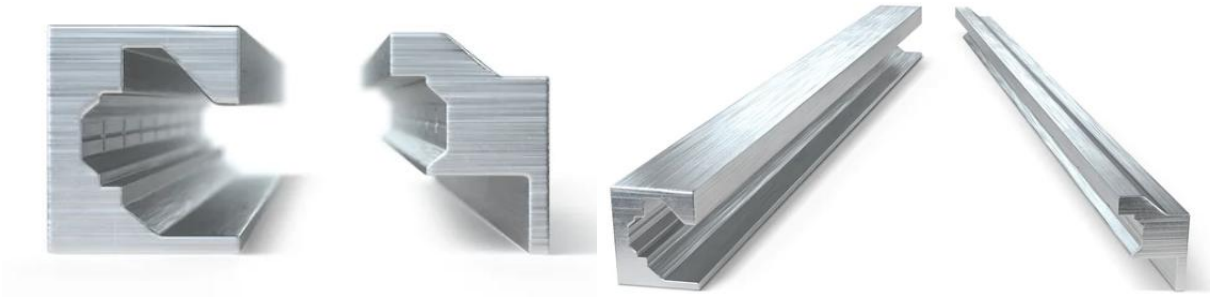
Technical Specification Sheet

Slim Hovr Bracket System



1. Product Overview

- **Product Description:**
  The Slim Hovr Structural Mounting System is a hidden mounting solution engineered for floating shelves and millwork components between approximately **1 1/4" and 1 7/8" thick**. It delivers the same high-performance characteristics as the Classic system—strength, safety, ease of installation, and versatility—while being optimized specifically for thinner designs. For maximum strength or thicker millwork, see the Classic Hovr Bracket System.

  Features:

  1. **Strength and Safety:** Exceptional load capacity achieved through optimized weight distribution and integrated set-screw locking system.
  2. **Aluminum and Uniform:** 6063-T6 aluminum profile can be cut to any length, enabling flexible fabrication and efficient stocking.
  3. **2/3 Ratio Efficiency:** Can be used at a 2/3 bracket-to-wood ratio without compromising strength or performance at load capacity ratings
  4. **Easy Installation:** Straightforward and fast wall and millwork installation; see installation guide for full details.
  5. **Broad Substrate Compatibility:** Installs into wood studs, metal studs, and/or directly into various wall materials (drywall with anchors, concrete, tile, plaster, plywood, uneven surfaces, etc. - load capacities vary)
  6. **Millwork Versatility:** Suitable for solid wood, and any millwork with adequate backing and fastening hardware - hollow shelves/millwork, MDF, concrete, plexiglass, metal, and other fabricated millwork components.
  7. **Adjustability:** Allows left-to-right and angle adjustment after wall bracket installation.

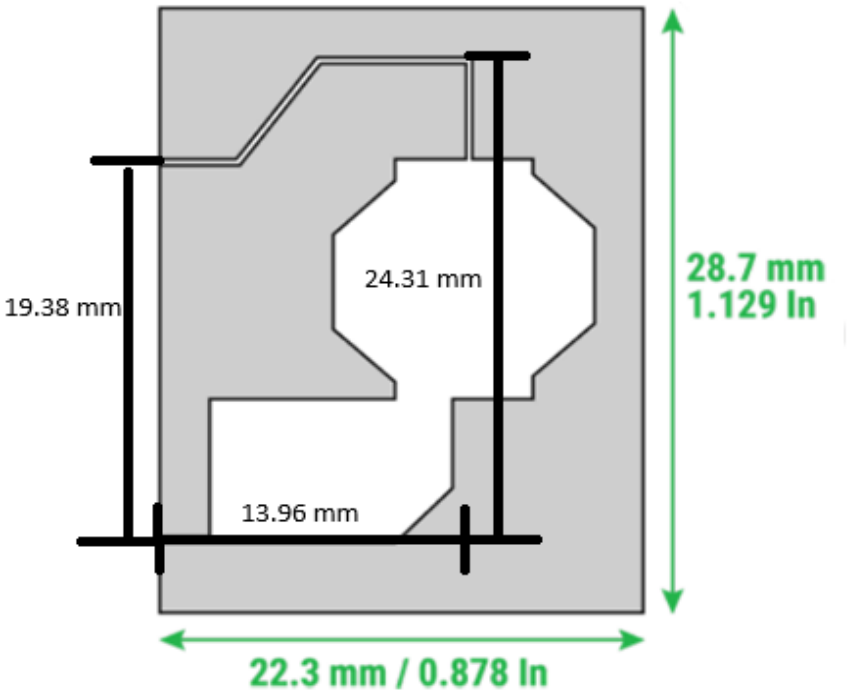
8. **Design Flexibility:** Enables millwork solutions not possible with traditional brackets, including drawer-style shelves, shoe racks, integrated lighting, wiring channels, and more.
9. **Standardized System:** Consistent hardware, bracket geometry, and installation methods across all lengths.

For an in-depth explanation of features and benefits of the Classic and Slim Hovr Bracket System, view our latest two webinars here:
https://www.youtube.com/watch?v=aRL4G1JHC5Q /
https://www.youtube.com/watch?v=ZwSORWokaiY

Or visit our website's support and installation pages: www.hovrsolutions.com

2. Technical Specifications

- **Material:** 6063 T6 aircraft-grade aluminum
- **Dimensions:** ~1 1/8"x7/8", Max Length = 94" (8ft section, cuttable to length)



- **Manufacturing Tolerance:** ±0.25 mm typical (aluminum extrusion)
- **Load Capacity (Tested):**
  150 lb at 8" projection from wall, installed into **2 standard (2×4) wood studs** using the included fasteners, with load evenly distributed across the mounted millwork.
- **Calculated Load Capacity Guidance:** Based on the tested configuration (150 lb @ 8"), the following table provides **calculated fastener-based load guidance** for deeper projections and additional studs.
  *Values are **calculated only** and **not individually load-tested or approved***
- Actual performance depends on wall construction, stud quality, installation accuracy, and safety factors

Studs (screws)	8"	10"	12"	14"	16"	18"	20"
2 studs (2x)	150*	120	100	85	75	65	60
3 studs (3x)	225	180	150	130	115	100	90
4 studs (4x)	300	240	200	170	150	135	120

- **Finish:** Mat Aluminum Finish – Not Coated
- See installation guide below for included installation hardware and required bits
- **Terminology Note:** The Classic and Slim systems use a two-part interlocking design consisting of a *male (wall-side) bracket* and a *female (millwork-side) bracket*. These may also be referred to as the *Wall Bracket* and *Millwork Bracket/shelf bracket* for clarity
- The Hovr Bracket System is considered a concealed structural mounting hardware component. Project-specific engineering review is recommended for commercial, public, or life-safety-critical applications.

3. Installation Instructions

BASIC INSTALLATION GUIDE - HOVR SLIM - 1 1/8" TALL BRACKET

hovr Slim

BASIC INSTALLATION GUIDE

www.hovrsolutions.com
contact@hovrsolutions.com

Have a question? Visit our help center at hovrsolutions.com/learn

WHAT YOU NEED

INCLUDED HARDWARE

- 4 x 3 1/8" GRK #10 RSS Screw (per 4 ft of bracket)
- 12 x 2 1/2" GRK #10 R4 Screw (per 4 ft of bracket)
- 4 x 1/2" - Set Screws - 5/16" #18 Course Thread (1 set screw per foot)
- 1 x Hex Key - 5/32"

BITS REQUIRED

- Drill Bit - 3/16" - HSS (Optional: To drill extra holes in the male bracket)
- Drill Bit - 17/64" HSS Jobber (To pre-drill tap hole)
- Tap Bit - 5/16" HSS #18 (To thread the tap hole)
- T-25 Torx 2" Star Drive

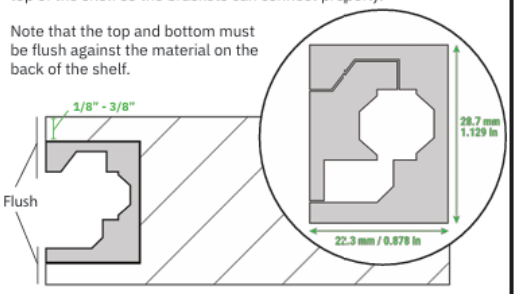
TOOLS REQUIRED

- Tape Measure
- Electric Drill
- Level
- Stud Finder
- (Router)
- (Table Saw)

STEP 1 - CREATE CHANNEL

The most common method is to router out a 1 and 3/16" tall channel at the back of your shelf to make room for the female bracket. This channel should be between 1/8" and 3/8" from the top of the shelf so the brackets can connect properly.

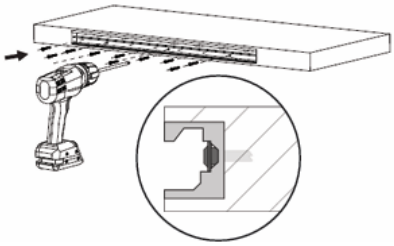
Note that the top and bottom must be flush against the material on the back of the shelf.



Side View of Shelf with Hovr Bracket Placed in Channel

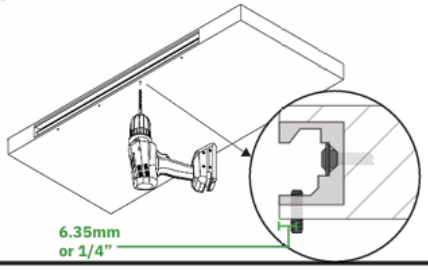
STEP 2 - ATTACH FEMALE BRACKET TO SHELF

Use the 2 1/2" GRK screws to secure the bracket to your shelf. Starting from the outer edges, use 1 screw every other hole. Pre-drilling screw holes may be necessary for harder woods.



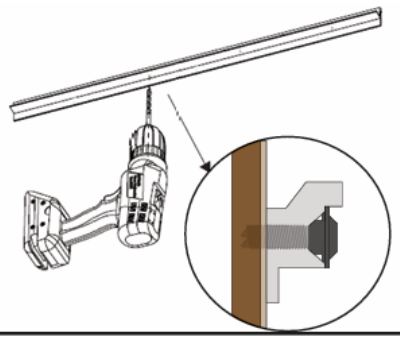
STEP 3 - DRILL SET SCREW HOLES

Drill & tap the holes in the bottom of the shelf to accommodate the set screws for the bracket that will be used to secure the two components together later in the install (as a general rule, use 1 set screw per foot of bracket). Use a 17/64" drill bit to predrill the tap hole, and then use a 5/16" tap bit to thread the hole. These should be about 6.35mm or 1/4" in from the bottom lip of the female bracket.



STEP 4 - PREPARING THE MALE BRACKET

It is recommended to anchor to a minimum of 2 studs. There is a hole every 2" along the bracket. If by chance the predrilled holes in the male bracket do not match up with the stud location, please mark the location on the male bracket. Use a 1/4" drill bit to drill a hole at the required location.



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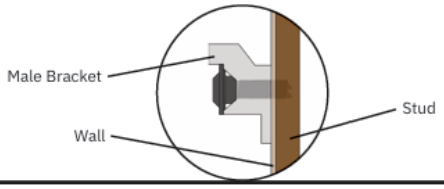
BASIC INSTALLATION GUIDE - HOVR SLIM - 1 1/8" TALL BRACKET

STEP 5 - ATTACH MALE BRACKET TO WALL

When attaching the male bracket to the wall, please use the GRK #10 3 1/8" wood screws. Start by drilling one screw into the first stud but not tightening all the way. Then using a level, make sure the bracket is leveled before drilling your second screw into the other stud(s). Tighten the remaining screws.

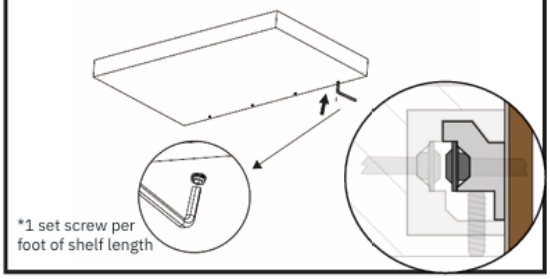
***Important: Make sure the screws in the male bracket are sufficiently tight against the wall. Too loose and the connection of the shelf to the wall may not be stable and the shelf may wiggle. Too tight and the male bracket may bend and fail to engage with the female bracket.**



STEP 7 - SECURE BRACKETS TOGETHER

Insert the set screws into the pre-drilled & tapped holes from step 3. These should be 6.35mm or 1/4" from the bottom ledge of the female bracket. Screw them in tight, securing them with the provided hex key. The tighter the better. You may choose to also use Epoxy glue alongside the set screws, for a more permanent, stronger install.

Combining both methods together gives the strongest results. You can find out more at hovrsolutions.com/learn.



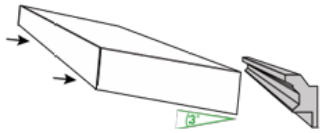
IMPORTANT TIP #1

Please use the specified hardware described in this installation guide. By not using the specific items, you may cause a loss of integrity of the Hovr Bracket System, and thus, decreased performance. It is recommended that yearly checks are done to ensure a proper hold on the wall, such as tightening of set screws.

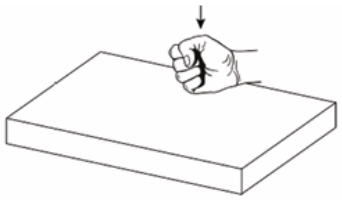
For any additional information, please visit our help center at hovrsolutions.com/learn

STEP 6 - COMBINE BOTH BRACKETS

Tilt your shelf downward at a 3° angle to begin engaging the 2 brackets together. Hook the upper part of your female bracket onto the upper part of the male bracket. Once you feel the grooves begin to interlock, the next step is to secure them together...



To do this, apply 2-3 taps at the back of the shelf where the brackets sit. This should cause the brackets to snap fully into place, leaving a level shelf. You can use a hammer with a block if needed to add extra force at the back of the shelf to get the brackets to engage (Sometimes more force is required than what you can generate with a fist, especially for longer length shelves)



IMPORTANT TIP #2

It's important that the male bracket is flush against the wall. If you bend it, it may fail to engage correctly with the female bracket, resulting in a failed installation. That being said, not all walls are straight, and you can leave up to 1/4" of space between the back of the male bracket & the wall without the integrity or holding capacity being compromised.

For bowed walls (especially when bow is 1/4" or less), follow these steps in order:

Step 1: Tighten the male bracket fully to the wall, ignoring the bow, and see if you can apply enough force (Step 6) to the top back of the shelf to get the brackets to engage. If that doesn't work...

Step 2: Slightly loosen the screws of the male bracket by a quarter turn or less. Start with only the sections where the bracket is bending most due to the bow, but all screws may need to be loosened slightly (1/4 turn or less to start). Now try again to see if you can apply enough force to the top back of the shelf to get the male and female brackets to engage with each other (Some trial and error may be required). If that doesn't work...

Step 3: Shim out the sections affected by the bow and causing the male bracket to bow on the wall, ensuring the male bracket is straighter on the wall. Now try engaging the brackets again.

- Regularly updated installation instructions can be viewed here: https://hovrbracketsystem.com/en-ca/pages/installation?srsltid=AfmBOoqSXDP2J2Rns_-WWT5vMkzO03vI8SQGIkew2MmFTSkoFHlHOB-R

4. Additional Installation Guidelines

- **Biggest differences from the Classic Bracket:**
  1. 1 screw per stud – with 1 screw per stud instead of two, there is naturally more flexing with the Slim Hovr Bracket System compared with the Classic, but if the male bracket is sufficiently tight, there should be minimal flex (See more info below – Tightening wall bracket and bracket engagement)
  2. Slim female bracket width dimension of top and bottom are the same – see install guide and technical specifications above
  3. Millwork thickness requirements – See below
- **Set Screws:**
  Set screws are a critical safety component. They lock the male and female brackets together, ensure proper engagement, and maintain the system's rated load capacity over time. Set screws may also assist with initial engagement during installation.
- **Tightening wall bracket and bracket engagement:**
  1. A tightly installed male (wall-side) bracket increases the rigidity of the overall system. In general, the tighter the wall bracket is fastened, the less flex the system will have under load.
  2. As the wall bracket is tightened more firmly to the wall, it may become more difficult to engage the two bracket components. With enough force applied to the top back of millwork (step 6) (block and hammer may be used), the brackets may engage with a better hold and more rigidity overall due to counteracting forces of male bracket pulling into wall and female bracket/millwork pulling away from wall
  3. If brackets are not properly engaging because too much force is preventing the engagement, the top male bracket screws can be slightly loosened (1/4 turn or less), providing an easier engagement. This may require some trial and error to get the ideal hold (ie. Not too tight that the brackets won't engage, but not too loose that the brackets flex or are less rigid with load).

4. Generally, brackets not engaging properly may occur on longer length millwork/brackets, with more fastening points, that are very tight to the wall, or have more pronounced bows in the wall
5. If your wall is bowed by ¼" or less, it is generally recommended to sufficiently tighten the bracket fully to the wall and try to engage the brackets without adjustments to the wall, as the brackets will generally still adjust on the wall and engage (especially on shorter lengths) and provide a strong hold due to 1 and 2 above. If not, loosen the problem screws that are causing a bigger bow in the male bracket (start with ¼ turn only, some bow is okay).
6. When fully engaged, the bracket components will seat flush and the millwork will no longer lift upward at the back edge.

- **Millwork thickness requirements:**
  1. With hidden applications, generally the Slim Hovr Bracket System should be used with 1 3/8" material or thicker, so that there is 1/8" material above and below the female bracket in the millwork. The profile of the bracket is ~1 1/8", so less than 1 3/8" material is possible. Use discretion in determining the minimum thickness required based on the tools being used and the material and application of the millwork
  2. Non-hidden applications can be 1 1/8" thick, or as thick as the bracket, and a thin veneer can be glued on to make a hidden application
  3. Generally, when millwork is thicker than 1 7/8"-2", Hovr recommends moving to the Classic Hovr Bracket System for maximum strength and hold
- **Placement of the female (millwork) bracket in the back of millwork:**
  1. Height: Generally, material above the female bracket should be around 1/8" to 1/4", with a max of ½". The remaining material should go below the female bracket in the back of the millwork; this provides additional surface area to support the millwork and wall on the underside.
  2. Horizontal Centering: The female bracket should be centered to the back of the millwork, whether using a 2/3 ratio of bracket to wood or not. The male bracket should be in line, or centered with, the female bracket when engaging the brackets on the wall.
  3. Bracket Depth (into millwork): Bracket depth is the same for hard and soft walls and is the depth of the female bracket (see "step 1- create channel" on installation guide).
- **Millwork Backing Requirements**: Hovr Brackets can be used with any millwork material if there is some way to attach the female bracket to the millwork. In solid wood the bracket is just screwed directly into the wood with included wood screws, on hollow millwork, or in a situation where the bracket cannot be attached with the

wood screws (concrete, plexiglass, etc.), backing (such as a strip of wood) may be required to attach the female bracket to the millwork. Otherwise, appropriate fastener hardware based on the millwork substrate must be used. This provides the bracket with versatility for a wide range of millwork applications and designs.

- **Maximum Millwork Depth:**
  1. Generally, a depth (projection) of 16" out from the wall should not be exceeded without additional support, as load capacity decreases exponentially as weight is added past the center load point of deeper millwork. The load capacity of 150 lbs is calculated at 8" out from the wall, with load distributed evenly; at 16" from the wall the load capacity when weight is evenly distributed drops to roughly 75 lbs and has less rigidity.
  2. Discretion may be used here-smaller loads that are focussed before the center load line with greater surface area below bracket and more fastening points may be viable for deeper millwork.
  3. For deeper millwork, Hovr recommends moving to the Classic Hovr Bracket System

5. Intended Applications

- Floating Shelves
- Other Millwork
- Environmental Performance:
  6063-T6 aluminum is corrosion-resistant and suitable for interior and exterior use. The bracket contains no ferrous components and will not rust or deteriorate from normal weathering. Fire behavior is consistent with aluminum hardware; bracket is non-combustible

6. Additional Information

- Support Page: For additional in-depth information on all topics concerning Hovr Bracket Systems, visit our support page here: https://hovr.helpjuice.com/
- Maintenance requirements: It is recommended for safety and security of the system that the set screws be tightened every 6 months to 1 year to ensure they have not loosened over time due to additional setting of bracket and vibrations/movement of millwork
- Accessories:

1. Installation Bit Pack: The installation bit pack is a 17/64” drill bit and a 5/16” tap bit required to drill and thread the set screw holes in the bottom of your millwork, this is the only hardware required for installation that is sold separately
2. There are certain accessories listed on our website which may be useful for non-standard installations such as;
   a) longer set screws for thicker millwork
   b) glue/epoxy for a permanent install,
   c) Oneshot Steel stud anchors for metal studs
   d) tools making installation of brackets easier. https://hovrbracketsystem.ca/collections/accessories?_atid=JtSPs0yV8J5NhEXnOmd3E2khRCvUfo

- Stocking/Inventory: Brackets do not require special stocking requirements

7. Contact Information

- Website: www.hovrsolutions.com / www.hovrbracketsystem.com
- Name: Alex Schmid
- Email: alex@hovrsolutions.com
- Phone (cell): 778-888-4815
- Brackets can be purchased directly from the website here: https://hovrbracketsystem.ca/pages/bracket-select , contact Alex@hovrsolutions.com for details on discounts and further information