Innovate Your Interiors with Extruded Aluminum Trim

Course Number: XI_CEU – EL131a

Thursday, June 21, 2018 – 10:30 am

Learning Units 1.0 LU/HSW

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Questions related to specific products and services may be addressed at the conclusion of this presentation.

Speakers List

Course / Learning Objectives

- See how extruded aluminum trim products can be utilized to improve and enhance drywall surfaces.
- Explore the methods and considerations related to the installation of aluminum trims for interior spaces.
- Summarize the sustainable features and performance characteristics of aluminum.
- Discuss and specify various profile and finish options that are available for aluminum interior trims.

Interior Trim:

“The details are not the details. They make the design.”

Charles Eames

“God Is In The Details”

- Detailing needs to meet an architectural design aesthetic, as well as durability and sustainability requirements

- Specifying extruded aluminum interior trim products can contribute to all of these prerequisites

Why Use Extruded Aluminum Trim?

- Provide architectural detail
- Contribute to a modern aesthetic
- Provide clean intersections of drywall
- Create design elements from horizontal/vertical lines
- Separate wall materials
- Supply protection and a finished edge for drywall or panel corners

Trim Products Designed to Enhance Drywall Construction:

Design mostly driven by architects seeking cleaner details

Adds a distinctive profiles to corner conditions

Make it the feature, the focus, and the most impactful element of a well-designed space

Advantages of Extruded Aluminum Trim:

- Aluminum trims can withstand greater daily abuse than most materials
- Aluminum adds durability and longevity to construction
- Other trim materials cannot achieve the same level of detail and design
- Aluminum (when anodized or with a polished finish) is more aesthetically pleasing
- Extruded aluminum trims install straight and true.

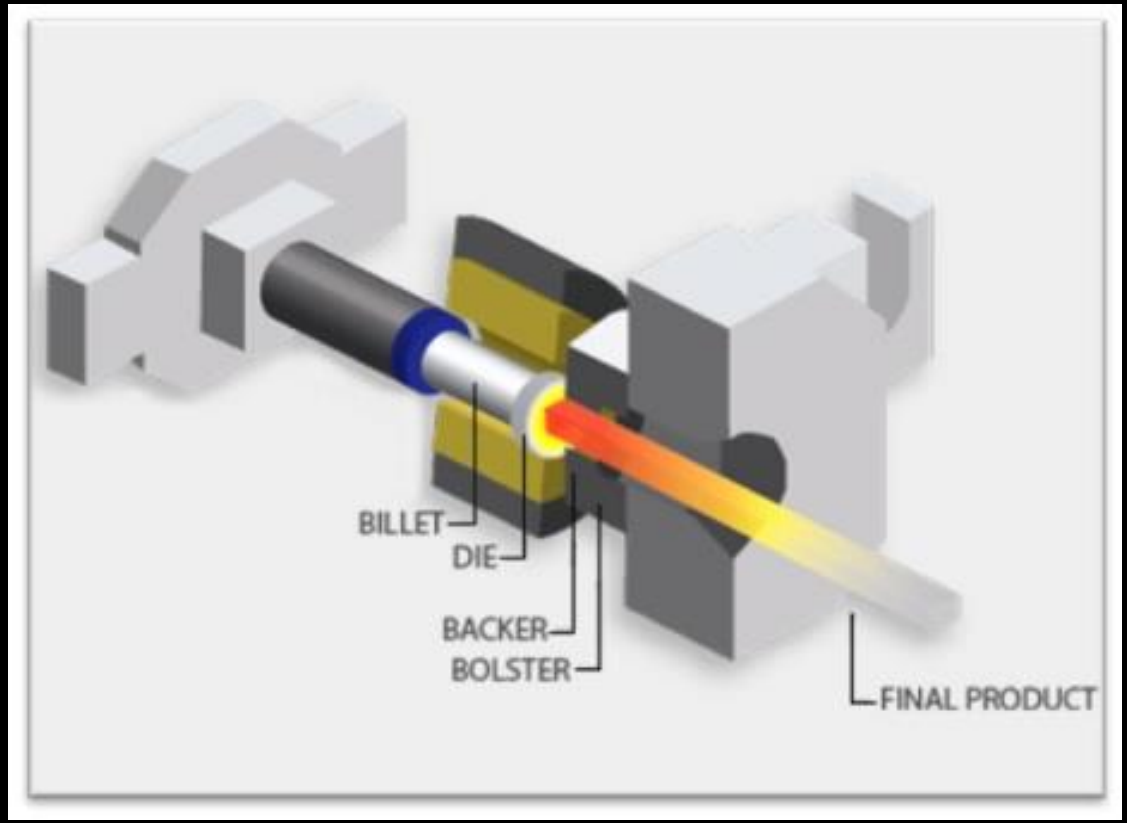
Extruded Aluminum:

What Is Aluminum Extrusion?

- Aluminum is the most abundant mineral in the earth's crust. Derived from bauxite, and is mined from the earth.
- After initial mining process, a form called alumina undergoes smelting and alloying, producing solid billets of cast metal from which extruded aluminum shapes or profiles are made.
- Billets are 8” – 12” diameter

What Is Aluminum Extrusion?

- Once the billets are created and heated they are pressed through the die which creates the intended extrusion shape.
- After passing through the die it will go through a backer and bolster which maintain the shape will adding space



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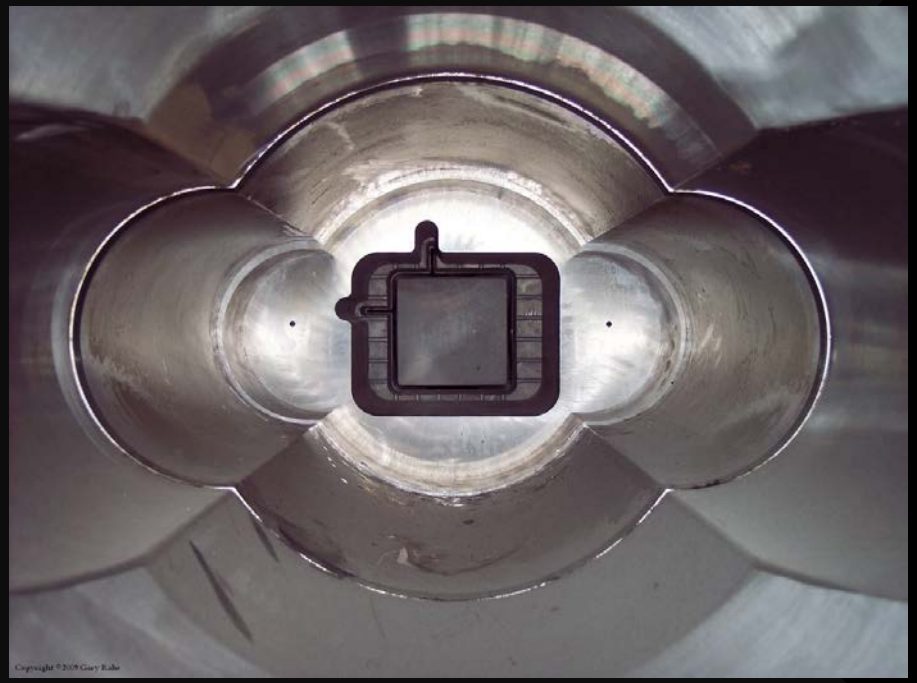


What Is Aluminum Extrusion?

What Is Aluminum Extrusion?

Type 6063 – T5 Aluminum:

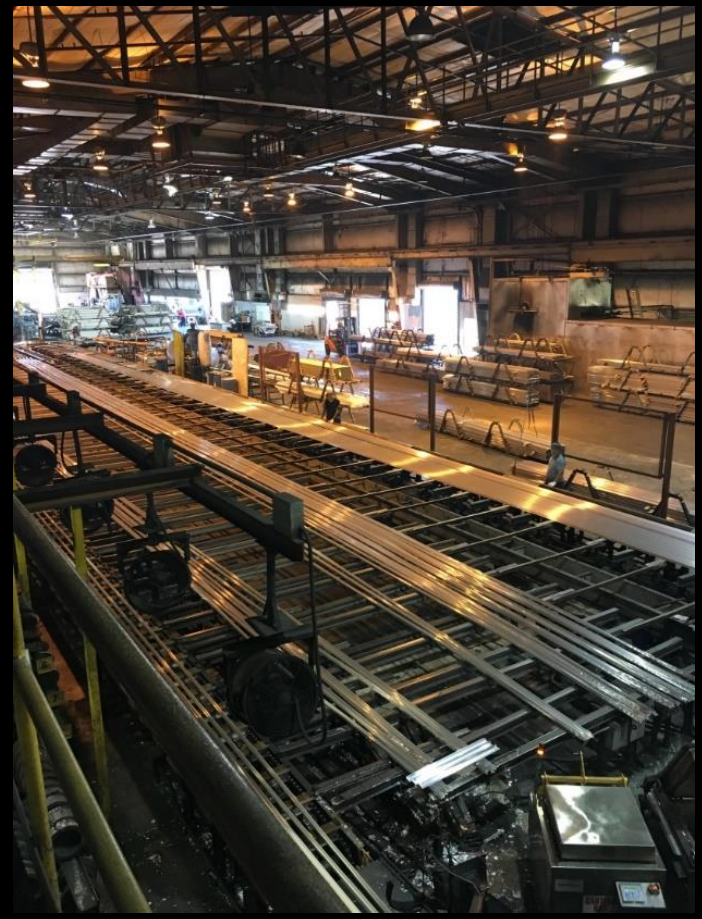
- Used for most extruded shapes
- Aluminum alloy with magnesium and silicon
- Very smooth surface
- Best alloy for anodizing
- T5 indicates it has been artificially aged and moderately heat-treated

Characteristics of Extruded Aluminum:

- Fire resistant and non-combustible.
- Does not rust
- Resilient and can spring back from the shock of impact.
- Poses no health or physical hazards - exempt from the requirement of publishing material safety data sheets.
- Relatively inexpensive and may not require long lead times.
- Can add a design aesthetic to a wide range of interior applications.
- Can be easily manufactured to accepted standard dimensional tolerances.

Characteristics of Extruded Aluminum:

- Can be recycled indefinitely without losing its characteristics.
- Retains a high scrap value.
- Lightweight. Weighs about one-third of most other metals.
- Easier to handle and less expensive to ship.
- Strong. Trim profiles can be made as strong as needed for most applications. Strength of rigid metal prevents swelling and buckling.



Characteristics of Extruded Aluminum: :

- Aluminum trim products are precisely manufactured under extreme tolerances
- Extrusions can become a part of the surface or they can become the feature itself
- Profiles are typically found 0.050” thickness
- Complex shapes can be realized in one-piece extruded aluminum sections

Sustainability:

- Extruded Aluminum is constructed from 75% to 100% post-industrial and post-consumer scrap

- Extruded Aluminum can help earn LEED® v4 certification:
    - Energy and Atmosphere Credit: Optimize Energy
    - Materials and Resources Credit: Building Product Disclosure and Optimization - Environmental Product Declaration (EPD)
    - Indoor Environmental Quality Credit: Low-Emitting Materials

- Aluminum is the only material that more than pays for the cost of its own collection

Sustainability:

Materials and Resources (MR)

- **Building Product Disclosure and Optimization: Environmental Product Declarations (EPD) Credit**

- **Building Product Disclosure and Optimization: Material Ingredients Credit**

The intent of these credit s are to encourage the use of products and materials for which life-cycle information is available and that have environmentally, economically and socially preferable life-cycle impacts. The intent is also to reward project teams for selecting products from manufacturers who have verified improved environmental life-cycle impacts.

Sustainability:

Indoor Environmental Quality (EQ)

- **Low-Emitting Materials Credit**

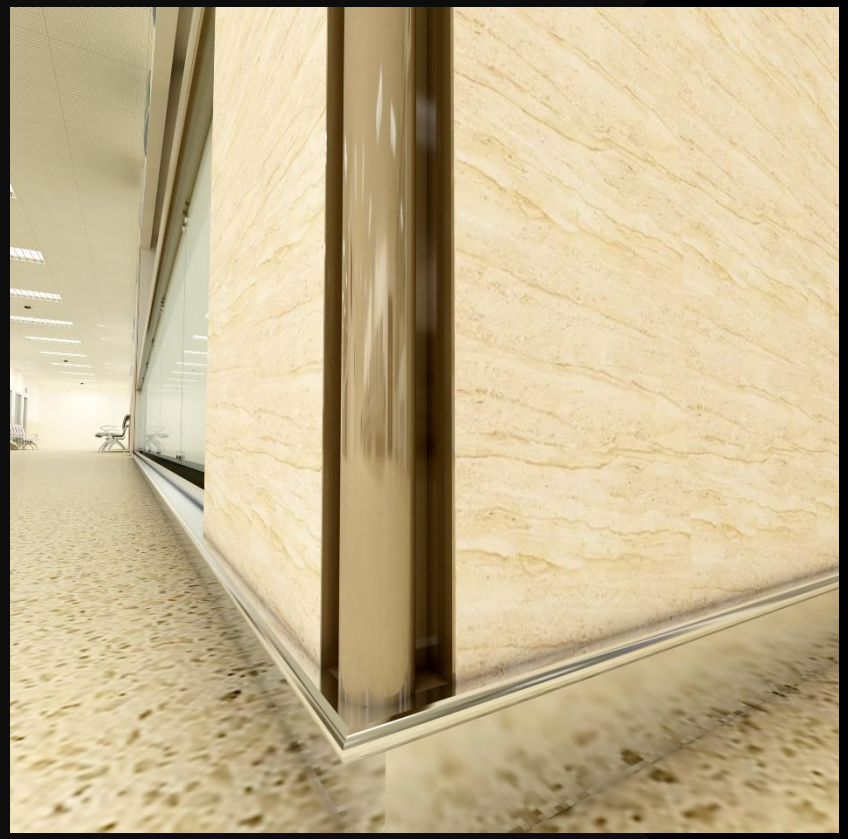
The intent of this credit is to reduce concentrations of chemical contaminants that can damage air quality, human health, productivity and the environment. This credit includes requirements for product manufacturing as well as project teams. It covers volatile organic compound (VOC) emissions in the indoor air and the VOC content of materials, as well as the testing methods by which indoor VOC emissions are determined.

Sustainability:

Energy and Atmosphere (EA)

- **Optimized Energy Performance Credit**

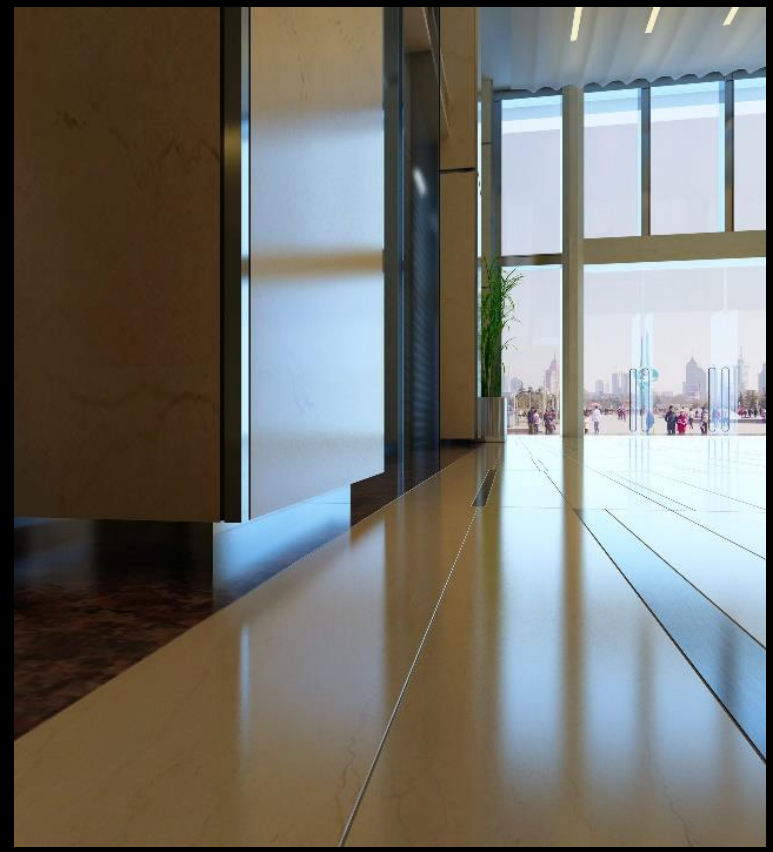
The intent of the Optimized Energy Performance credit is to achieve increasing levels of energy performance beyond the prerequisite standard to reduce environmental and economic harms associated with excessive energy use. Extruded aluminum has very good thermal performance, so when used in conjunction with other materials in the wall cladding, can assist in optimizing energy performance.



Profiles & Finishes:

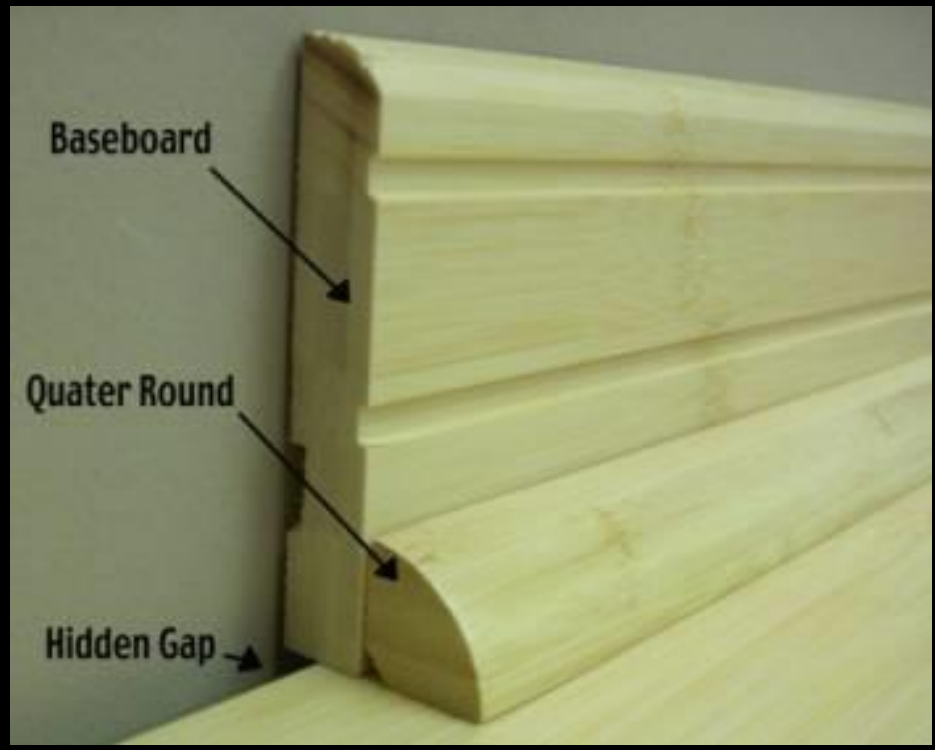
Product Offerings:

- Bases
- Reveals
    - 2pc System
        - Channels
        - Inserts
- Corner Trims
- Mouldings



Standard Base Detail:

- Typically a 3 ½ - 4 inch profile installed on top of the drywall
- Quarter round is sometimes used as a flooring joint
- Some modernists question the utility of the traditional baseboard

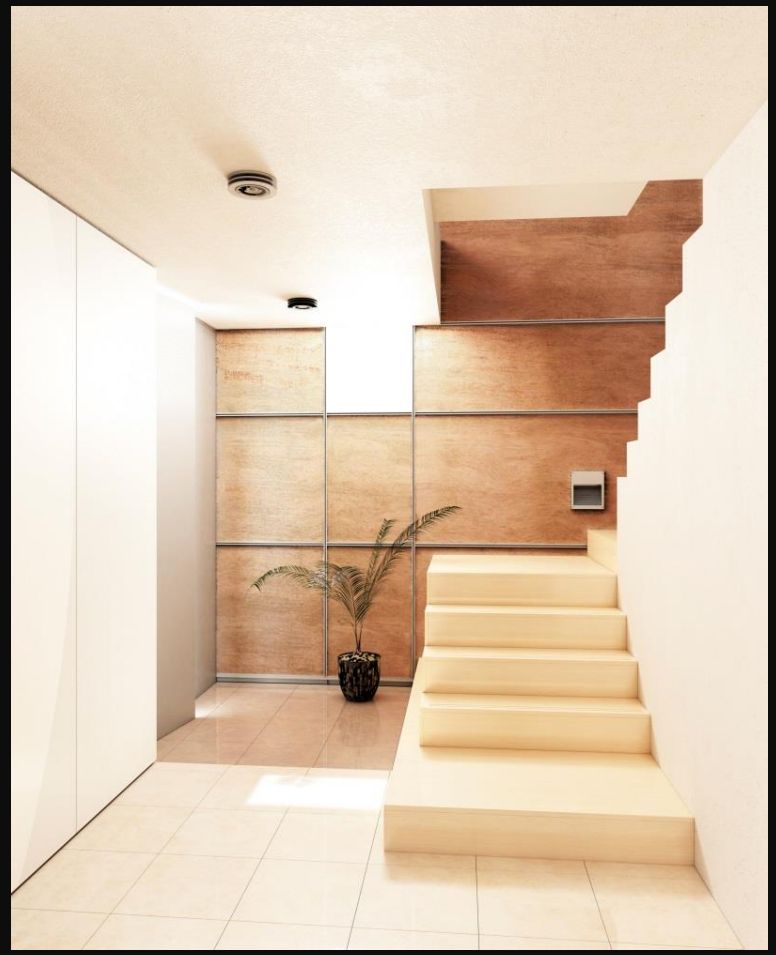


Reveal Base (Open):

- Creates a simple, minimalistic aesthetic
- The joint between the wall and floor should be kept open
- Reduces the material, installation, and finishing costs
- Wall base is more susceptible to damage
- Generally used in industrial or commercial applications
- Requires taping of the lower edge of the drywall

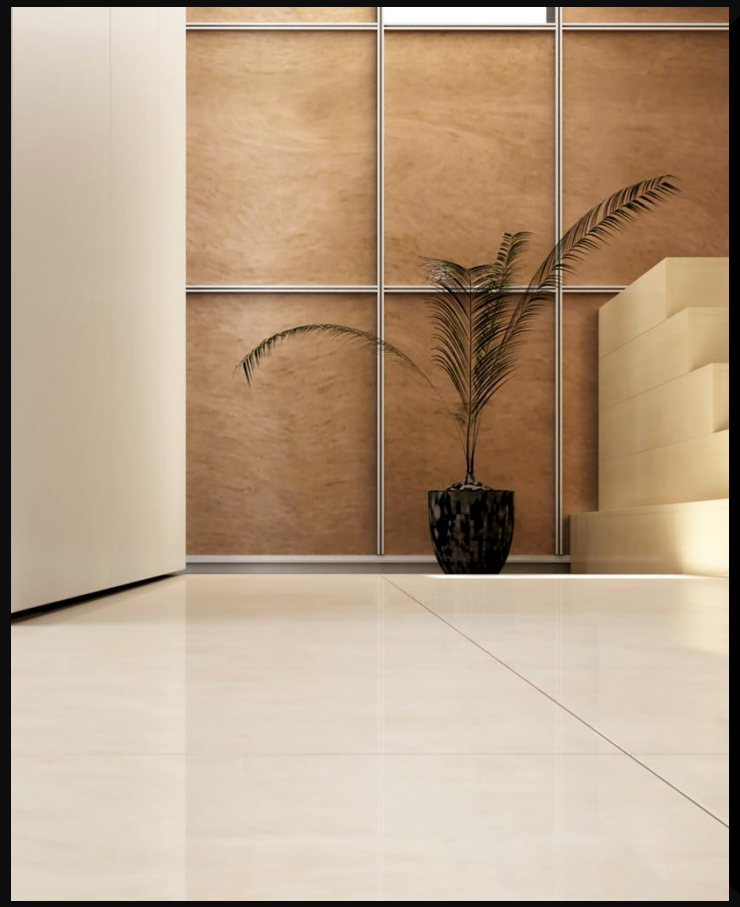
Reveal Base (Trim):

- Separates and expresses the joint between materials
- Popular in modern architecture
- Traditional materials: metal or plastic
- Offers great design flexibility
    - wide range of sizes and profiles
    - can be painted
    - can be carried through to door and window trim



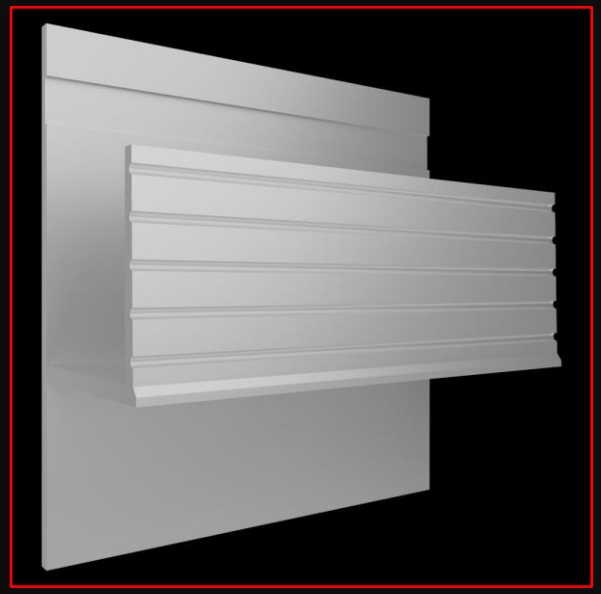
Flush Base:

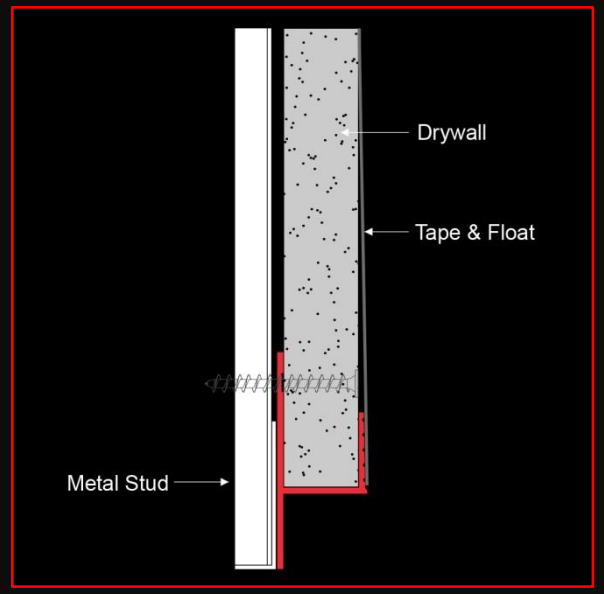
- Recessed, flush with the wall
- Clean, unencumbered look
- Common materials: wood and MDF
- Requires considerable planning and care to install
- Wall and base fastened to underlying substrate



Extruded Aluminum Bases:

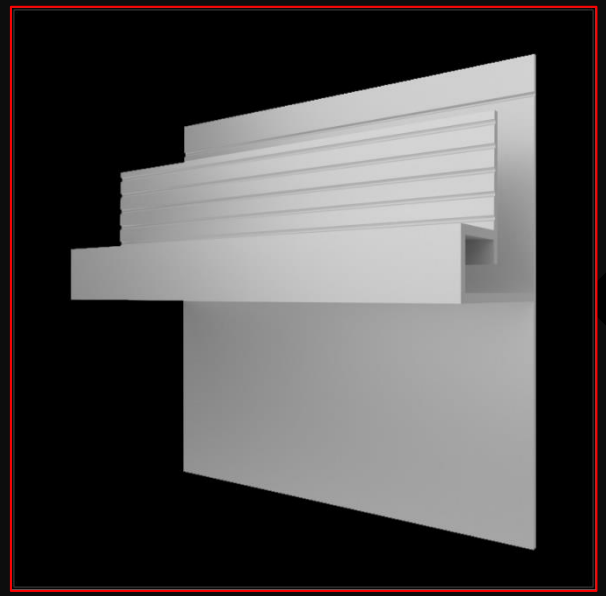
Bases: Shadow Line Reveal

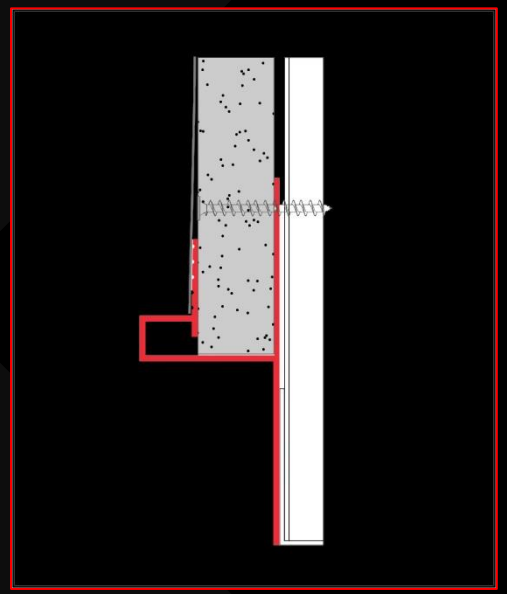




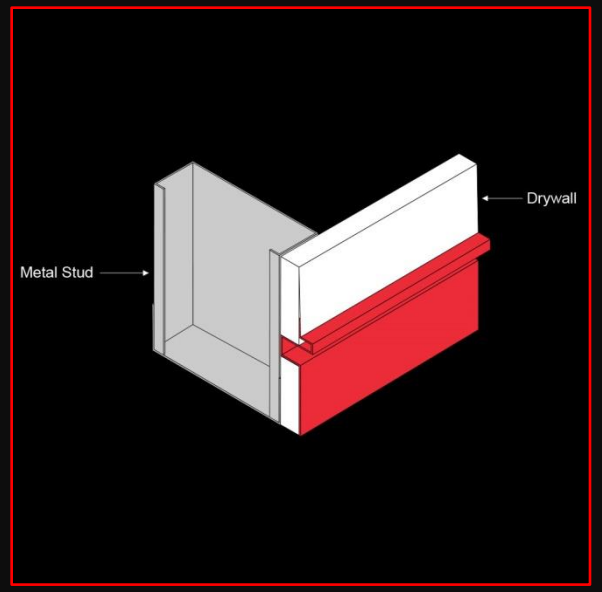
This profile provides the Reveal Base look but it has a tape and float edge that will protect the exposed lower edge of the drywall panel and give you a consistent reveal across the length.

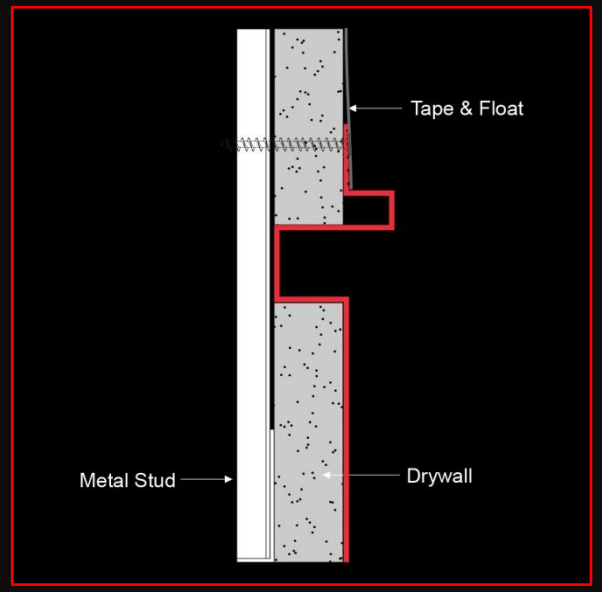
Bases: Projecting Square



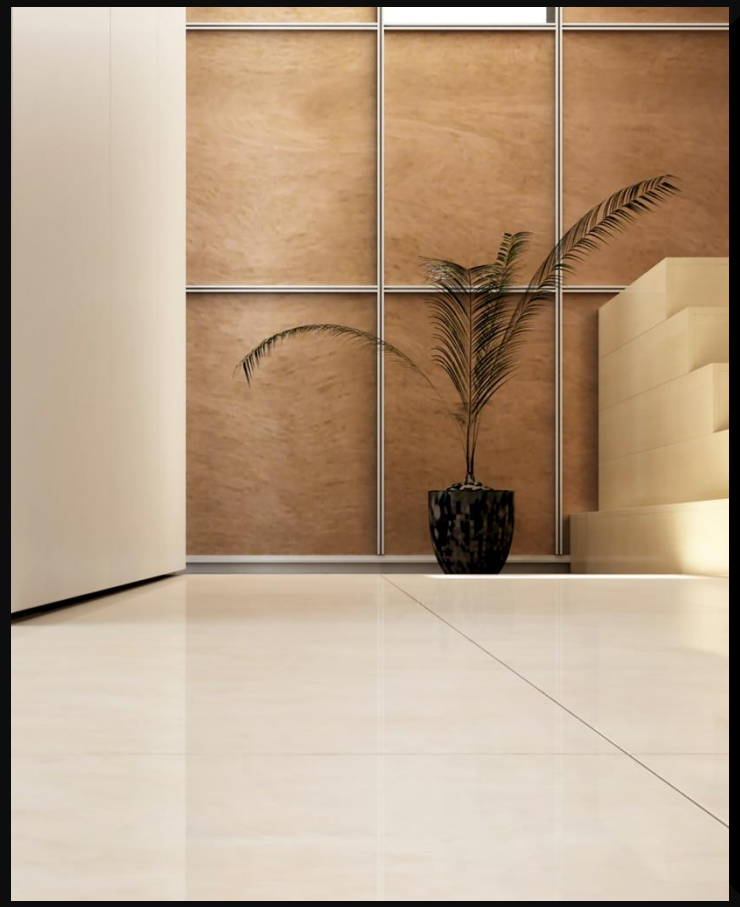


Bases: Flush Projecting Square



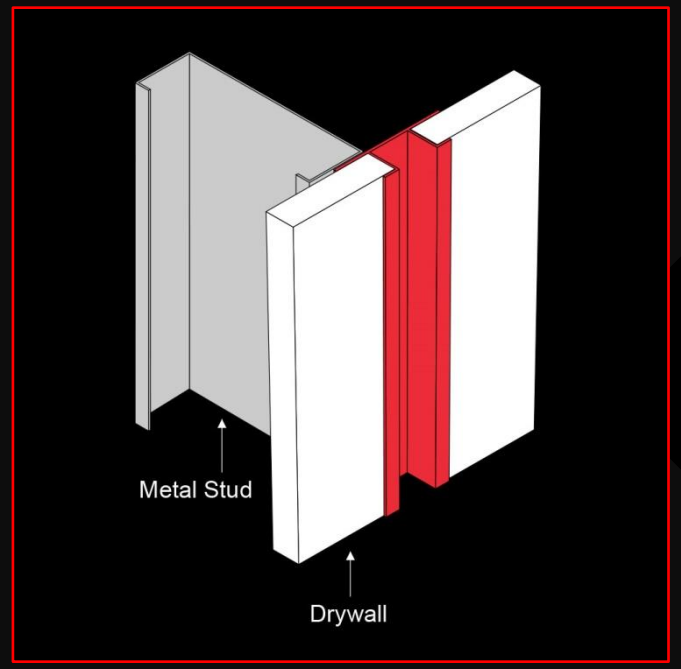


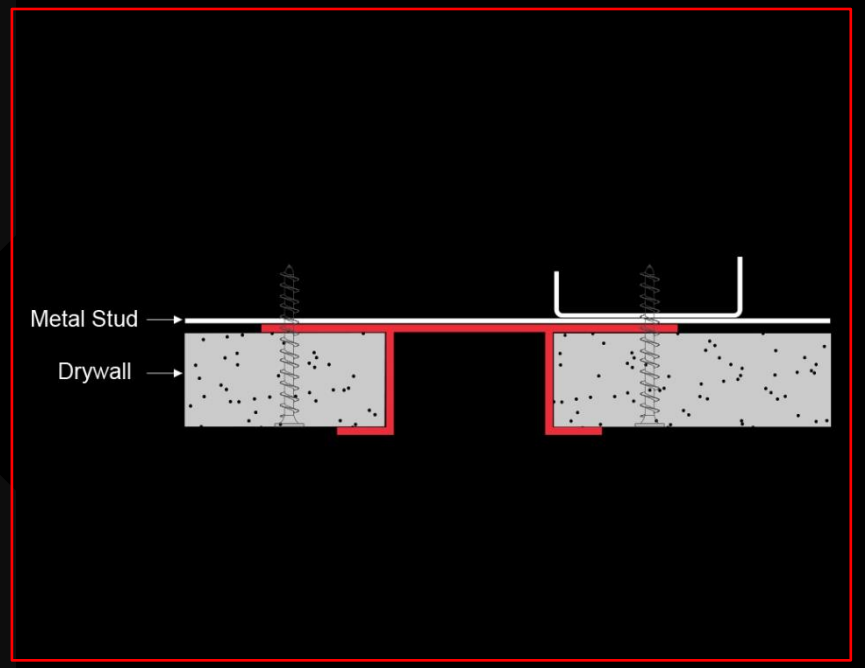
This profile gives a flash base with an square accent detail.



Extruded Aluminum Reveals:

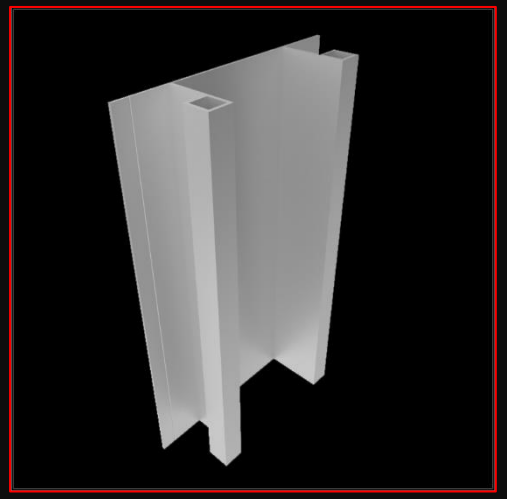
Reveals: Flange Reveal

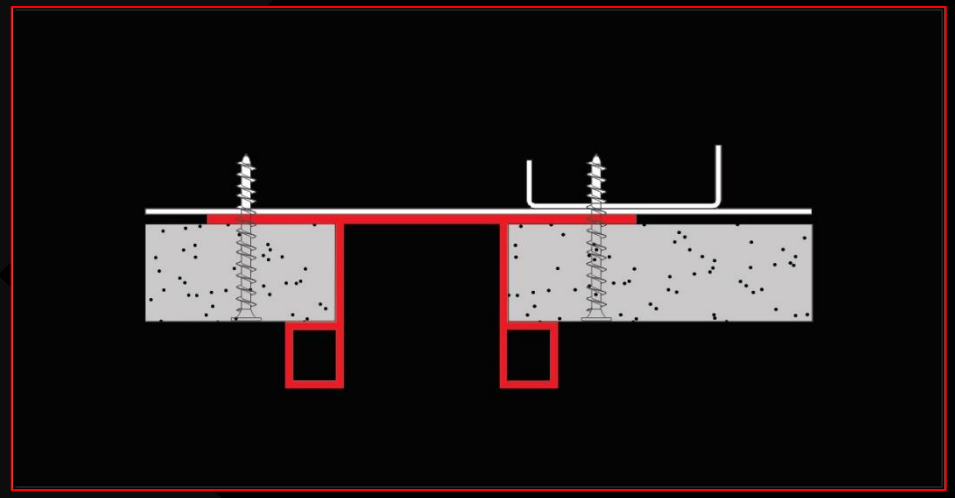




- Strictly a decorative detail
- Aluminum allows installation vertically, horizontally, diagonally
- Widths: ¼ inch up to 4 inches

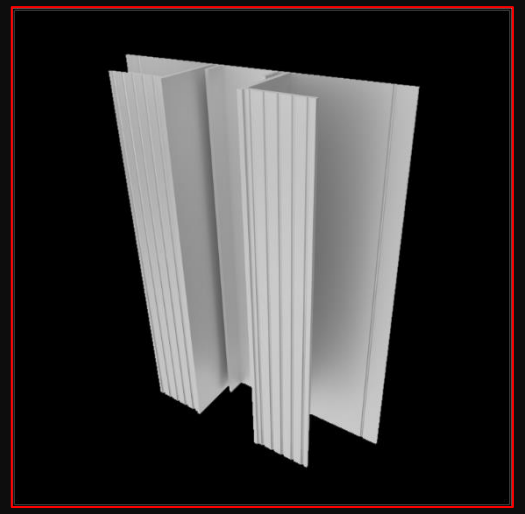
Reveals: Square Reveal

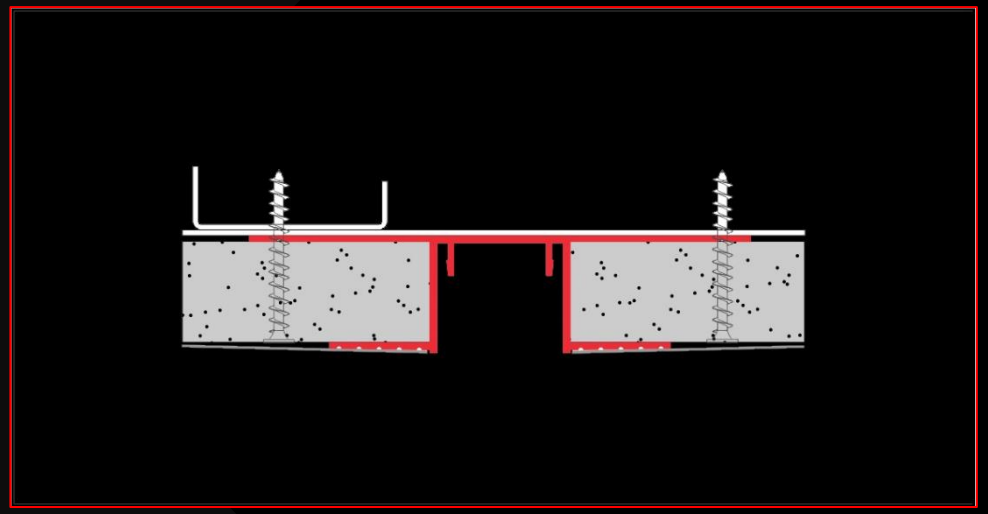




You can see this profile is very similar to the Flange Reveal it just has added square accents.

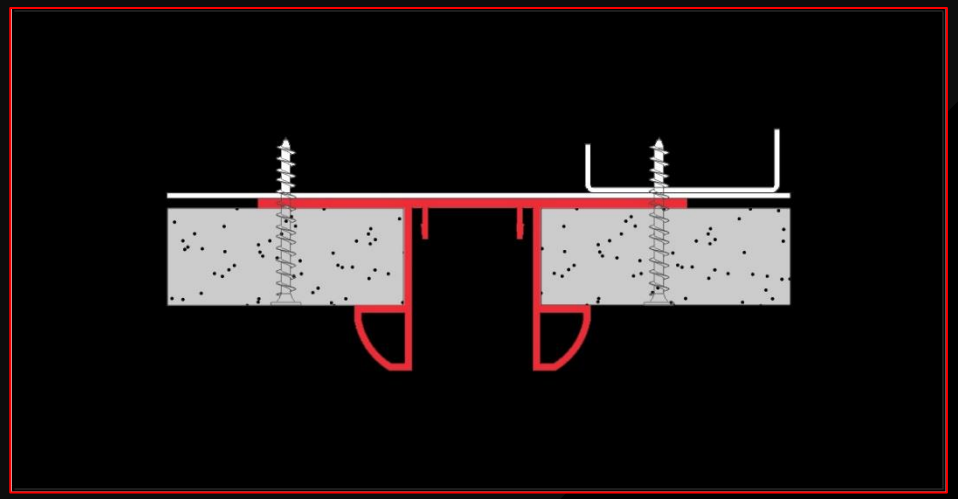
Channels: Flush

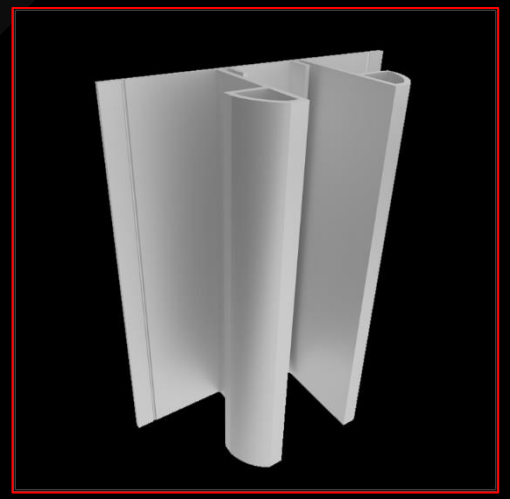




- Utilized in two-piece systems (channels and inserts)
- Installed vertically or diagonally and in approved conditions, horizontally
- Ridged face provides for taping and floating

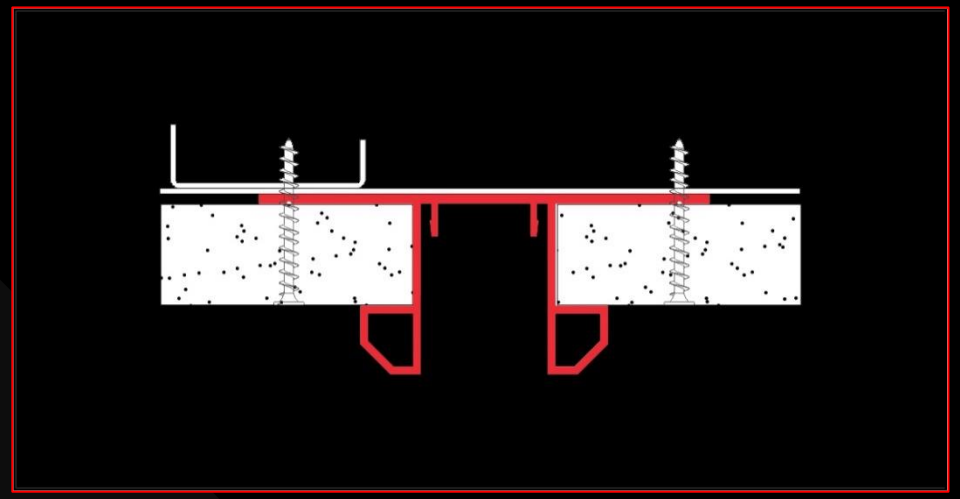
Channels: Square Tapered & Square Angled

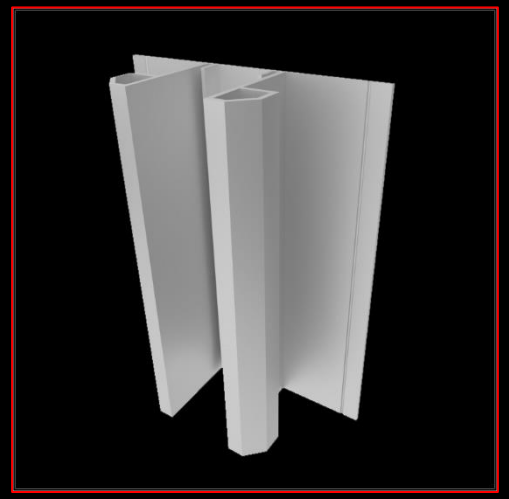




Unique tapered square edges create a dynamic look when paired with an insert piece

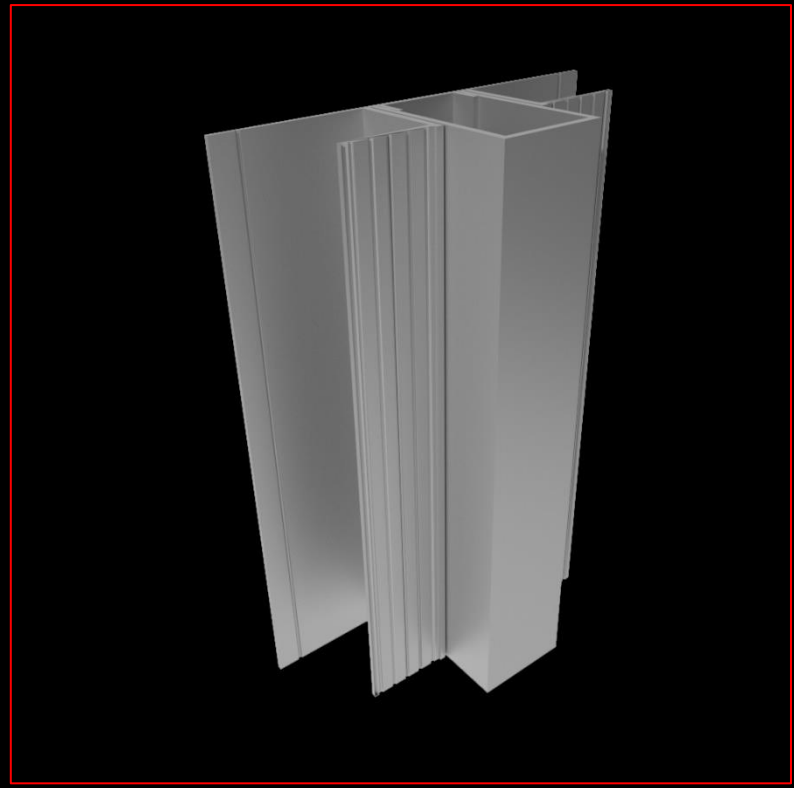
Angled detail adds a unique touch to a classic look



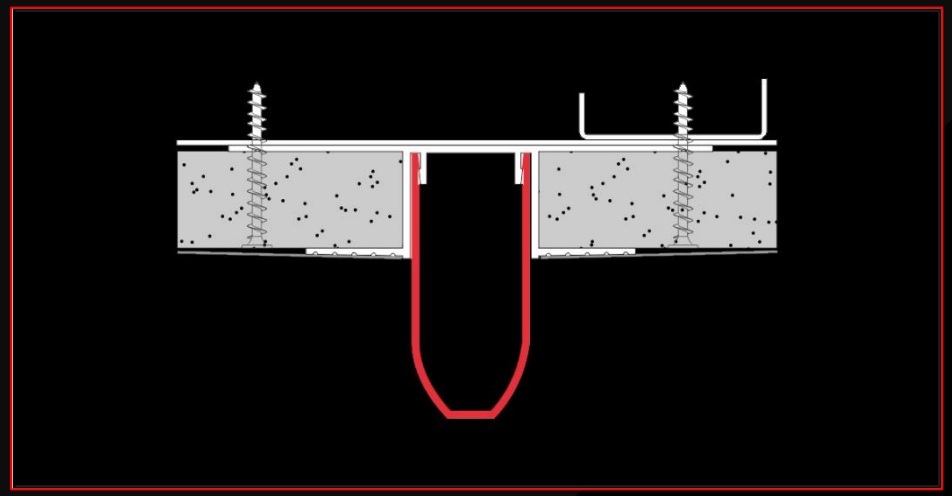


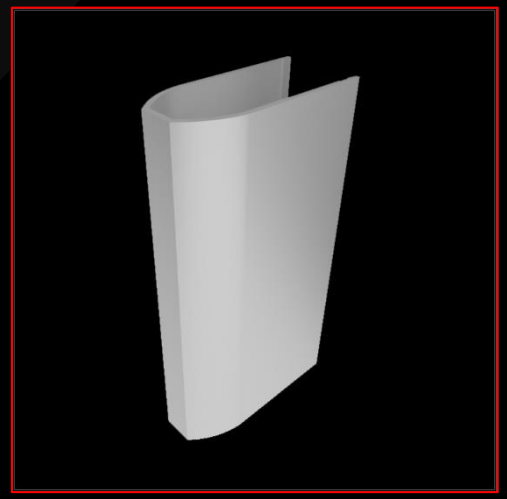
Inserts: Rectangular Square

- Inserts are paired with channel reveals and may be installed vertically or diagonally
- Utilized to create both modern and classic looks in drywall or panel installations
- Rectangular square insert is available in 1-inch and 2-inch projections



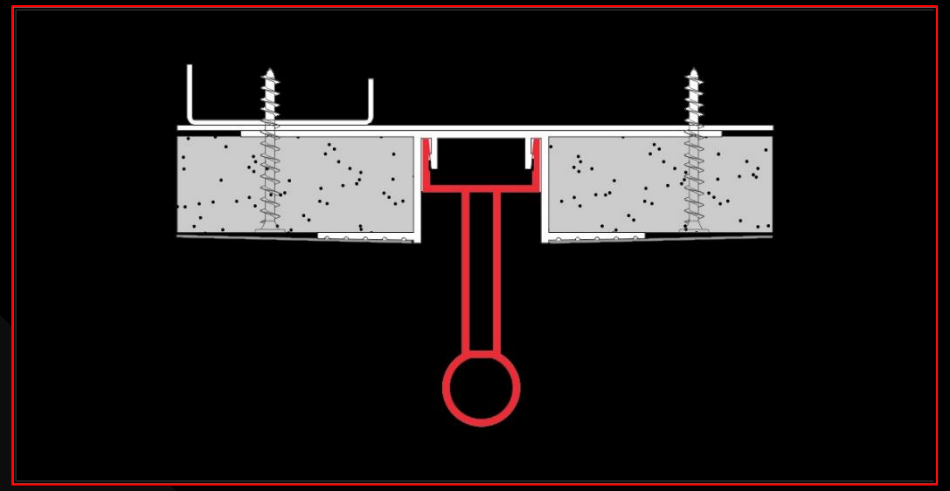
Inserts: Projecting Radiused Square & Blade Rectangular Round

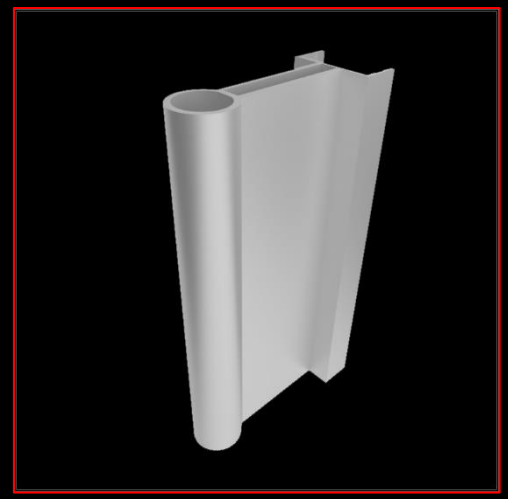


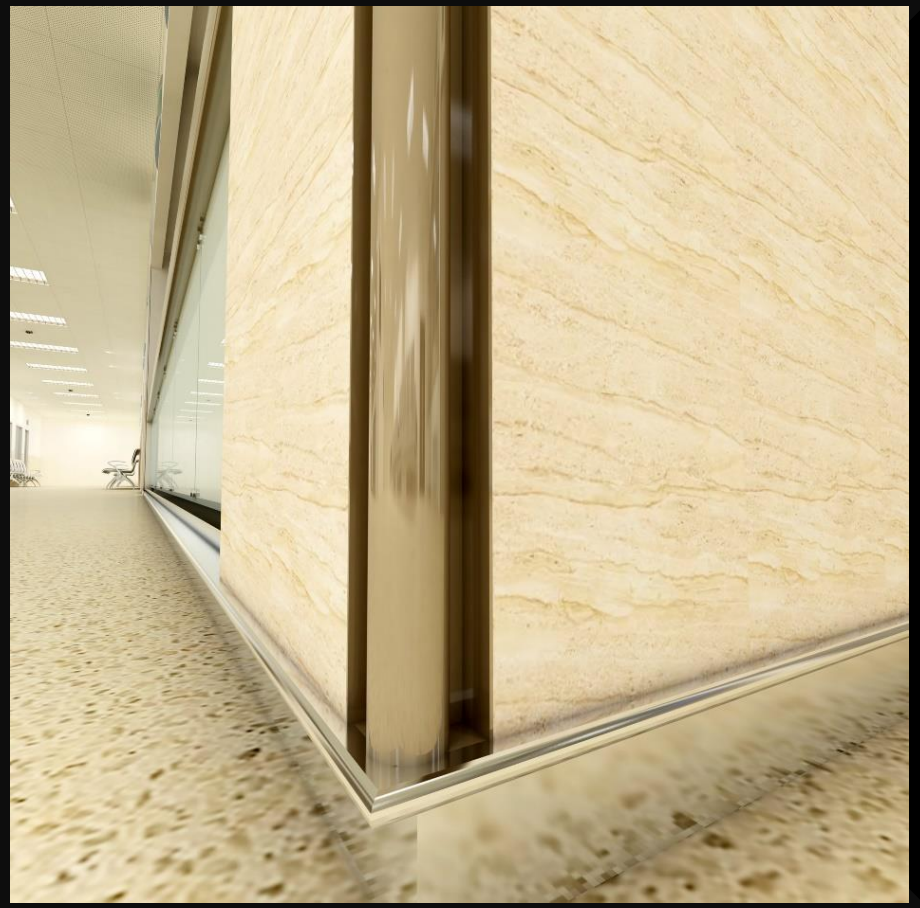


Available in Flush, 1-inch, 2-inch, and 3-inch projections

Available in 1-inch, 2-inch, and 3-inch projections







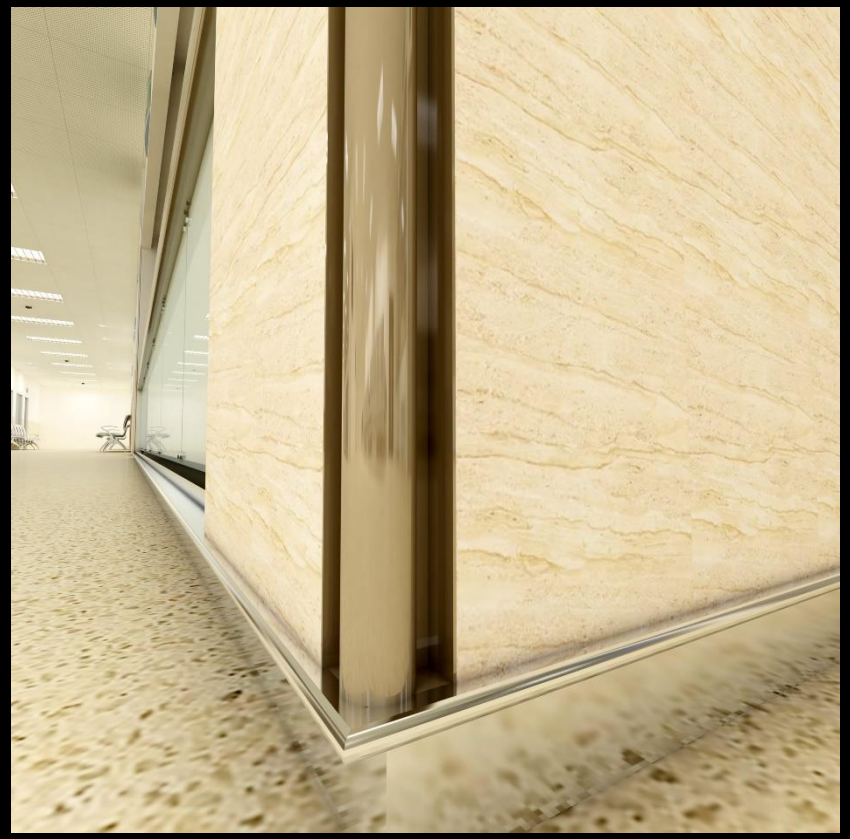
Extruded Aluminum Corners:

Corners:

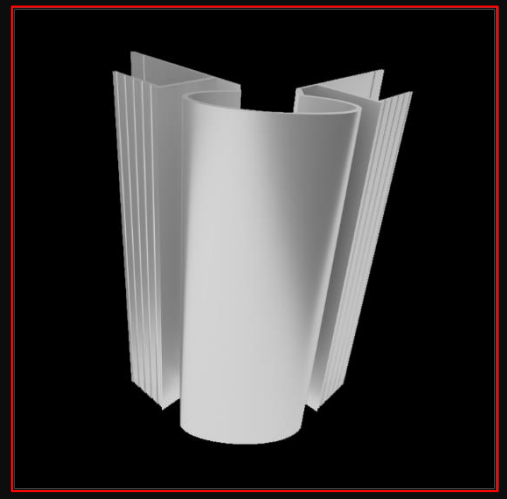
Compared to PVC rubber, aluminum corner trim profiles offer:

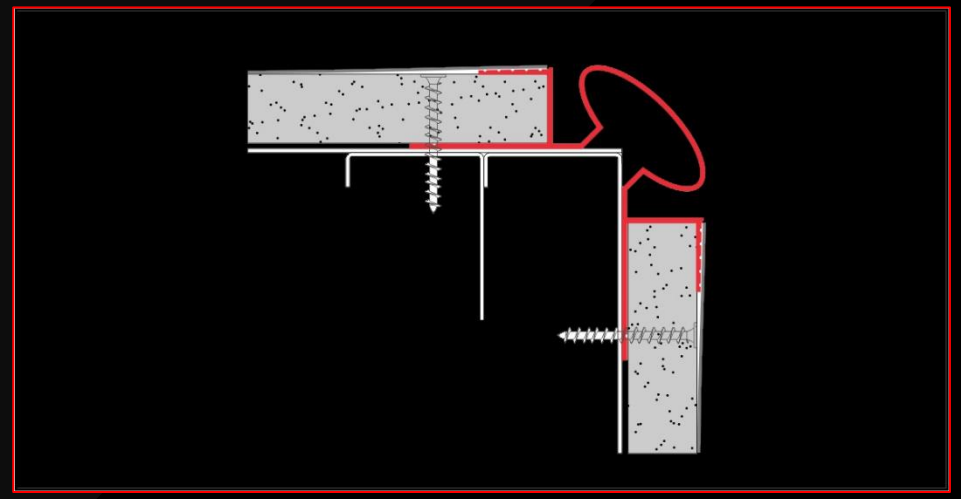
- superior protection
- greater longevity
- more design options

Available in square, radiused, round, elliptical, and tapered configurations

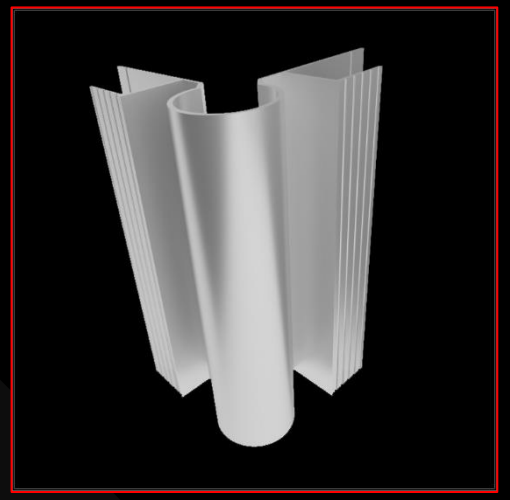


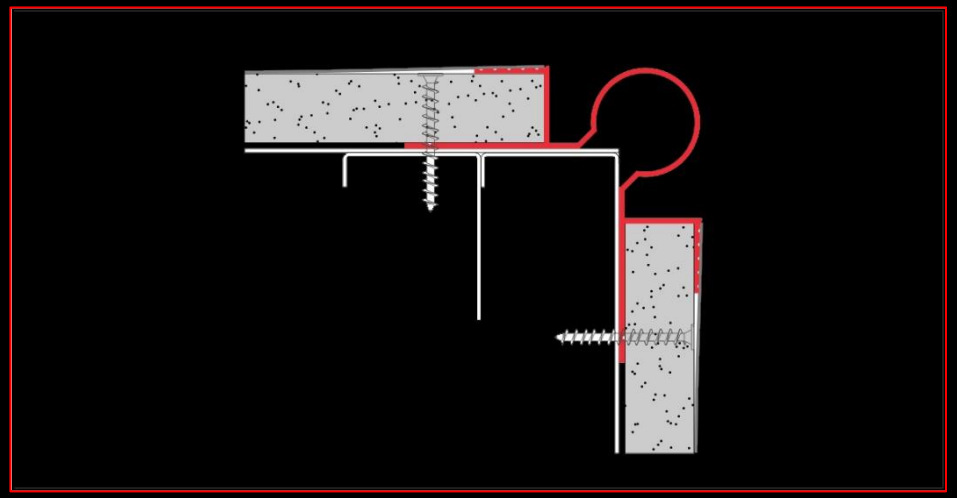
Corners: Eliptical & Round



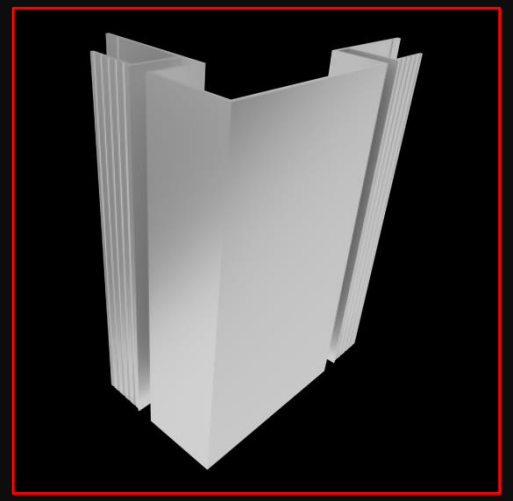


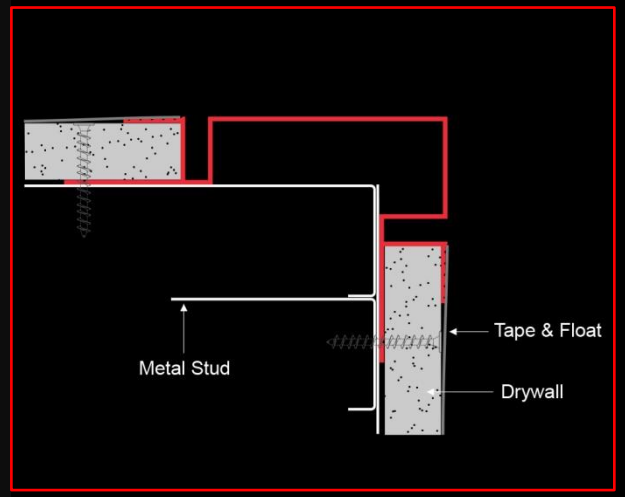
The reveal in each of these profiles creates the illusion of a floating corner.





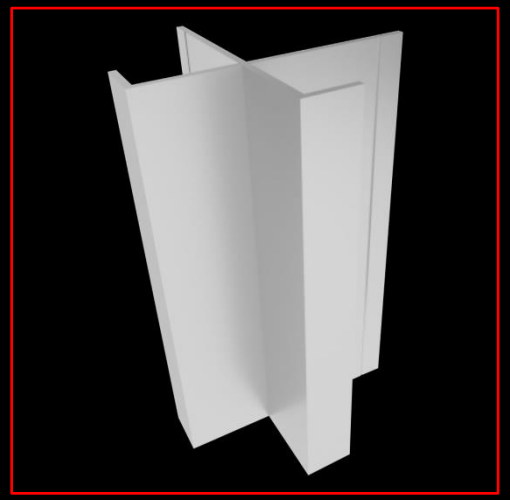
Corners: Rectangular & Open

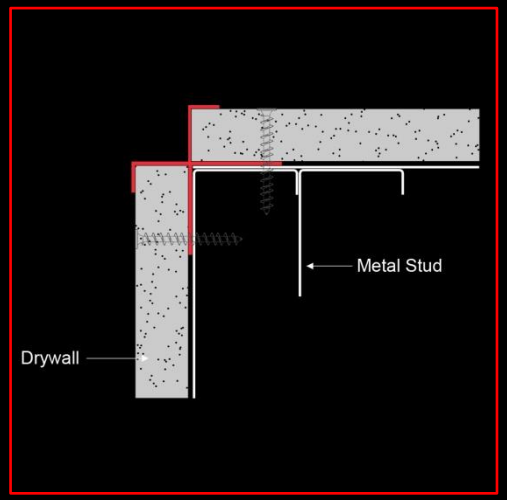




The rectangular profile is a good complement to hallways and transitions from open to linear spaces well.

Here is the open profile which is a more contemporary treatment for outside corners.



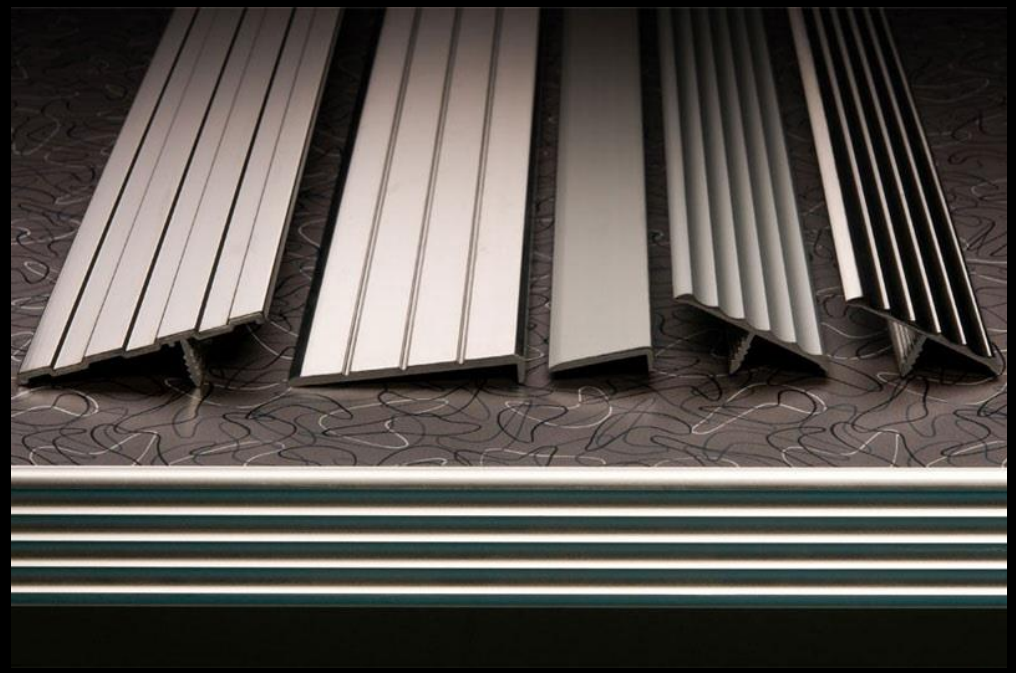


Anodized Finishes:

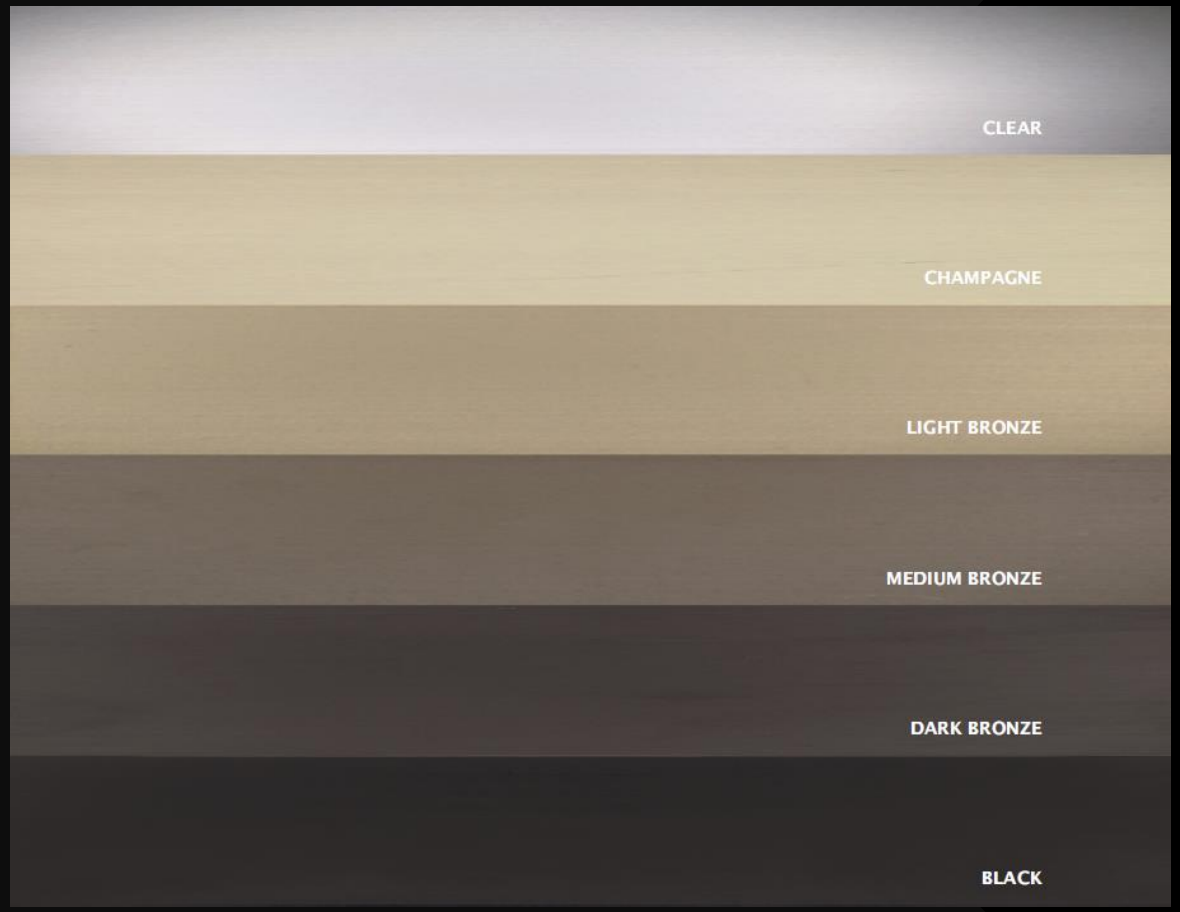
- 6063 Aluminum alloy is ideally suited to anodizing
- Aluminum oxide is fully integrated with the underlying aluminum substrate, therefore will not chip or peel.
- It has a porous structure that permits secondary processes

Clear Anodized Finishes:

- Protects the surface, while allowing the natural beauty of the aluminum to shine through
- Controlled electrochemical conversion process that deposits an oxide film on the aluminum trim.
- Natural oxidation occurs on bare aluminum, but the *controlled* oxidation process artificially creates a thicker, harder, and more durable "oxide film."
- Extremely durable finish, resistant to most forms of corrosion.
- Clear anodized finishes can vary slightly from one piece of trim to another. Design professionals should consider this characteristic before ordering.



Other Anodized Finishes:



- Typical colors: Champagne, Bronze, and Black.
- As with clear anodized, finishes can vary from one piece of trim to another.
- Typically, color will fall within a certain range, can usually be determined prior to anodizing.
- Manufacturer should provide anodized color details upon request.
- Specifiers should require anodized coating thickness be tested in accordance with **ASTM B244-68**.

Powder Coated Finishes:

- Provides a high-quality finish in almost limitless range of colors
- Electrostatic spray deposition is generally used to apply the powder coating to the aluminum substrate
- Compared to liquid paints, powder coating provides a more durable finish

Custom Pattern Finishes:

- Design professionals can also order trim in a custom pattern.
- For example in an airport interior, the wallpaper pattern was repeated on the aluminum trim covering panel joints in order to provide a continuous unbroken appearance.
- Shown here, a custom pattern resembles natural wood.

Installation:

Installation Introduction:

- Ensure correct layout and placement and that blocking has been provided
- All trim work can be applied to walls and ceilings and floated in flush with a gypsum board surface or installed with panels
- Follow the gypsum board manufacturer’s best practice application when installing any aluminum trim accessory
- Profiles are for aesthetic purposes only

Cutting Aluminum Trim:

- An outside corner is the best place to begin installation of aluminum trim profiles
- Can be cut with a chop saw, using a non-ferrous carbide miter saw blade
- It is recommended that lubricant be applied to the blade before each cut

Installation: Tape & Float Flanges

- Moldings are to be installed while the drywall/gypsum board is being installed
- The framing/blocking should provide a backer
- Before the taping process begins, installation flanges should be cleaned

Installation: Tape & Float Flanges

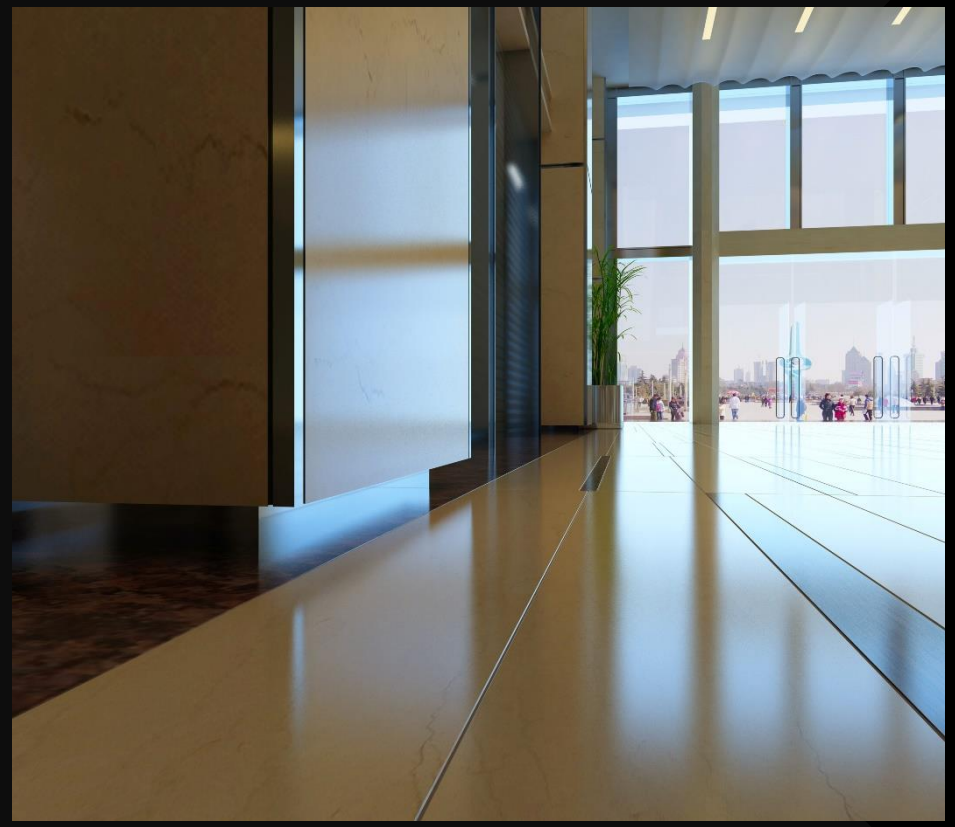
- Painted aluminum moldings should be masked with vinyl tape or cloth
- Drywall tape should not overlap the edge of the reveal
- An 8-inch-wide trowel should be used to apply the final skim coat

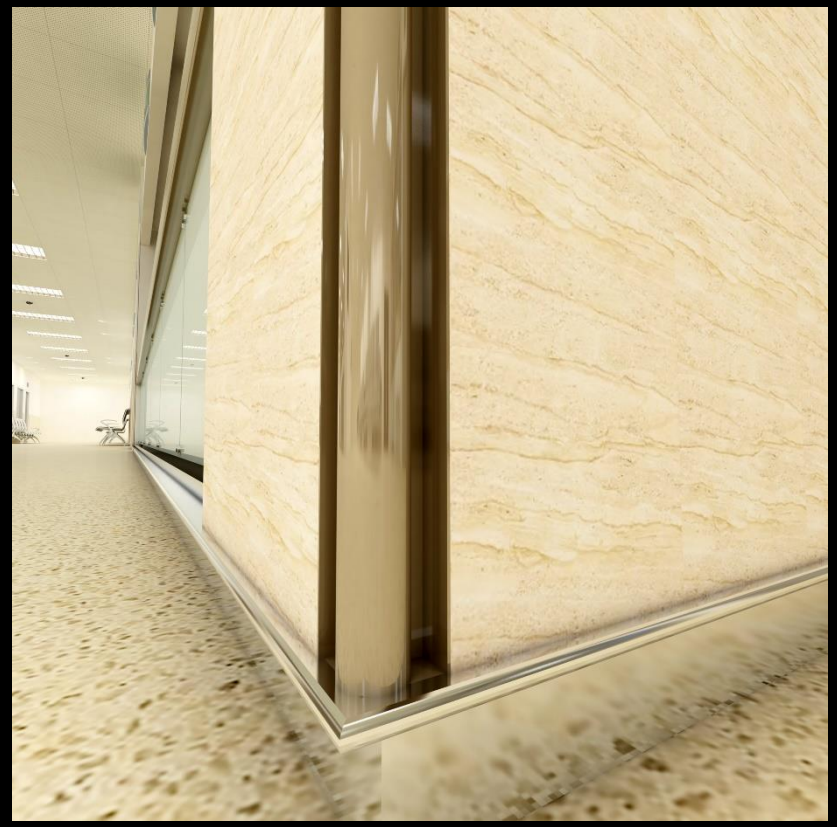
Installation: Without Tape & Float Flanges

- Moldings are to be concurrently during the drywall/gypsum board installation
- The framing/blocking should provide a backer so that moldings can be attached with #6 drywall screws 16 inches on center
- Reveals should be masked

Application Examples:

Application Examples:





Application Examples:

Summary:

Thank you!