:** Center Snap Insert

**Holding Type:** Friction Catch

**Alignment Method:** 330 Zero Alignment Pins

**Fastener Preparation:** Surface Mount

**Maximum Panel Size:** 4' x 4'

**Template:** N/A

## ACCESSORIES FOR MOUNTING

334 Mounting Euro Screws, 9/16" Thread

336 Mounting Wood Screws, 2" Thread

337 Mounting Bolts, 5/16" x 2-1/4"

349 Upholstery Mount

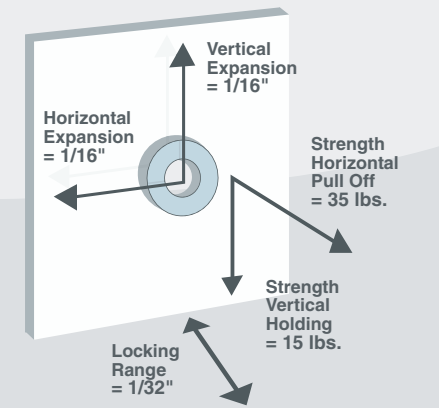
343 Thin Mount

## ACCESSORIES - TOOLS

913 Pilot Drill, 5mm Center Point Drill & Stop

920 Panel Adjuster

## STRENGTH TESTING

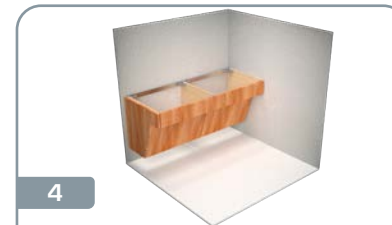
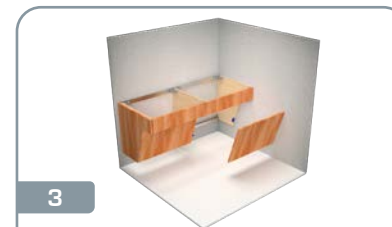
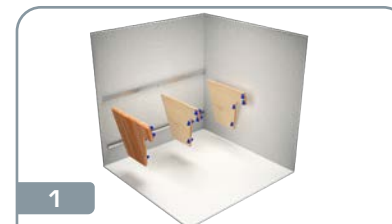


Colors: 325 Blue, 326 White

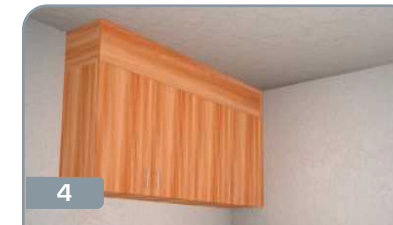
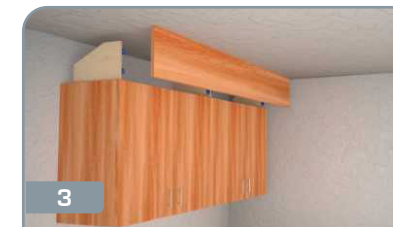
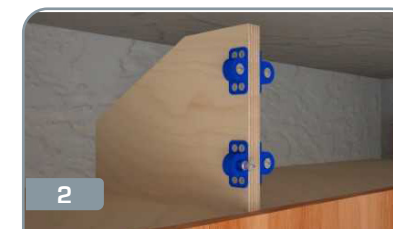
## 325 ZERO SIDE MOUNT, HOW IT WORKS

Wood panels mounted to an ADA unit, soffit, booth seat and column.

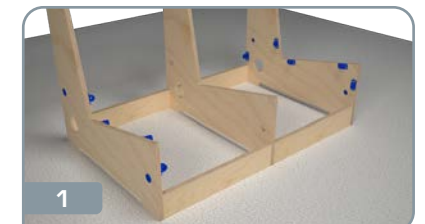
### 325 Zero Side Mount, ADA Unit



### 325 Zero Side Mount, Soffit



### 325 Zero Side Mount, Booth





# 200 Hanger

200 SERIES

<https://www.starhanger.com/products/200-hanger-1-3-8>



## APPLICATION

The 200 Hanger is our heaviest insert for mounting panels directly to drywall. The large 200 Hanger quickly and easily fastens any type of paneling directly to drywall. Substantial cost savings are gained by eliminating the furring layer and by directly mounting panels to the drywall surface instead. Institutions, schools, hospitals and universities have been delighted to find they could now afford a variety of panel and expressive design options.

## DESCRIPTION

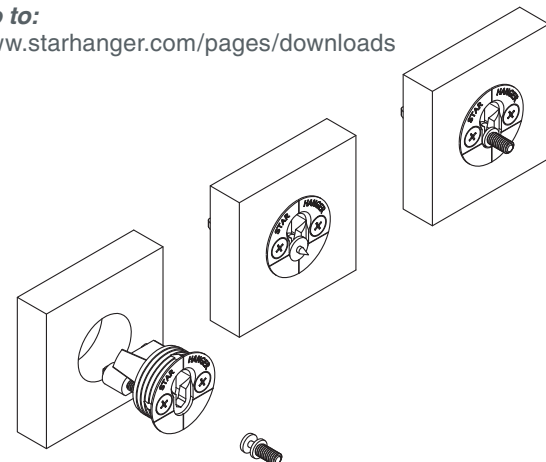
The 200 Hanger is a heavy-duty insert with a keyhole-style lock, molded under heavy pressure and high heat. Once inserted into a 1-3/8" hole in the drywall, the insert is locked in place by turning the locking screws. The 200 Hanger has a variety of mounting screws and bolts that allow for mounting thick and thin panels, moldings, metal, acoustical panels, fabric panels, mirrors, chair rails, artwork, signage and more.

## COST/BENEFIT ESTIMATE

The 200 Hanger allows direct panel application at about one-half the cost of a full furring system, (usually required for premium grade panel work). This system removes a substantial portion of the in-house engineering time required when using a traditional furring system. By eliminating the furring system labor cost is reduced in both the shop and field by reducing engineering, production and installation hours. There is also a substantial saving in material costs with the typical job seeing a cost of \$0.38/sq ft for panel mounting hardware.

**Note:** For an installation guide on the "110 Building a Straight Sheetrock Wall"

**Go to:** [www.starhanger.com/pages/downloads](http://www.starhanger.com/pages/downloads)



McDaniels Acura of Charleston South Carolina



## QUICK SPEC, 200 HANGER

**Application:** Mounts Wood, Steel, Glass, Solid Surface to Drywall

**Key Advantages:** Strong, Direct Connection to Drywall

**Fastener Type:** Key Lock Insert

**Holding Type:** 3/8" Keyhole Drop & Lock

**Alignment Method:** 211 Lock & Hanger Alignment Pins

**Fastener Preparation:** Drill 1-3/8" Through Hole

**Maximum Panel Size:** 4' x 12'

**Template:** N/A

## ACCESSORIES FOR MOUNTING

205 Hanger Shims, 1/32"

234 Mounting Euro Screws, 9/16" Thread

236 Mounting Wood Screws, 1-1/2" Thread

237 Mounting Bolts, #10 x 2-1/4" Thread

241 Epoxy Mounts

243 Thin Mounts, 3/8" Thread

945 Rivnut® 10-24 Steel Nut

950 Snaptoggle, 3/16" 10-24 Thread

952 Pop Toggle

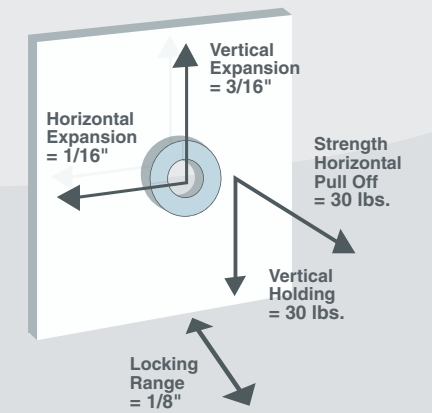
## ACCESSORIES - TOOLS

912 Hole Saw, 1-3/8" & Mandrel

920 Panel Adjuster

913 Pilot Drill, 5mm Center Point Drill & Stop

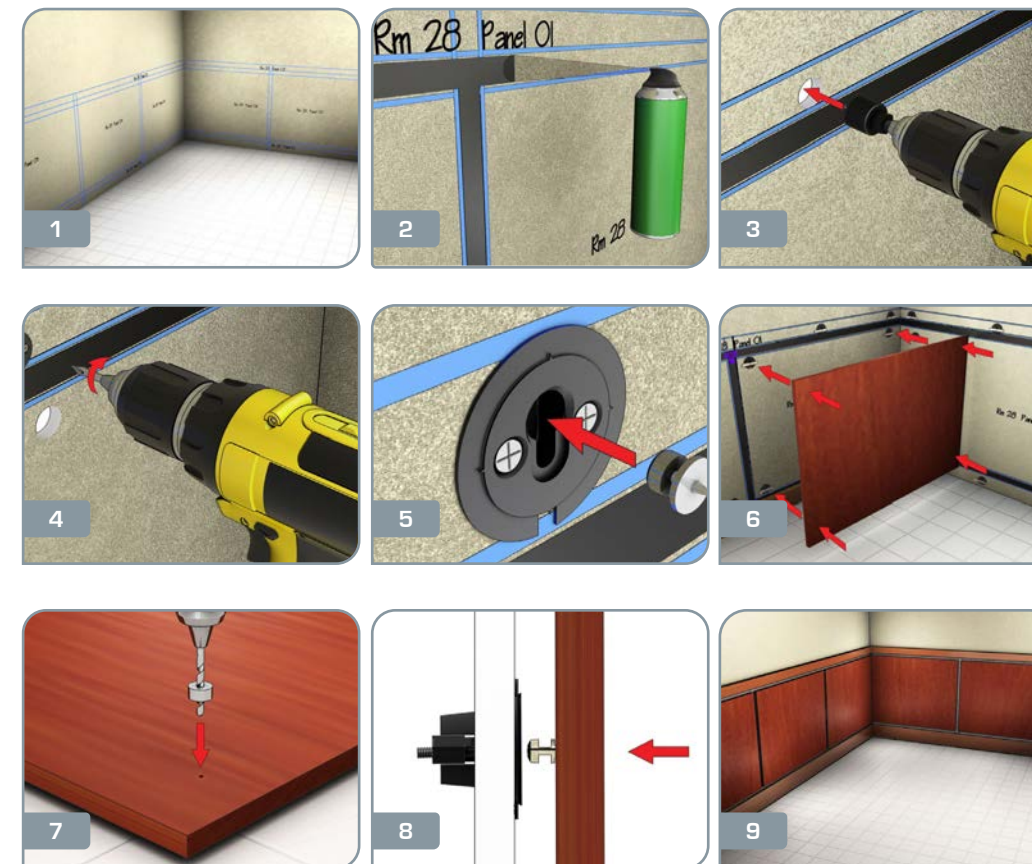
## STRENGTH TESTING



Colors: Black

## 200 HANGER, HOW IT WORKS

Wood panels mounted directly to sheetrock.



1. Layout the position of the reveals on site.
2. Paint the reveals, if needed.
3. Drill the 1 3/8" diameter holes through the sheet rock, as needed. Exact location is not required.
4. Insert the 200 Hanger into the predrilled hole. If you hit a stud, break off the clamp arms on the back of the 200 Hanger for a flush fit.
5. Place the 229 Galaxy Alignment Pins into the 200 Hanger.
6. Carefully position your panel over your 229 Galaxy Alignment Pins and push them firmly enough to leave a location mark.
7. Drill and then insert the 240 Double Headed Mounting Screws.
8. Lift the panel into place about 1/2" above marks, push in and down.
9. Finished product.

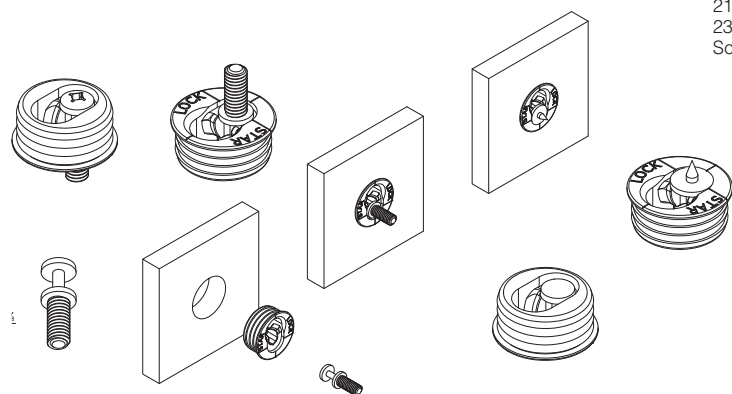
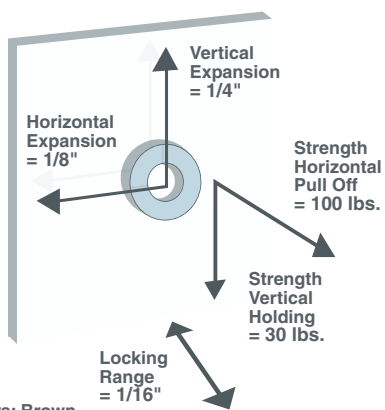
# 210 Lock



Metrolina Woodworks Inc., NC

## PRODUCT ADVANTAGES

- The 210 Lock is an improvement over old-style, 'traditional' panel clips that require 4 screws and 2 clips to be measured and aligned.
- Fast, easy installation
- Securely holds panels in place until you wish to remove them
- Invisible, shallow pockets allow for use in 3/4" panels
- Can be used anytime you want to mount wood to both wood or wood substrate.
- Our mounting screw & bolt also works well when epoxied into a solid surface



210 Lock & 234 Mounting Euro Screw 3/16"

## APPLICATION

The 210 Lock has many uses, including mounting panels to furring or sheetrock with the correct mounting screw in both the shop and in the field. The 210 Lock is a compression, wood-insert fastener used to mount any type of panel directly to either the panel or furring. The 210 Lock has a variety of mounting screws and bolts that allow for mounting thick and thin panels, moldings, metal, acoustical panels, fabric panels, mirrors, chair rails, artwork, signage and more.

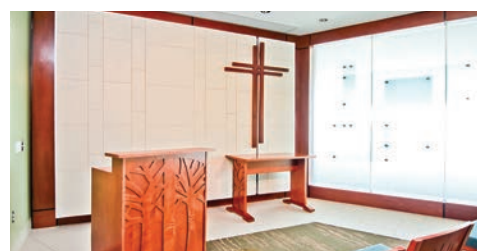
## DESCRIPTION

The 210 Lock is a medium duty, 1" diameter, injection-molded insert fastener designed to push in and down to lock the panel into place. This Lock keyhole design is stronger than the Zero snap-in design. The engineered plastic body and steel-mounting screw withstand repeated removal.

## INSTALLATION

The 1" holes can be quickly drilled with a 910 Carbide Tipped 1" Forstner Bit. Our 211 Lock & Hanger Alignment Pins can be used to mark your panels for the location of the mounting screw or mounting option selected. The Lock fits a 3/16" mounting screw. The panel is pushed in and down to lock the panel firmly in position.

# 240 Epoxy Mount



## APPLICATION

The solid surface 240 Epoxy Mount is designed for installing materials too brittle to hold a screw. Some examples would be (thin panels, Corian, MF, sculpted panels, acrylics, light metal panels, glass and solid surfaces.) The 240 Epoxy Mount work with virtually any material that will accept an epoxy. The perforated mild-steel mounting plate can be epoxy-mounted to almost any surface with high strength and predictability. The small perforations improve mechanical adhesion to the epoxy.

## DESCRIPTION

The 240 Epoxy Mount is made from a steel pin welded to a zinc coated steel plate. The 240 Epoxy Mount head is 3/16" Mounting Bolt, that works with the 340 Lock and 200 Hanger 1-3/8".

The 240 Epoxy Mount can be attached to various panels with a 3M Scotch-Weld 110 Epoxy. The 211 Alignment Pins 3/16" can be used to mark the mount locations onto panels.

The 240 Epoxy Mount is diameter 0.990" or 0.010" less than 1" and just a bit less than 1/16" thick. If installed in a pocket 1" x 1/16" pocket works well.

## COST/BENEFIT ESTIMATE

Mounting Solid Surfaces to wall or walls, and waiting until the glue sets is time consuming and frustrating work. It takes approximately 6 hours per 30" x 96" section, not including the seams. With practice this can be reduced by about 2 hours per sheet.

## PRODUCT ADVANTAGES

- Designed to directly hang solid surfaces such as acrylic, Corian, and glass flush with the wall
- Allows the installer to rely not only on traditional silicone, but a combination of silicone and epoxy mounts
- Quick and easy to install. Corian panels take approximately one hour per full-size sheet. After the epoxy sets up, generally about 24 hours.

## STRENGTH TESTING with 3/4", 45 lb. particle board

- **Tensile Failure** (Horizontal pull) = 250 lbs.  
Working Strength, Pull from Furring = 25 lbs.
- **Shear Failure** (Vertical weight holding) = 350 lbs.  
Working Strength, Weight holding = 25 lbs.



230 Epoxy Mount

# 300 Green Glide & 310 Green Glide Triangle

## APPLICATION

The 300 Green Glide is designed to mount wall panels using a prefabricated furring system. The 300 Green Glide is a precision, hidden-insert fastener that compresses into a pre-routed slot and is best suited to pre-engineered (CNC cut) panel-furring systems. The 300 Green Glide gives the fabricator the ability to exactly control the placement of wood panels, ADA panels, fabric panels, artwork, graphics, upholstery and more.

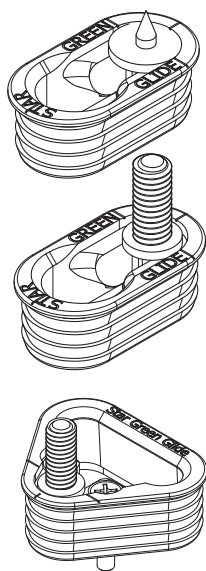
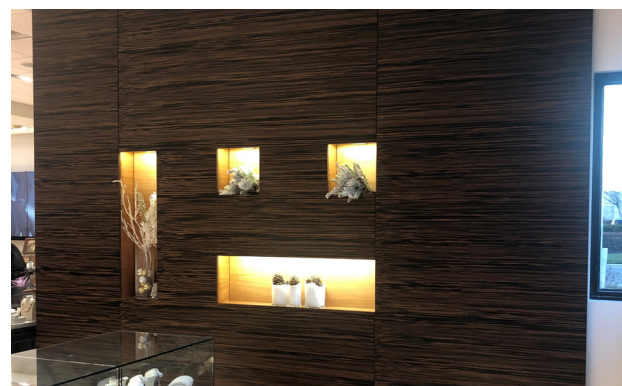
Using this insert is especially advantageous for panel-furring installations with complex, custom-shaped panels. The holes and pockets for the 334 Mounting Screws 5/16" and 300 Green Glide can be pre-drilled and fitted in the shop; then quickly removed, if necessary, for shipping and reinstalled in the exact same location in the field prior to hanging the panels and the furring.

## DESCRIPTION

The 300 Green Glide is faster, stronger and more precise than any other hidden-panel hanging system. The fastener is held firmly in place by compressing into a 5/8" x 1-1/4" routed pocket 1/2" deep. This elongated design provides the keyhole length needed for the 334 Mounting Screw 5/16" in the panel to glide smoothly and firmly into place. The advantage of the full CNC layout is that the double-headed screws are set in a specific location on the panel by starting at 2" off each corner. This mounting location can be pre-drilled and/or quickly determined in the field, with our 318 Green Glide, Drill Template 2" Offset (Includes Template, Drill & Stops)

## COST/BENEFIT ESTIMATE

Current estimates show that the pre-engineered system saves about 1.5 hours per 36" x 96" (or about 10%). This system generally adds engineering hours while saving substantial shop and installation hours. The hardware cost is similar to traditional clips.



Benchmark Woodworks, OH



## QUICK SPEC, 310 GREEN GLIDE TRIANGLE

**Application:** Mounts Wood, Steel, Glass, Solid Surface to Wood

**Key Advantages:** Flush, Strong, Precise, CNC, Locking Cap

**Fastener Type:** Key Lock Insert

**Holding Type:** 3/8" Keyhole Drop & Lock

**Alignment Method:** 311 Green Glide Alignment Pins

**Fastener Preparation:** Route 1-1/4" x 1-1/2" Pocket

**Maximum Panel Size:** 4' x 10'

**Template:** 317 Green Glide Triangle Router Template, 306 Drill Template

## ACCESSORIES FOR MOUNTING

334 Mounting Euro Screws, 9/16" Thread

336 Mounting Wood Screws, 1-1/2" Thread

337 Mounting Bolts, 5/16" x 2-1/4"

341 Epoxy Mount, Nylon 945 Rivnut® 10-24 Steel Nut

950 Snaptoggle 3/16", 10-24 Thread

952 Pop Toggle

## ACCESSORIES - TOOLS

913 Pilot Drill, 5mm Center Point Drill & Stop

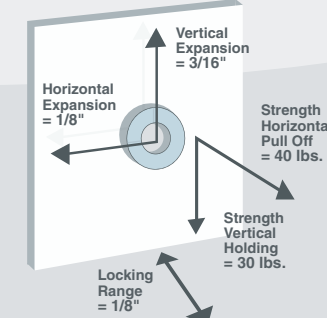
915 Router Bit, Flush Offset (Works with all Star Templates)

920 Panel Adjuster

960 Pneumatic Insert Hammer

962 Hammer Head for 310 Green Glide Triangle

## STRENGTH TESTING



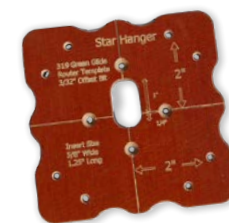
Colors: Green



317 Green Glide Triangle Router Template



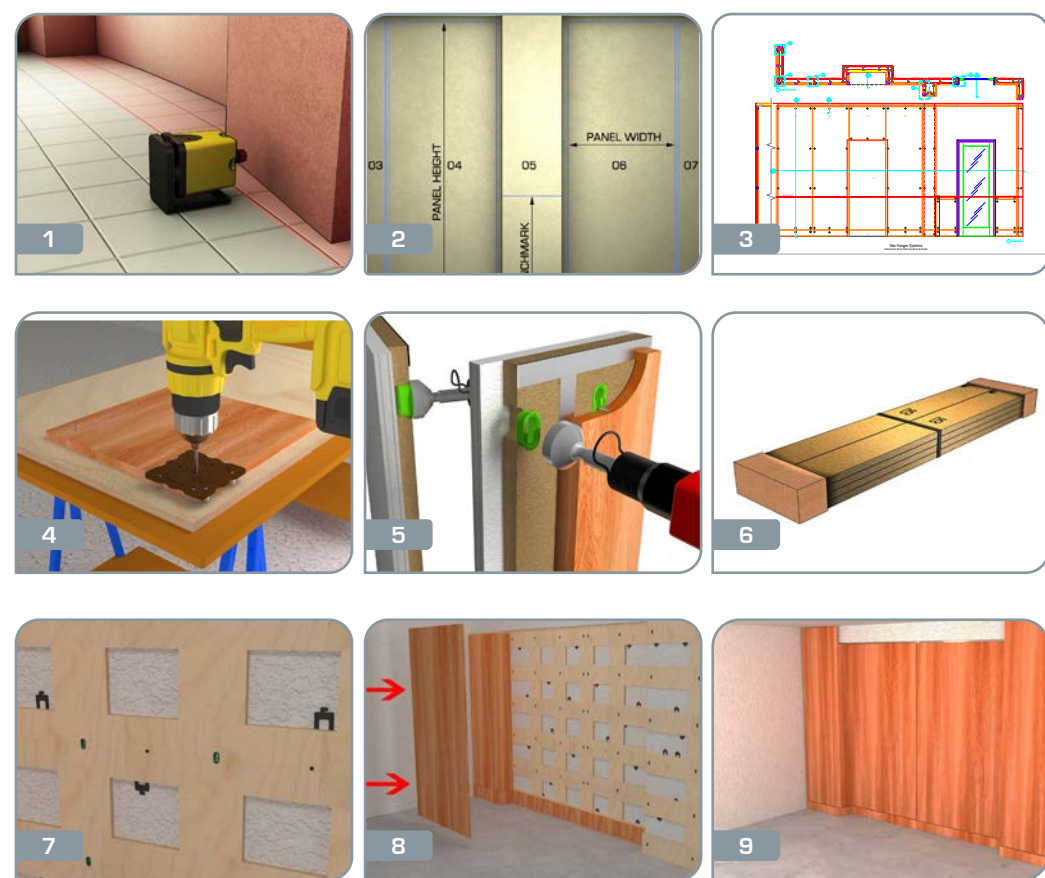
306 Drill Template, 2" Offset



305 Green Glide, Router Template

## 300 GREEN GLIDE, HOW IT WORKS

Wood panels shown mounted using a prefabricated panel system.



- Carefully review the shop drawing to understand field alignment requirements.
- Layout and field verify all required site dimensions based on face of panels for both horizontal and vertical lines.
- Revise shop drawings to reflect face of all panel sizes on primary drawing layer. Revise the furring layer to match panel sizes precisely; **this is a critical step.**
- The 305-300 Hammer Head can significantly reduce the man hours required to install the hangers and is the recommended tool for a proper install of the Green Glides.
- The 334 Mounting Screws can be installed accurately in the field with a drill template.
- The prefabricated panel furring & panels can be shipped flat packed.
- A string line or laser is used in the field install; shim, screw and glue all furring into place.
- Locking the panels into place should be the simplest part of the process.
- Finished room using prefabricated panel furring and the 300 Green Glide.

## 300 SERIES MOUNTING OPTIONS

### 205 HANGER 1-3/8", SHIMS 1/32" (50 SHIMS)



#### APPLICATION

The 205 Hanger 1-3/8", Shim 1/32" is used to shim-out the 200 Hanger 1-3/8" in locations with uneven surfaces. Up to 8 shims or 1/4" of shims can be used per hanger on 5/8" drywall.

### 311 GREEN GLIDE ALIGNMENT PINS 5/16" (10 PINS)



#### APPLICATION

The 311 Green Glide Alignment Pins are used to quickly mark the exact location for the 5/16" mount. The pin fits snugly into the key-slot facing of the 300 Green Glide or 310 Green Glide Triangle for a precision marking. This is removable and reusable.

### 330 ZERO ALIGNMENT PINS (10 PINS)



#### APPLICATION

The 330 Zero Alignment Pins are designed to fit snugly into the following Zero Products: 320, 322, 325, 326, 328. This pin pushes into the front friction catch for a precise marking for the 5/16" mounting screw. Removable and reusable.

### 334 EURO SCREW, 9/16" LONG, 5/16" HEAD GAP



#### APPLICATION

These 334 Mounting Screws have 5/16" between the head and the collar; the threads are 9/16" long and work well with 3/4" plywood, MDF and particle board with a 5mm pilot hole. Compatible with 200 Hanger, 210 Lock, 300 Green Glide, 310 Green Glide Triangle, 320 Zero, 325 & 326 Zero Side Mounts.

### 335 EURO SCREW, 5/16" LONG, 5/16" HEAD GAP



#### APPLICATION

These 335 Mounting Screws have 5/16" between the head and the collar; the threads are 5/16" long and work with 1/2" plywood, MDF and particle board with a 5mm pilot hole. Compatible with 200 Hanger, 210 Lock, 300 Green Glide, 310 Green Glide Triangle, 320 Zero, 325 & 326 Zero Side Mounts.

### 336 COMBINATION SCREW, 1-3/8" LONG, 5/16" HEAD GAP



#### APPLICATION

The 236 Combination Screw has 5/16" between the head and the collar; it has 16 threads per inch, at 1-3/8" long with a 1/8" pilot hole. The combination screws work well in both wood and with plastic anchors like the 952 Pop Toggle TC. Compatible with 200 Hanger, 210 Lock, 300 Green Glide, 310 Green Glide Triangle, 320 Zero, 325 & 326 Zero Side Mounts.

### 337 COMBINATION SCREW, 9/16" LONG, 5/16" HEAD GAP



#### APPLICATION

The 337 Combination Screw has 1/8" between the head and the collar; it has 16 threads per inch, at 9/16" long with a 1/8" pilot hole. The combination screws work well in both wood and with plastic anchors like the 952 Pop Toggle TC. Compatible with 200 Hanger, 210 Lock, 300 Green Glide, 310 Green Glide Triangle, 320 Zero, 325 & 326 Zero Side Mounts.

## 300 SERIES MOUNTING OPTIONS

### 338 MACHINE SCREW 10-24, 1-3/8" LONG, SELF-TAPPING, 5/16" HEAD GAP



#### APPLICATION

The 338 Mounting Bolt has 1/8" between the head and the collar; it has 24 threads per inch, at 1-3/8" long. The machine bolt is typically used in tapped, light gauge steel and aluminum with a 1/8" to 0.149" pilot hole. The 10-24 thread is common and can be used with the 945 Rivnut, 950 Snaptoggle and a variety of commercially available anchors. Compatible with 200 Hanger, 210 Lock, 300 Green Glide, 310 Green Glide Triangle, 320 Zero, 325 & 326 Zero Side Mounts.

### 339 MACHINE SCREW 10-24, 9/16" LONG, SELF-TAPPING, 5/16" HEAD GAP



#### APPLICATION

The 339 Mounting Bolt has 1/8" between the head and the collar; it has 24 threads per inch, at 9/16" long. The machine bolt is typically used in pre-drilled, light-gauge steel and aluminum with a 1/8" to 0.149" pilot hole. The 10-24 thread is common and can be used with the 945 Rivnut and a variety of commercially available anchors. Compatible with 200 Hanger, 210 Lock, 300 Green Glide, 310 Green Glide Triangle, 320 Zero, 325 & 326 Zero Side Mounts.

### 343 THIN MOUNTS 3/16" (100 SCREWS)



#### APPLICATION

The 343 Thin Mount is designed for thin panels made of plywood, particle board composites, plastics and solid surfaces. The 343 Thin Mount inserts into a drilled or routed 1/2" hole. The Thin Mounts are made with engineered, automotive plastic that is slightly pliable and will not void the solid surface fabrication warranty.

### 349 UPHOLSTERY MOUNTS



#### APPLICATION

The 349 Upholstery Mount is designed for fabric-wrapped panels and is designed to work with soft materials; those that are difficult to determine or have variable locking depth. This mount is suitable for to use with most surfaces and is made with an engineered automotive plastic that is slightly pliable and will not void a solid surface fabrication warranty. With a ridged, multilevel locking head, you can push each contact point in at different depths to accommodate bulging or bunched fabric.

## MOUNTING ACCESSORIES

### 953 BOSCH 5/16" X 6" CARBIDE TIPPED DRILL



#### APPLICATION

The 953 Bosch 5/16" x 6" Carbide Tipped Drill works with the 952 Pop Toggle for long and smooth drilling of sheetrock.

### 945 RIVNUT® 10-24 STEEL NUT - STEEL INSERTS FOR SHEET METAL



#### APPLICATION

The 945 Rivnut® is basically a threaded 'Pop Rivet' and can be fitted into a small hole from only one side of a steel panel. The 945 Rivnut® work as nuts for the 237 and 337 Mounting Bolts for use in many applications, like connecting wood panels to steel panels.



### 911 CARBIDE TIPPED, 1-1/4" FORSTNER BIT

The 911 Carbide Tipped, 1-1/4" Forstner Bit is compatible with the 224 Galaxy. The Galaxy insert is 5/16" thick; we recommend a 3/8" hole depth, leaving a 1/16" space to ensure the insert does not bottom-out. This gap also allows for expansion and contraction of the panel without bubbling the surface.

### 952 POP TOGGLE TC FOR 5/8" SHEETROCK (100 TOGGLES)



#### APPLICATION

The 952 Pop TC Toggle® is a Medium Duty sheetrock wall anchor. It works very well with our 236 and 336 Mounting Screws. The Pop Toggle in combination with the appropriate screws and fasteners allows for multiple applications.

### 950 STEEL TOGGLES - STEEL INSERTS FOR ANY CAVITY



#### APPLICATION

The 950 Steel Toggle is a zip-action, hollow-cavity anchor designed to work with our 237 Mounting Bolt and 337 Mounting Bolt. Perfect for concrete blocks, sheetrock, steel and more.

# 400 SERIES: Traditional & Modern Wall Clips

The 400 series includes two styles of Z Clip for vertical panel installation. We have a traditional aluminum S Clip and our modern nylon NZ Clip that can be stapled into place. These are super-fast and strong!

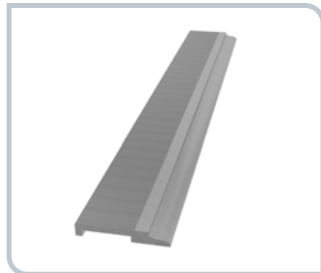
400 NZ Clip



420 S Clip



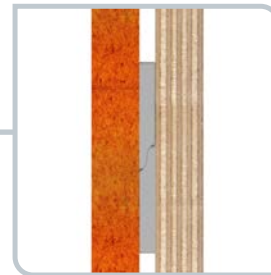
430 S Bar



410 NZ Alignment Clip



400 NZ Clip Staple



410 NZ Clip Wood Screws

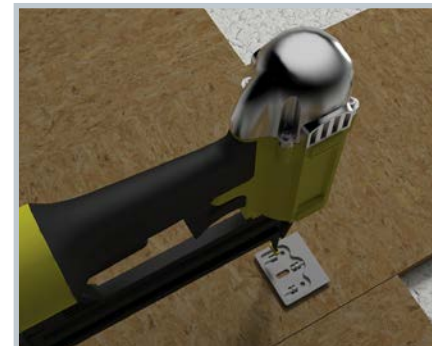


420 S Clip Steel Screws



430 S Clip Bar Epoxy

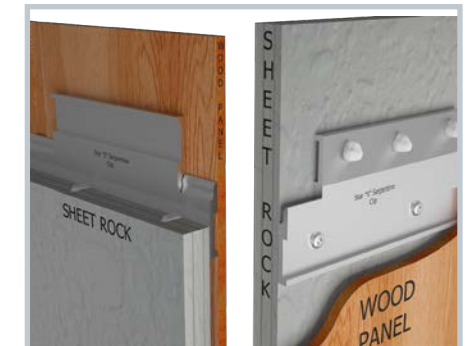
400 NZ Clip



420 S Clip



430 S Bars



# 400 NZ Clip

(1/4" Staple Installed)

## APPLICATION

The Star Hanger 400 NZ Clip is a redesigned panel clip system that is revolutionizing installation of vertical mounted panels. The high strength nylon construction has the potential to replace traditional aluminum clip systems, while at the same time reducing both material and installation costs.

Please see the 400 NZ Clip Shop Demonstration Video on YouTube to see how they save about 2/3 of the installation time.

The 400 NZ Clip fits into our 12 ft. Aluminum extruded 430 S Clip Bar.

## DESCRIPTION

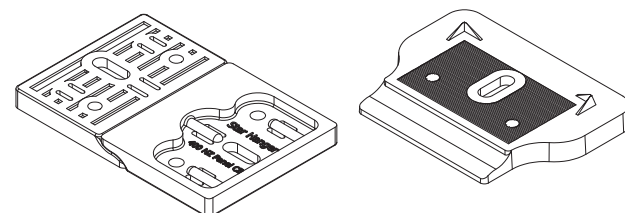
The 400 NZ Clip is a standard clip size, 1/4" thick x 2" long, and when paired, they are 2" x 3"; the screw layout is a perfect 1-1/2" square (3/8" lift-off). The formulation of the molded material is strong yet pliable. The unique pliability, preformed staple slots, and thick structural ribs around the perimeter make the clip stronger than standard aluminum clips.

The 400 NZ Clip can be quickly installed because the wall fastener locations do not have to be perfectly horizontal, and the panel clip location is determined with the use of the 410 Alignment Clip.

The panel is accurately located, and when the panel is pushed into 400 NZ Alignment Clip, the marking blades provide a thin and precise mark that shows exactly where the outside edge of the upper corners are located.

## COST/BENEFIT ESTIMATE

Traditional panel clips are time consuming to layout and to install, taking about 6 minutes per pair. At \$50.00 an hour, that is \$8.33 per pair. The combination of the 400 NZ Clip and the 410 NZ Alignment clips can cut that time by more than 2/3. Comparable in cost at as low as \$0.25 per clip.



Salon Interiors, NJ

410 NZ Alignment Clip

400 NZ Clip

**QUICK SPEC, 400 NZ PANEL CLIP, NYLON**

**Application:** Mounts Wood, Steel, Glass, Solid Surface to Wood

**Key Advantages:** Strong, Versatile, Works with Staples

**Fastener Type:** Surface Mounted

**Holding Type:** 3/8" Drop & Lock

**Alignment Method:** 410 NZ Alignment Clip

**Fastener Preparation:** Surface Mount

**Maximum Panel Size:** 4' x 12'

**ACCESSORIES - TOOLS**

920 Panel Adjuster

**STRENGTH TESTING**

Vertical Expansion = 3/16"

Horizontal Expansion = 1"

Strength Horizontal Pull Off = 25 lbs.

Strength Vertical Holding = 25 lbs.

Locking Range = 1/8"

Colors: Gray

**ACCESSORIES FOR MOUNTING**

Surface Mount, Recessed Mount

## 400 NZ CLIP, HOW IT WORKS

Wood panels shown mounted to a premium grade furring system.



1. Determine greatest projection (bump out in wall) to determine face of panel layout.
2. Field-verify all required site dimensions based on face of panels for both field horizontal and vertical lines.
3. Using string lines or a laser, shim, glue and screw all horizontal furring into place.
4. Screw or staple the 400 NZ Clips at all corners and 24" on center or as needed.
5. Place 410 NZ Alignment Clips on each individual panel's set of clips (The Alignment Clips are reusable).
6. Place reveal spacers between panels to locate the exact panel positions. Carefully push the panel into the Alignment Clips to mark the panel clip position
7. Screw or staple the 400 NZ Clips in the position indicated by the Alignment Clips. The clips can be adjusted using the screw slot.
8. Set the panels by firmly pulling them down until they bottom out on the clips. It is a good practice to use a dab of silicone on the center clips to prevent movement.
9. Completed panel system

# 420 S Clip

## APPLICATION

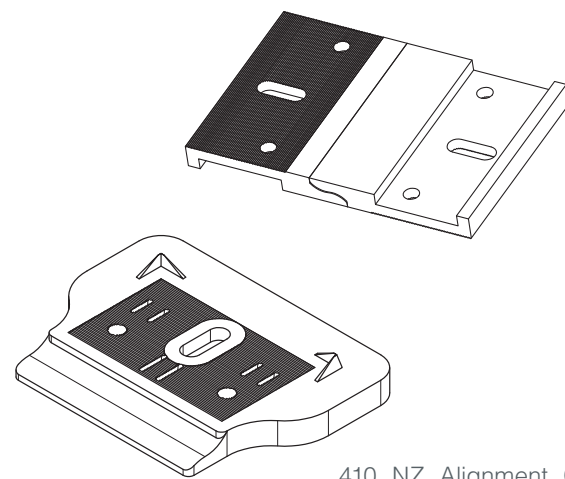
The 420 S Clip is generally used to mount panels to furring in the field. It can also be used in full-length bars to mount panels directly to drywall. The 420 S Clip is an upgrade to the more traditional panel clip, providing improved 'locking' and fast, precision mounting. The S Clip is stronger, easier to adjust, and has higher resistance to side movement than other mounting clips. It can be used with all wood, MDF, and architectural panels - with or without furring. Like most clips, it requires a 1/4" pocket for flush-mounting panels.

## DESCRIPTION

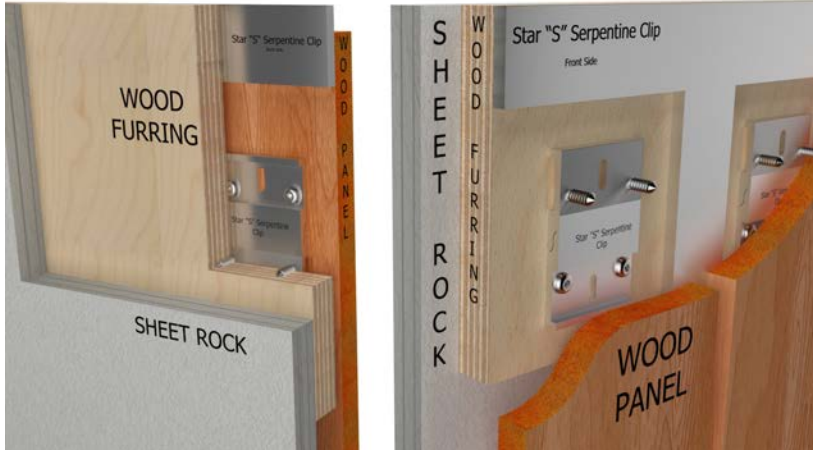
The 420 S Clip is made of extruded aluminum cut to 2" lengths; when paired, they require a 2" x 3-1/2" pocket (3/8" lift-off). Features include a unique ogee profile that snaps into place, letting the installer know that the location is correct and the panel is seated properly. There is 1 screw-slot for adjustment and 2 for locking. The clips are ribbed along the backs, backs, which provide extra strength and security.

## COST/BENEFIT ESTIMATES

Traditional panel clips are time consuming to layout and install taking about 6 minutes per pair. At \$50.00 an hour, that is \$4.97 per clip. With use of the 410 NZ Alignment Clip, time can be cut in half, while the hardware cost is as low as \$0.25 per clip and is competitive with all other premium clips.



410 NZ Alignment Clip is a compatible marking tool for the 420 S Clip.



Astro Sheet Metal, TX



## QUICK SPEC, 310 GREEN GLIDE TRIANGLE

**Application:** Mounts Wood, Steel, Glass, Solid Surface to Wood

**Key Advantages:** Traditional Clip

**Fastener Type:** Surface Mounted

**Holding Type:** 3/8" Drop & Lock

**Alignment Method:** 410 NZ Alignment Clip

**Fastener Preparation:** Surface Mount

**Maximum Panel Size:** 4' x 12'

## ACCESSORIES FOR MOUNTING

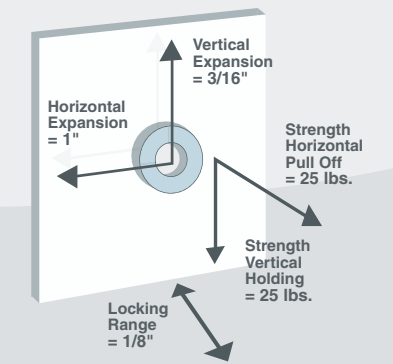
Surface Mount, Recessed Mount

430 S Clip 12ft Bar is compatible with the 400 NZ Clip and 410 NZ Alignment Clip.

## ACCESSORIES - TOOLS

920 Panel Adjuster

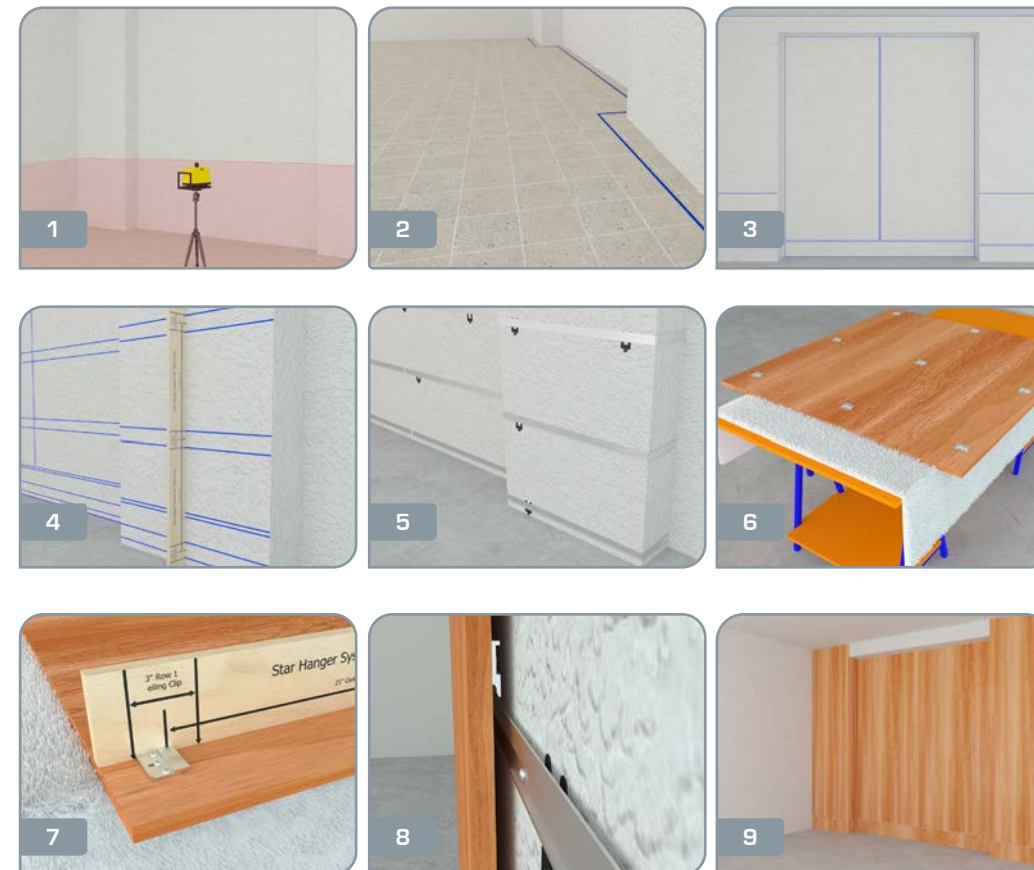
## STRENGTH TESTING



Colors: Aluminum

## 420 S CLIP, HOW IT WORKS

Wood panels and full-length bars mounted directly to sheetrock.



1. Find high point of floor, check to see if the project has a pre-set, horizontal benchmark. If not, set your own horizontal benchmark.
2. Determine greatest projection (bump out in wall). This will determine the face of the panels. If there is a large bump, discuss the layout options with the GC.
3. Layout the basic dimensions of the panels on the walls to confirm there are no problems, panel alignments, widths of door jambs or electrical build outs.
4. Layout a story pole that includes the benchmark plus top and bottom of the Bars and Clips, which are 3" apart. The bars should be about 24" apart.
5. Starting in the corners, shim the bars out to the greatest projection per wall. The finished bars should be level and straight.
6. Place your panel upside down on a soft surface.
7. Use your story pole to mark the top of the 400 S Clips and accurately screw them into place.
8. Lift the panel into place - about 1/2" above marks, and push in and down firmly to lock the panels into their final position.
9. Finished paneled wall.

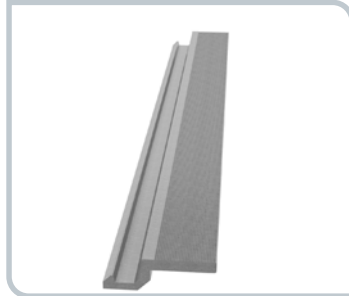
# 500 SERIES: Ceiling Panels

The 500 Series provides a safe and efficient method to mount overhead panels to ceiling furring. There are a variety of compatible components that allow the user to choose single clips, clip pairs, full bars and the panel reveal lock to prevent ceiling panel movement.

510 Ceiling Clip Pair



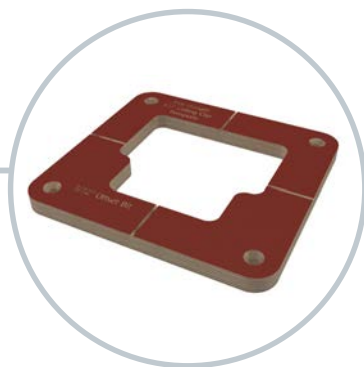
511 Ceiling Clip Bars



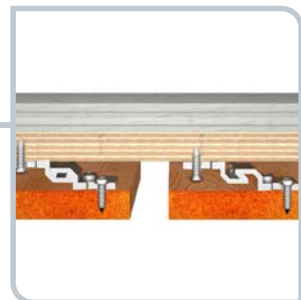
512 Ceiling Clip Singles



514 Ceiling Clip Pair, Nylon



537 Ceiling Clip Template



510 Ceiling Clip Wood Screws



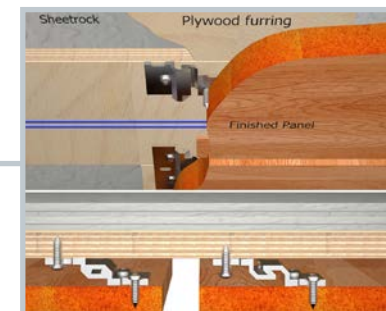
511 Ceiling Clip Bar-Tapping Screws



527 Ceiling Reveal Lock

## 500 SERIES - CEILING PANELS

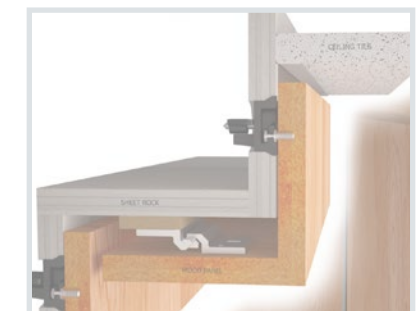
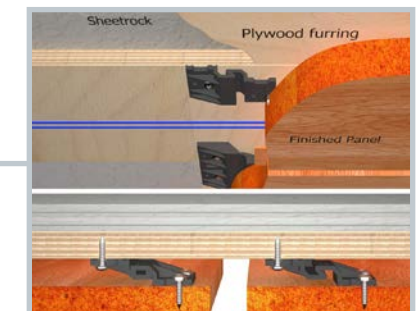
510 Ceiling Clip Pair



511 Ceiling Clip Bars



514 Ceiling Clip Pair





# 510 Ceiling Clip

## APPLICATION

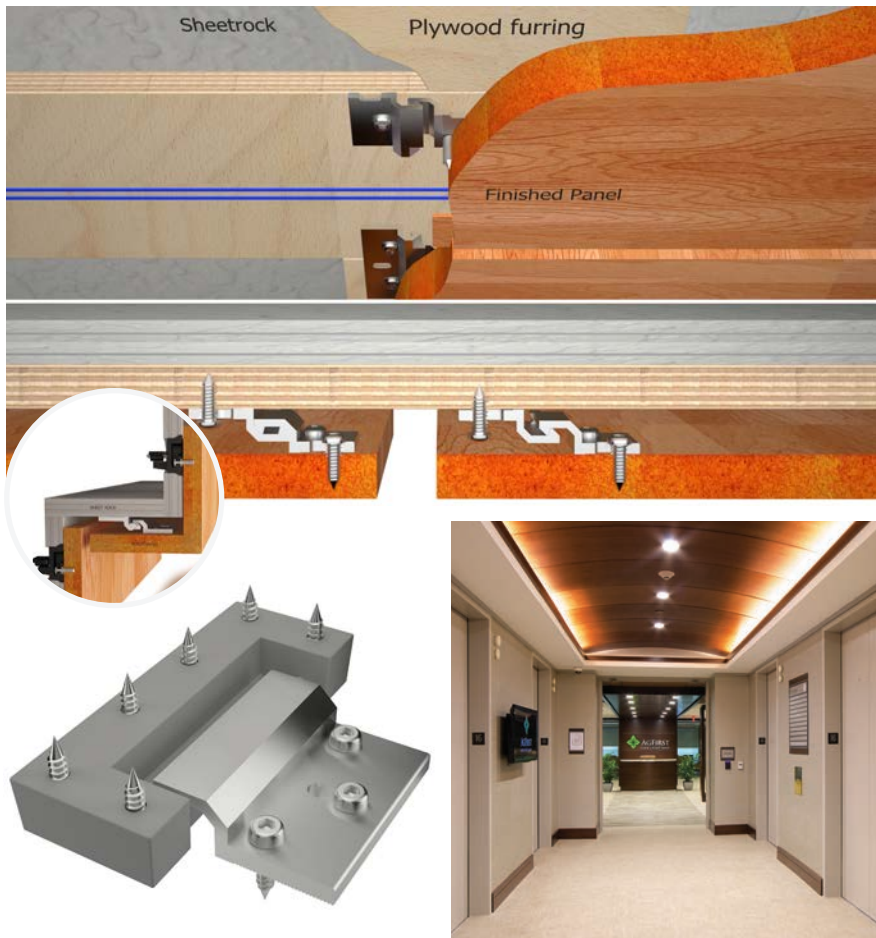
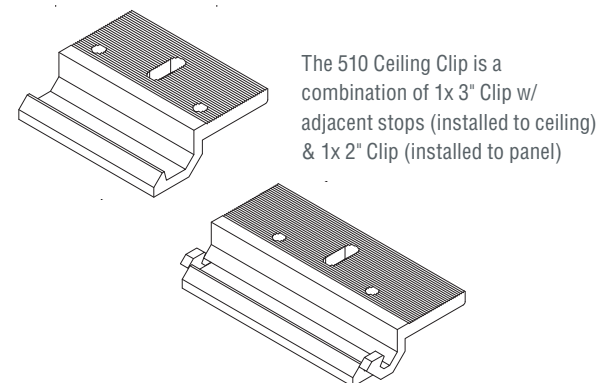
510 Ceiling Clips are designed to mount overhead panels to ceiling furring. These 510 Ceiling Clips are a pair of hidden, ceiling-panel clips that lock together, both side to side and front to back, and still allow panels to remain removable.

The 510 Ceiling Clip is the first clip of this kind specifically designed for horizontal application. No manufacturer currently recommends the use of standard Z Clips because panels continually expand and contract in size. This movement has a tendency to pull and push against the clip. Over time, this creeping action can literally move the panel off its clips. The 510 Ceiling Clips have a mechanical locking edge that physically prevents the clips from pulling off the edge. They offer improved stability and safety.

This fastener allows panels to be lifted and dropped into place, securely hanging panels from any wood furring that will hold screws. Once in place, the panels can be removed but only with coordinated lifting on all edges (1/16" ceiling clearance). The 510 Ceiling Clip has a Z-hook shape with a 1/8" overlapping edge and end stops that prevent one clip from slipping off the other. The clips have 3 holes for secure mounting and are rated up to 25 lbs.

## DESCRIPTION

Ceiling Clips are solid aluminum and come as a pair of single pieces or 12' lengths. In both cases, one clip is attached to the ceiling furring while the other is attached to the panel backs (screws supplied) in a corresponding location. Accurate alignment can be achieved using our template (537 Ceiling Clip Template). The panels are then lifted into place and locked by dropping the clips into place. The panel position is adjustable up to a 1/4" allowing for material expansion. The panels can be held and positioned by adding small amounts of silicone where the clips join.



Barker Rinker Seacat Architecture, CO

510 Ceiling Clips and 6x #8 3/4" Pan Head Screws

511 Ceiling Clip 12ft Bar

**QUICK SPEC, 510 CEILING CLIP**

**Application:** Mounts Wood Panels to Overhead Furring

**Key Advantages:** Safe, Strong, Designed for Overhead Use

**Fastener Type:** Surface Mounted

**Holding Type:** 1/8" Drop & Lock

**Alignment Method:** Plywood Template

**Fastener Preparation:** Surface Mount

**Maximum Panel Size:** 4' x 12'

**Template:** 537 Ceiling Clip, Router Template

**ACCESSORIES FOR MOUNTING**

- 510 Ceiling Clip, Pair Aluminum
- 511 Ceiling Clip, 12 ft. Bar
- 512 Ceiling Clip, Single Aluminum
- 514 Ceiling Clip Pair, Nylon
- 516 Ceiling Clip, Reveal Lock
- 537 Ceiling Clip, Router Template

**Colors:** Aluminum

**STRENGTH TESTING**

Vertical Expansion = 1/4"

Horizontal Expansion = 1/4"

Strength Horizontal Pull Off = 25 lbs.

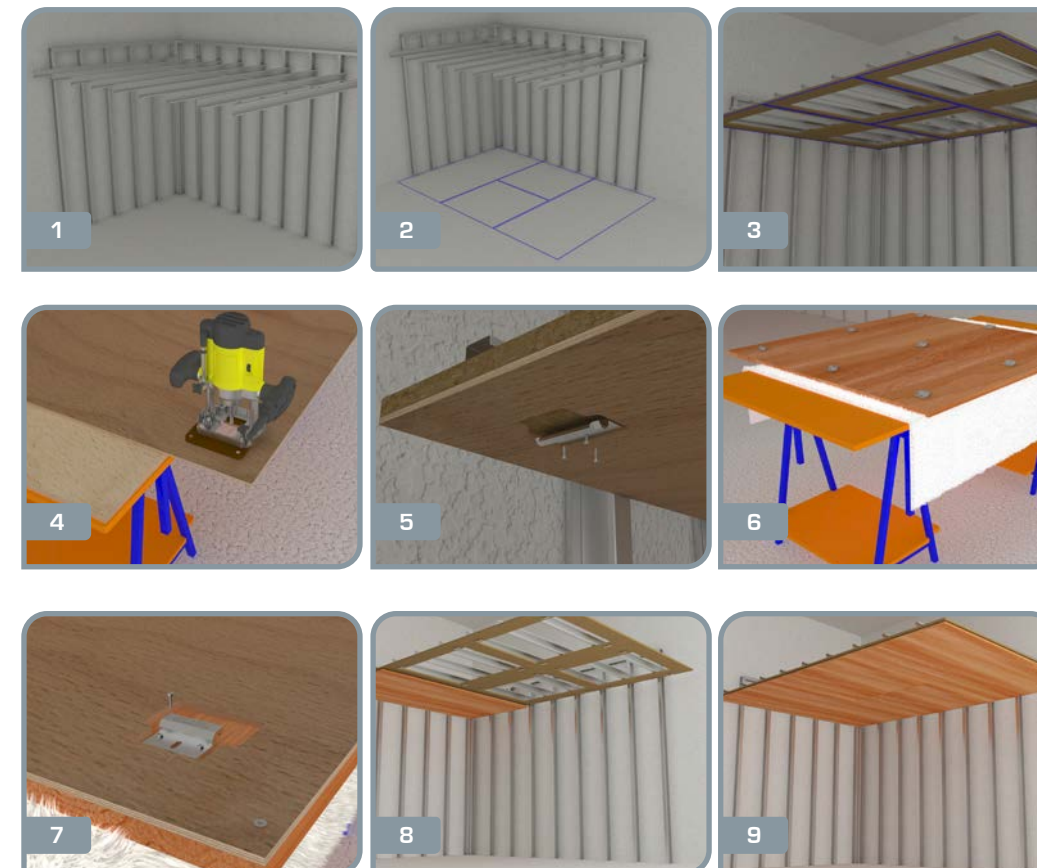
Strength Vertical Holding = 25 lbs.

Locking Range = 1/32"

The 512 Ceiling Clip Single is a 2" clip designed to work with the 511 Ceiling Clip, Bar 12ft. This is the same clip that comes with the 510 Ceiling Clip.

## 510 CEILING PANEL CLIP, HOW IT WORKS

Wood ceiling panels shown mounted to furring.

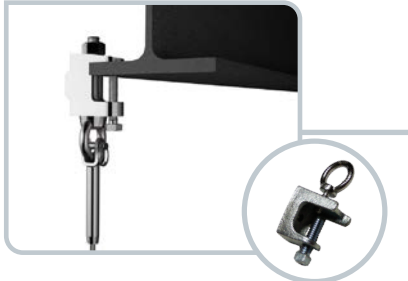


1. Check the structure above the sheetrock to be sure it will support the panels you are planning to install. Our weight holding for screws is based on using 16-gauge steel studs.
2. Lay out the perimeter of the panel's layout lines on the floor to check fit.
3. Securely install 3/4" plywood furring with a string line, level & flat.
4. Make a template from 1/4" plywood to provide accurate installation of the clips. Star Hanger sells a 537 Ceiling Clip Router Template that is helpful here.
5. Temporarily set the 1/4" plywood template in the exact location of the panel with a few screws. Install the 3" Ceiling Clip carefully against the back on the template with 3 screws
6. Set up flat, carpeted worktable to work on.
7. Temporarily set the 1/4" plywood template on the panels with a few screws.
8. Install the ceiling panel carefully, and make sure each clip has dropped into place.
9. Ceiling panels can be glued with a small spot of silicone to hold reveal tolerances. The panels are now safely in place and still permanently removable.

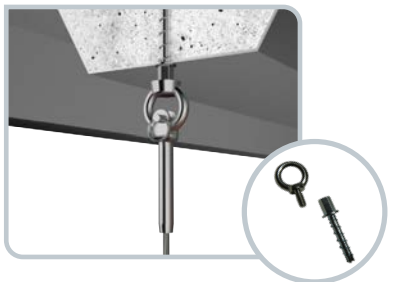
# 600 SERIES: Overhead Cloud Hanger

The 600 Series is made up of a variety of components that allow overhead panels, clouds, signs, art and slats to be hung from stainless steel cables. We supply all of the components required to connect your finished product directly to the support structure above using strong and attractive hardware.

610 Beam Clamp



612 Anchor & Eye Bolt



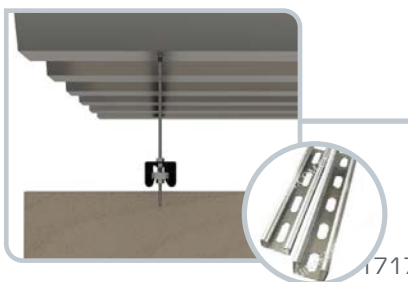
614 Diamond Eye Pad



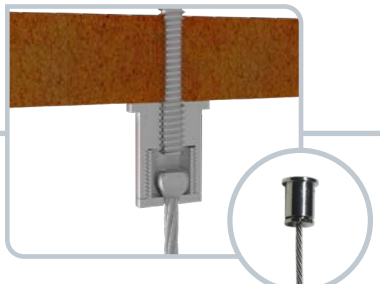
615 Eye Bolt Screw



617 Unistrut



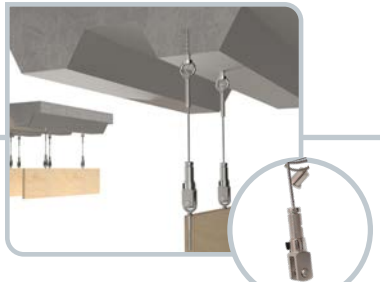
620 Ball Lock



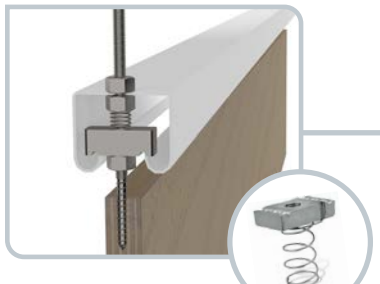
622 Cable & Fork



625 Adjustable Cable Gripper



618 Unistrut Channel Nut



625 Nylon Hanger



630 Aluminum Hanger



615 Eye Screw

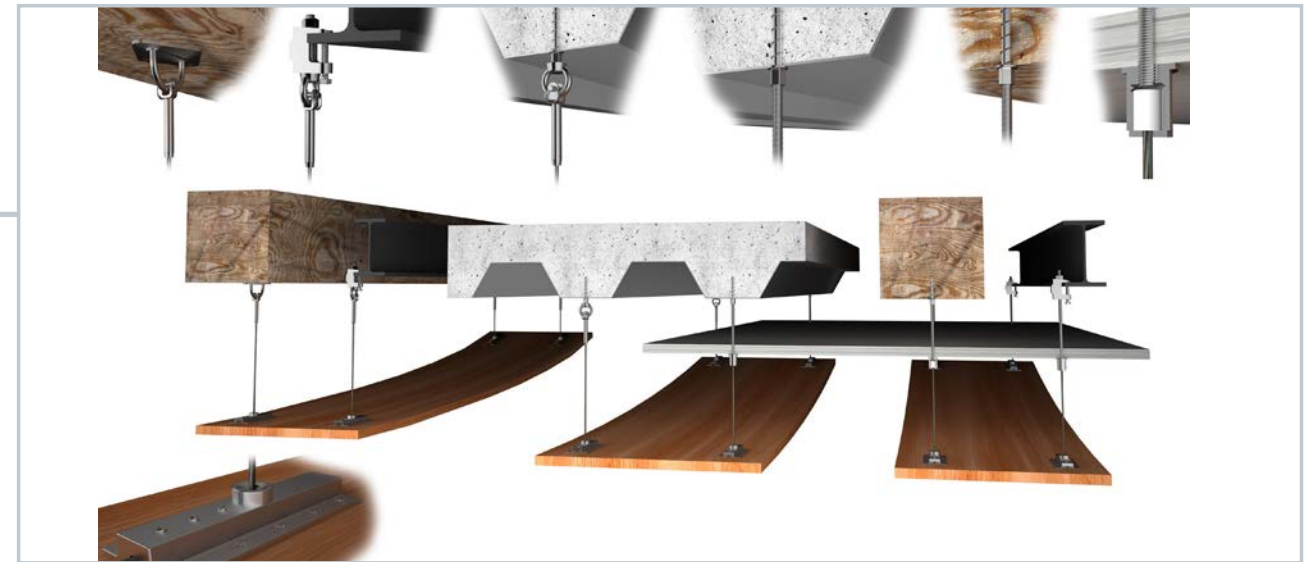


619 Rail & Slat Bolts



Using the connection chart below, find the fastener that best fits your surface.

## 600 SERIES - CLOUD HANGER



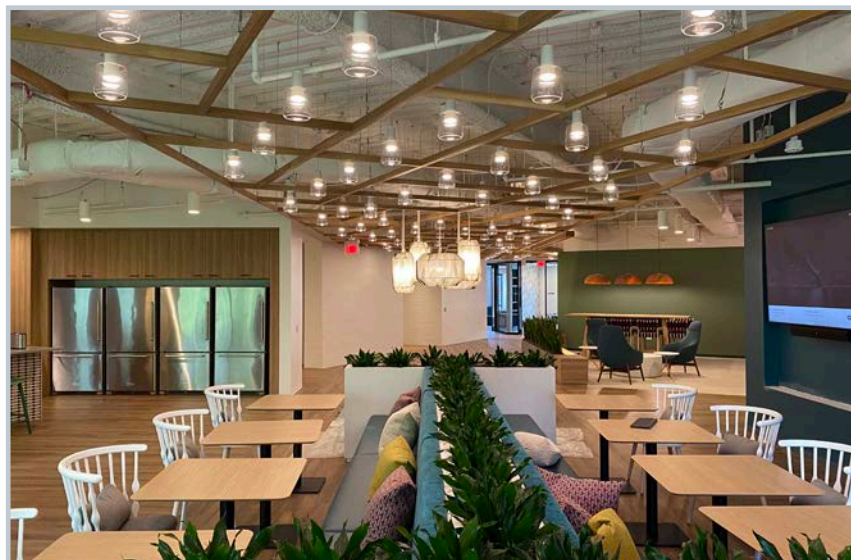
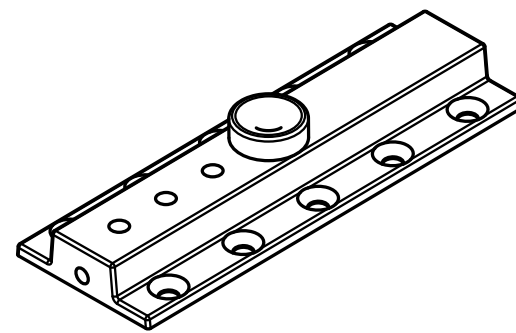
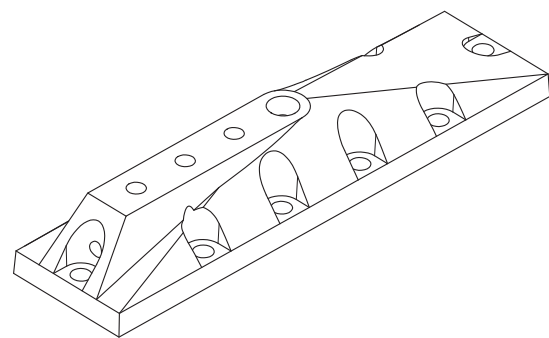
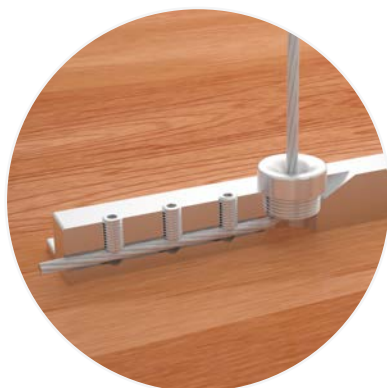
# 630 Cloud Hanger

## APPLICATION

The 630 Cloud Hanger is an adjustable mounting plate that is the final connection from 1/8" cable to wood ceiling panels, art work or anything else that holds screws. With the 630 Cloud Hanger, cable length is quickly adjustable, and wood panels are securely attached with 10 Pan Head screws. The ten screws allow for secure and durable connection even to thinner panels.

## DESCRIPTION

Manufactured by Star Hanger, the 630 Cloud Hanger is constructed from a solid 5/8" x 1-7/8" x 5-1/2" aluminum, extruded bar. There are 10 screw holes for # 8 Pan-Head screws. The cable length is easily set during installation with 3 Allen lock-screws at the cloud level, which greatly eases final adjustment. There is a rub collar to protect the cable at the clip-to-cable connection, which allows the panel to be mounted at up to a 30-degree angle. The 630 Cloud Hanger is generally unseen and has an aluminum mill finish.



Southern Commercial Interiors, Inc., SC



## QUICK SPEC, 625 CLOUD HANGER, NYLON

- Application:** Mounts Wood Panels to Cables
- Key Advantages:** Safe, Strong, Adjustable, Overhead Use
- Fastener Type:** Surface Mounted
- Holding Type:** Set Screws
- Alignment Method:** Laser Level
- Fastener Preparation:** Surface Mount
- Maximum Panel Size:** 5' x 12'
- Template:** N/A

## ACCESSORIES FOR MOUNTING

- 610 Beam Clamp, Connects to I Beam
- 612 Anchor & Eye Bolt, Connects to Concrete
- 614 Diamond Eye Pad, Connects to Wood
- 615 Stainless 1/4" Eye Wood Screw
- 620 Ball Lock & Cable, Connects to Sheetrock
- 622 Cable Fork & Cable, Connects to Cloud Hanger

**Note:** The plate pullout strength will vary according to the size and depth of the screws, pilot holes, cable angle and material type. A single # 8 flat-head, wood screw with 1/2" penetration, and a 3/64" pilot hole, installed in 45 lbs particleboard, fails at about 30 lbs. With 10 screws, this gives a total pull out of 240 lbs, which divided by a safety factor of 5, gives a working load limit of 40 lbs.

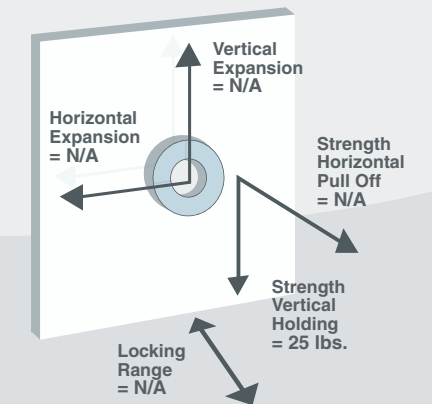
**Star Hanger Systems recommends:** Ceiling clouds should be made with a plywood core at least 3/4" thick, with four cables, a maximum panel weight of 160 lbs and a maximum cable-angle of 30° from the horizontal.

**Note:** 630 Cloud Hanger is a fixed cable connection; therefore, movement or sway of the cloud panel will result in bending and fatigue at the cable - clip connection. 630 Cloud Hanger has been tested to 1,000,000 sway cycles, at 10 degree angles, holding 100 lbs. However, a fixed cable connection should not be used if panels will be constantly subject to sway or noticeable movement.

## ACCESSORIES - TOOLS

N/A

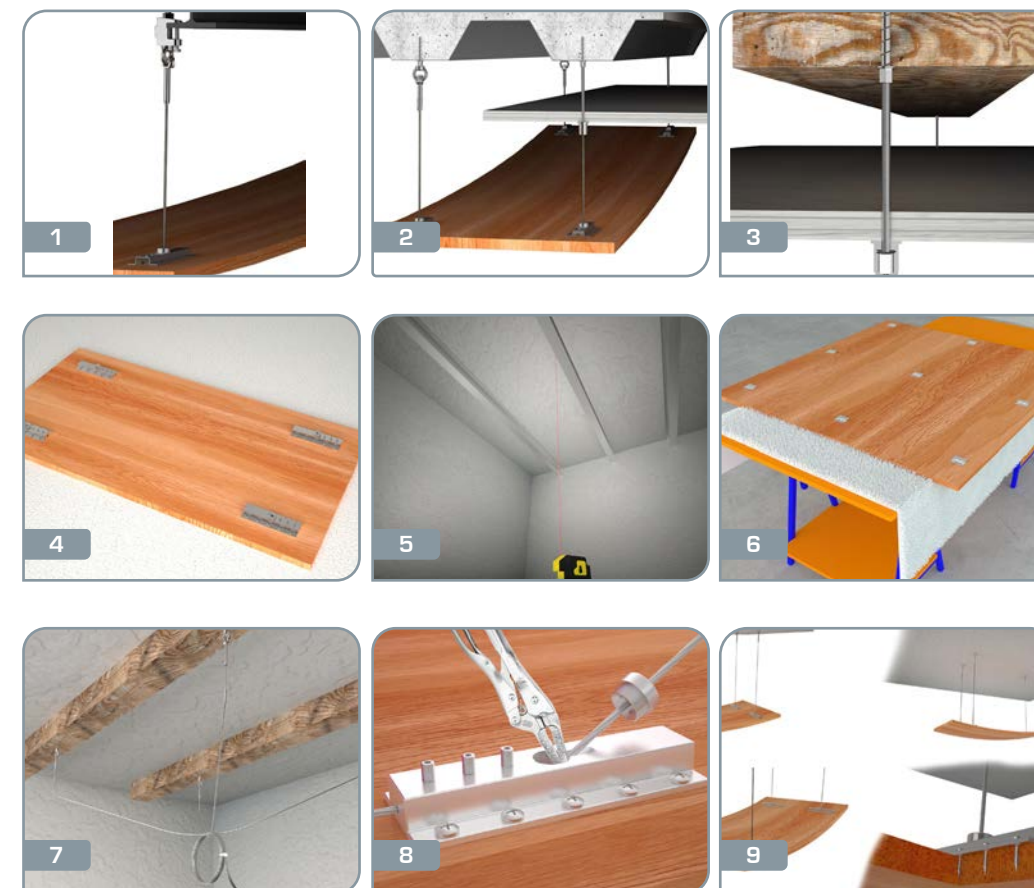
## STRENGTH TESTING



Colors: Black

## 625 CLOUD HANGER, HOW IT WORKS

Wood ceiling panels shown mounted to various substrates.



- 1-3 There are three common ceiling structures that the Cloud Hangers can be suspended from - steel beams, concrete and wood. The type of ceiling structure determines your first steps.
4. Determine the desired location of ceiling panel on the floor.
5. Use a laser level to transfer the cable connection points to the ceiling structure.
6. Examine the ceiling structure above and determine if the cable connection points are workable. Do not block HVAC vents, fire sprinklers, cameras or other critical equipment.
7. When using exposed structural connections and cables. The cables should be dropped about 12" below the final panel level. Tie and loop the cables together to hang them well above the work zone.
8. Install the 630 Cloud Hangers onto the Cloud Panel using Installation Guide found on our website.
9. Finished panels

**Note:** When properly connected, the 630 Cloud Hangers should show no signs of movement or failure with 100 lbs. pounds of added force.

## 600 SERIES MOUNTING OPTIONS

### 610 BEAM CLAMP: CONNECTS TO I BEAM



#### APPLICATION

The 610, 1/4" Beam Clamp offers a secure option for the uppermost connection of cloud-cables, or other connections, to steel ceiling structures. This is a commonly available clamp designed to connect 1/4" - 20 threaded rod to steel trusses or I-beams.

### 612 ANCHOR & EYE BOLT: CONNECTS TO CONCRETE



#### APPLICATION

The 612 Cloud Hanging Structural Screw Anchor & Eye Bolt is an option for the uppermost connection point to concrete ceiling structures for cloud systems. This is a commonly used Screw Anchor (KH-EZ I, manufactured by Hilti), designed to attach 1/4" - 20 threaded rod or an eye bolt to a concrete surface.

### 614 DIAMOND EYE PAD: CONNECTS TO WOOD



#### APPLICATION

The Cloud Hanging structural connector, 614 stainless 1/4" Diamond Pad Eye is one option for an exposed uppermost connection point at the ceiling structure. The Pad Eye is generally screwed to a thick wood beam or steel beam.

### 615 STAINLESS 1/4" EYE WOOD SCREW



#### APPLICATION

The Cloud Hanging structural connector, 615 stainless 1/4" Eye Screw, with 2-1/4" of thread includes the option of using the Eye Wood Screw for the exposed, uppermost connection to the ceiling structures and on the lower panel connections. The highly polished Eye Bolt is a strong and attractive fastener.

### 617 UNISTRUT 1-5/8" CHANNEL



#### APPLICATION

The 617 Unistrut, 1-5/8" Channel is a common structural support found at any electrical supply house. Most customers buy this locally to save on shipping. The Unistrut is used as a component in hanging a variety of slats and wood strips directly from the ceiling structure. It is generally used with the 618 Unistrut Nut and the 619 Rail & Slat Bolt.

## 600 SERIES MOUNTING OPTIONS

### 618 UNISTRUT SPRING NUT



#### APPLICATION

The 618 Unistrut Spring Nut fits into the 617 Unistrut, 1-5/8" Channel and has a 1/4" -20 thread. The nut is generally used with a 619 Rail & Slat Bolt to hold slats on cable ends. The 618 Unistrut Spring Nut can be inserted into the 617 Unistrut, 1-5/8" Channel at any point in the channel.

### 619 RAIL & SLAT BOLT



#### APPLICATION

The 619 Rail & Slat Bolt fits into the 618 Unistrut Spring Nut to hold wood slats or signage.

### 620 BALL LOCK & CABLE: CONNECTS TO SHEETROCK



#### APPLICATION

Exposed hardware on a finished ceiling needs to have a connection made from the threaded rod, which is exposed through the finished ceiling, to the 1/8" stainless steel cable. The Ball Connector screws directly to 1/4" exposed portion of the threaded rod. The Ball Connector includes a 1/8" stainless steel cable with a ball fitting to hang the cable from the Ball Connector. The Ball Connector and cable are not adjustable at the finished ceiling level. – All cable length adjustments are made at the cloud level. The non-adjustable cable is generally mounted after the ceiling is finished.

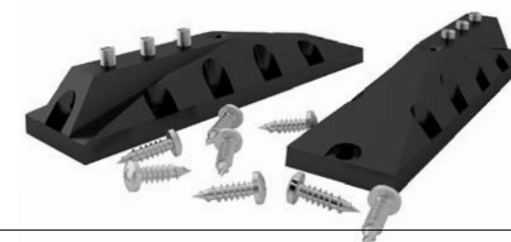
### 622 FORK CONNECTOR & CABLE: CONNECTS TO CLOUD HANGER



#### APPLICATION

When using exposed hardware for a cable-hung cloud ceiling installation, there needs to be a connection made from the ceiling structure to the 1/8" stainless steel cable. The Cable Fork Connector attaches directly to the Eye Pad or Eye Bolt with a cleavage and safety pin, both of which are removable.

### 625 CLOUD HANGER: CONNECTS CABLES TO PANELS



#### APPLICATION

The 625 Cloud Hanger is an adjustable mounting plate that is the final connection from 1/8" cable to wood ceiling panels. With the 625 Cloud Hanger, cable length is quickly adjustable, and wood panels are securely attached with 10 Pan Head screws. The ten screws allow for secure and durable connection even to thinner panels.

# 720 Dowel

32mm Long, 8mm Diameter, Waterproof



## APPLICATION

The 720 Dowel, 8mm x 32mm is an inexpensive method to permanently attach two 3/4 panels to one another. They are used in heavy duty applications where a wood dowel may not be strong enough or in wet areas. (See Strength Testing). They work well on plywood, particle board, composites, plastics and solid surfaces. The 720 Dowel is installed into a pre drilled 8mm hole. The mounts are made of engineered, automotive plastic that is slightly pliable and will not void the solid-surface, fabrication warranty. The threads are 9/16" deep, leaving 3/16" of surface material on 3/4" panels. The 720 Dowels work independently and are not compatible with any other fastener. Dowels are not removable and have little room for the natural expansion and contraction of panels.

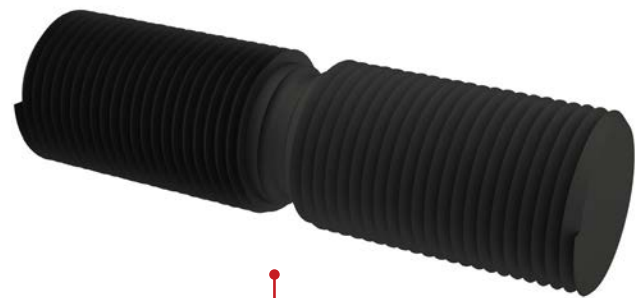
## DESCRIPTION

The 720 Dowel ribs are threaded and fit snugly in 8mm diameter holes with a flat bottom. These ribs are small and sharp for better gripping performance. The 720 Dowel can be epoxied onto any solid surface or press fit. They can also be used to attach dissimilar materials like wood and solid surfaces. However, dowels should only be in small panels that move less than 1/32" or a maximum of 24" x 24" because they do not allow for natural expansion and contraction. They can be used with large panels if the same material is used.

**Note\*:** These are sealed edge dowels and can generate high air pressures when installed quickly. We recommend that you allow at least 1/8" of additional depth to your pre-drilled holes to prevent bulging.

## STRENGTH TESTING with 3/4", 45 lb. particle board

- **Tensile** Failure (Horizontal pull) = **160 lbs.**  
Working Strength, Pull from Furring = **25 lbs.**
- **Shear** Failure (Vertical weight holding) = **100 lbs.**  
Working Strength, Weight holding = **25 lbs.**



The 720 Dowel  
8mm x 32mm

# 740 Backsplash Dowel



## APPLICATION

The 740 Backsplash Dowel is designed to create a quick, secure and permanent mount of a backsplash to a counter top. The 740 Backsplash Dowel is intended to be used in the field to solve many problems associated with the installation, maintenance and durability of countertops and backsplashes. Over time, cabinets and floors begin to settle and shrink, which cause gaps between the countertop and backsplash. These gaps allow water to contact the edge of the particleboard where the particleboard swells, and the gaps open wider. The gaps cause a self-destructive cycle that is difficult to stop. The 740 Backsplash Dowel provides a mechanical lock, and when set into a bed of caulk, they provide a mechanical lock and water-resistant seal that stops the gaps that allow water in.

(per AWI Premium Grade installations)

## DESCRIPTION

The 740 Backsplash Dowel is a 5/16" sharply ribbed, zinc-coated, steel dowel that fits into pre-drilled holes with the aid of the 745 Backsplash Dowel Jig Kit. The dowels are screwed into the countertop and press-fit into the top. The steel ribs hold the backsplash in place until the silicone glue sets.

## COST/BENEFIT ESTIMATE

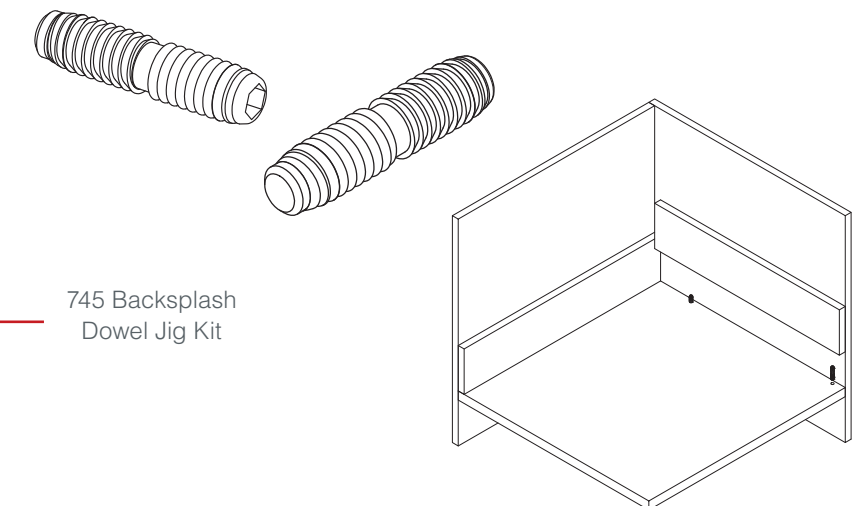
- A typical 10ft. sink unit with side splashes takes about 7 minutes to lock down, caulk and clean up.
- No shop machining required.
  - No second trip required for caulking.
  - Allows less experienced installers to do professional, quality work.



The 740 Backsplash Dowel



745 Backsplash Dowel Jig Kit



# 750 Tapered Shim



## APPLICATION

The 750 Tapered Shim is generally used to adjust furring. The shim is tapered from 1/32" to 1/8" thick. Two shims can be used as a pair to hold material parallel during positioning.

## DESCRIPTION

The 750 Tapered Shim is a U-shape that allows for screws to be placed in the center, which will help hold and stop the shim from warping the material. The rough satin surface grips adhesives well, while the tail hook allows for mess-free adjustments with the use of an improvised tool. In short, the 750 Tapered Shim is designed to increase speed and accuracy.

## COST/BENEFIT ESTIMATE

Tapered Shims are about twice as fast to install as flat shims, and they are more accurate.

It takes about 10 minutes to shim 16 ft of furring. At \$50.00 per hour, or \$0.83 per minute, 16 ft of furring's cost is \$4.98.

The 750 Tapered Shim can cut the installation time in half saving about \$2.50 per 16 ft of furring.



1000 Ct. Bucket: \$125  
100 Ct. Box: \$14.50

# 760 Countertop Bolt



765 Ball Head Allen Wrench

## APPLICATION

The 760 Countertop Bolt is designed to tightly join seams together. The hybrid 760 Countertop Bolt fills the gap between the "hard-to-use", Tite-Joint Fastener and the expensive, Gear Head Zip Bolts. The 760 Countertop Bolt can be tightened in seconds. Our 760 Countertop Bolt is simple, inexpensive, strong and requires only common tools with no learning curve. The 760 Countertop Bolt is a valuable upgrade to the traditional Tite Joint Bolt.

## DESCRIPTION

The 760 Countertop Bolt is a custom-made 1/4" x 3-1/2" x 3/16" Allen head bolt, coupled with a typical rectangular, steel washer. Installers find that a 3/16" Ball End Hex Wrench used with a battery-operated drill greatly improves installation times. The traditional Hex Head is replaced with an Allen head which allows tightening with a standard ball-end Allen wrench or our 765 Ball Head Allen Wrench.

## COST/BENEFIT ESTIMATE

With 4 countertop bolts per 24" countertop, it should take about 10 minutes per countertop seam to tighten. At \$50.00 per hour, or \$0.83 per minute, the per-seam installation cost is \$8.30. With the Star Countertop Connector, installation times are halved; **saving \$4.13 per seam.**

## PRODUCT ADVANTAGES

- The 760 Countertop Bolt can be installed 10x faster with a drill.
- The cost is consistent with old style bolts
- Stronger than traditional bolts, they are heat treated, N-5
- Also available: a CNC Router Cut, 3/8" Phenolic Template

## STRENGTH TESTING with 3/4", 45 lb. particle board

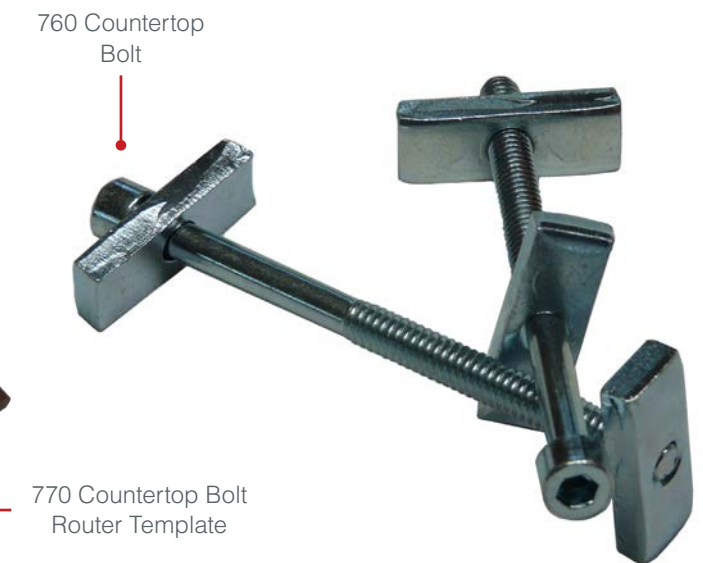
- **Tensile Failure (horizontal pull) = 600 lbs.**  
Strength, (pulling slot together) = **100 lbs.**

\*Bolt Strength at over 2,000 lbs. far exceeds the strength of the particleboard slot.

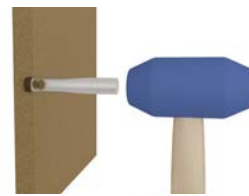


765 Ball Head Allen Wrench

770 Countertop Bolt Router Template



## 900 SERIES: Specialty Tools



### 905 Thin Mount Driver

The 905 Thin Mount Driver is used to install any of the 343 Thin 5/16" Mount, 243 Thin 3/16" Mount or the 349 Upholstery Mounts.



### 910 Carbide Tipped, 1" Forstner Bit

The 910 Carbide Tipped, 1" Forstner Bit is compatible with the 320 Zero, 322 Zero and 340 Locks. These inserts have a 9/16" length; we recommend a 5/8" hole depth, leaving a 1/16" space to ensure screws do not bottom-out. This gap also allows for expansion and contraction of the panels without bubbling the surface.



### 911 Carbide Tipped, 1-1/4" Forstner Bit

The 911 Carbide Tipped, 1-1/4" Forstner Bit is compatible with the 224 Galaxy. The Galaxy insert is 5/16" thick; we recommend a 3/8" hole depth, leaving a 1/16" space to ensure the insert does not bottom-out. This gap also allows for expansion and contraction of the panel without bubbling the surface.



### 912 Hole Saw, 1-3/8" & Mandrel

The 912 Hole Saw 1-3/8" & Mandrel cuts a diameter hole in sheetrock up to 1-1/2" thick material. Compatible with the 200 Hanger 1-3/8"

(Tip: If you hit a stud, remove the wings and cut off the stop arms of the 200 Hanger, then screw directly into the stud.)



### 913 Pilot Drill & Stop, 5mm Center Point

The 913 Pilot Drill & Stop is the perfect size to drill out locations for our Euro Mounting Screws. These screws have a 9/16" length; we recommend a 5/8" hole depth, leaving a 1/16" space to ensure screws do not bottom-out. This gap also allows for expansion and contraction of the panels without bubbling the surface.



### 914 Pilot Drill, 1/8" Center Point Drill & Stop

The 914 Pilot Drill works with Galaxy inserts and any standard #10 Pan Head Screw. A pilot hole is always recommended because it improves the accuracy and strength of the screw.



### 915 Router Bit, 3/32" Offset

The 915 is a high-quality tungsten carbide router bit with a 1/4" shaft, a 1/2" top bearing, and a 5/16" cutter diameter for a 3/32" offset. The 3/32" offset router bit works with all Star Hanger templates and is a common size.



### 919 Bosch 5/16" x 6" Carbide Tipped Drill

The 919 Bosch 5/16" x 6" Carbide Tipped Drill works with the 952 Pop Toggle for long and smooth drilling of sheetrock.



### 920 Panel Adjuster

The Panel Adjuster is carefully designed to exactly fit panel edges, which allows panels to be nudged into place without damaging the edge banding.



### 960 Air Hammer & Insert Heads

The 960 Air Hammer is a commonly found air hammer. Each Insert Head is designed to match the profile of both the interior and the depth of each insert to increase installation speed and accuracy.



### 964 Galaxy Air Hammer

The 964 Galaxy Air Hammer is a commonly found Air Hammer. The 965 Galaxy Air Hammer Head is designed to match the profile of both the interior and depth of the Galaxy inserts to increase installation speed and accuracy. Galaxy inserts are set slightly below the panel surface.



### 969 Galaxy Boring / Insertion Machine Fixture

969 Galaxy Boring / Insertion Machine Fixture is designed to mount on an existing 35mm Hinge-Boring / Insertion Machine. The standard machine retrofit requires a new 1-1/4" Flush Boring Bit and the 969 Galaxy Retrofit Insertion Head as a replacement of the hinge-holding fixture. After the retrofit, hinge-boring machine works in the typical way, it holds the material, bores the hole and inserts the Galaxy insert.

## TESTIMONIALS

“ We have been stocking Star Hanger fasteners for some time. We just used the Star Hangers for direct panel connection to the GWB for the Gaston Committee Center maple panels. This project could not budget for a full furring system. They were delighted with the results and the \$30.00 psft. price.

- **James McGrew, McGrew Woodwork**  
Cabinet Maker, Columbia, SC

“ We have been stocking Star Hanger fasteners for some time. We use the Zeros for our ADA front panels, and the installers like them also.

- **Kristine Cox, Rowland Woodworking**  
Former AWI President - High Point, NC

“ You will be pleased to know the Green Glides worked out great for us. I am in engineering and programmed everything to run on the CNC, veneer panels and backer panels. Our installers were highly skeptical that there would be enough tolerance built in for adjustment, but they were all pleasantly surprised how quickly and easily everything went together on-site. We definitely intend to use them again in the future and are interested in checking out the triangle glide when it's available. Thanks for a great product!

- **Beth Haywood, Chesapeake Millworks, Inc.**  
Project Engineer, Owings, MD

“ We used the 400 NZ Clip with the Alignment Clips to ensure proper placement on the wall and also, to maintain the design of the feature wall.

- **Keith Cauwenberghs, Salon Interiors**  
Mount Laurel, NJ

“ This was my first experience with your product, and I was very pleased with the quality and consistency of the clips. Install was quite easy, and I appreciate the ability to maintain access behind the panels.

- **Craig Bouck, Barker Rinker Seacat Architecture**  
Craig Bouck, AIA



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