

TITE-LOC PLUS

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PRODUCT FEATURES

- 20 year non-prorated finish warranty
- Available in 4 variations - see profile drawings to right. Check local factory for panel condition availability.
- Maximum panel length of 64 feet
- Mechanically seamed in the field to 180 degrees
- Weathertightness Warranty Available

MATERIALS

- 37 stocked colors (24 gauge steel)
- 13 stocked colors (22 gauge steel)
- 36 stocked colors (.032 aluminum)
- 20 stocked colors (.040 aluminum)
- Galvalume Plus available

UL CLASSIFICATION

- UL-580 Class 90 rated up to 18" O.C.
- UL-1897 wind uplift
- UL-790 Class A fire rated
- UL-263 fire resistance rated
- UL-2218 impact resistance rated

ASTM TESTS

- ASTM E1592
- ASTM E331/1646
- ASTM E283/1680

*24 ga. and 22 ga. steel panels and .032 and .040 aluminum panels are UL-90 classified over solid substrate. See roof deck construction in Underwriter Laboratories roofing materials and systems directory.

FLORIDA BUILDING PRODUCT APPROVALS

- 24 GA & .032 Aluminum (Open Purlins): FL Prod. Approv 5562-R4
- .040 Aluminum: FL Approv 10879-R1
- 24 GA & .032 Aluminum: FL Prod Approv. 13487-R2
- 24 GA & .032 Aluminum: FL Prod. Approv. 16142

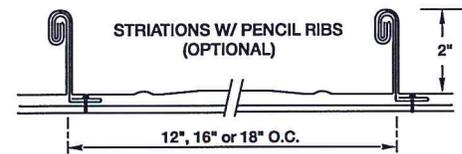
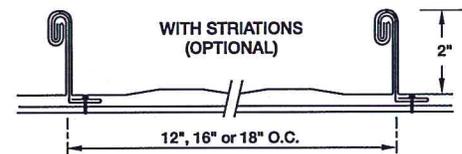
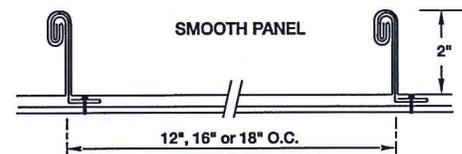
MIAMI-DADE PRODUCT APPROVALS

- .032 Aluminum (Plywood Deck): NOA No.13-0222.05
- 24 GA Steel (Plywood Deck): NOA No.13-0222.07
- .032 Aluminum (Steel Deck): NOA No.13-0222.04
- 24 GA Steel (Steel Deck): NOA No.13-0222.06

TESTS

- 24 ga. Steel SSTD Missile Impact Tested - Passed
- .032 Aluminum SSTD Missile Impact Tested - Passed

UL 90
CLASSIFIED



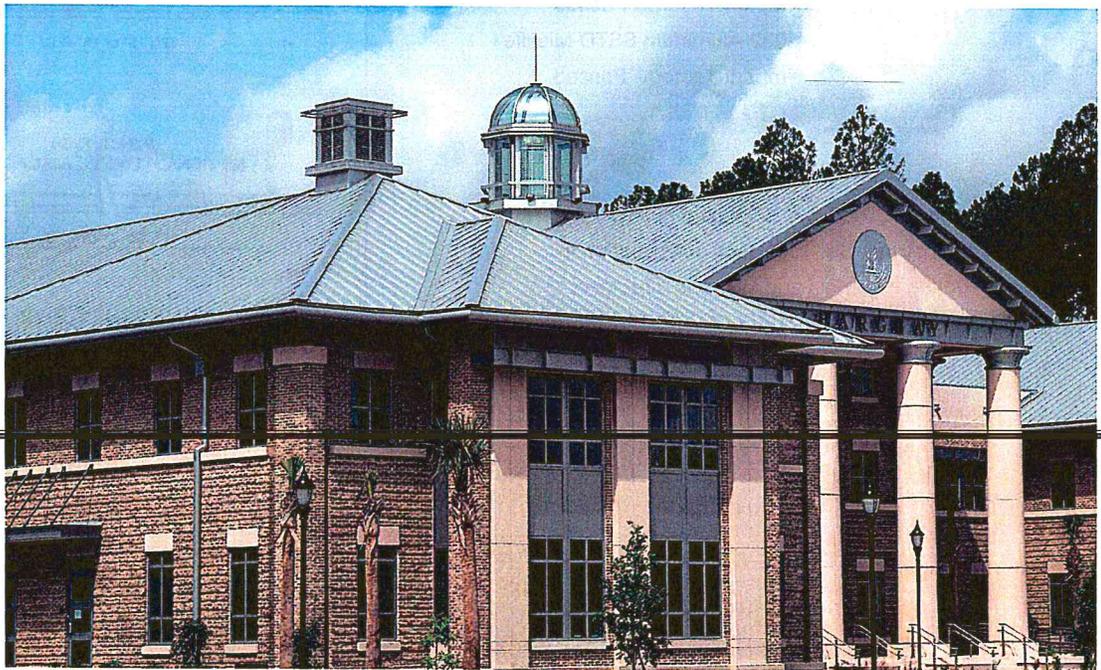
SPECS: 12", 16" OR 18" O.C.

2" HIGH

Note: Panel conditions vary by manufacturing facility. Please check local plant for availability.



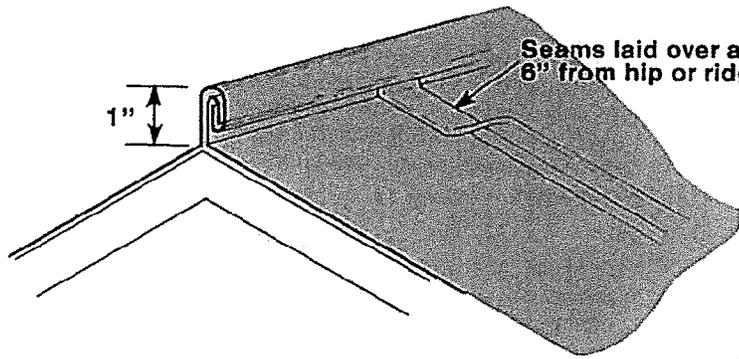
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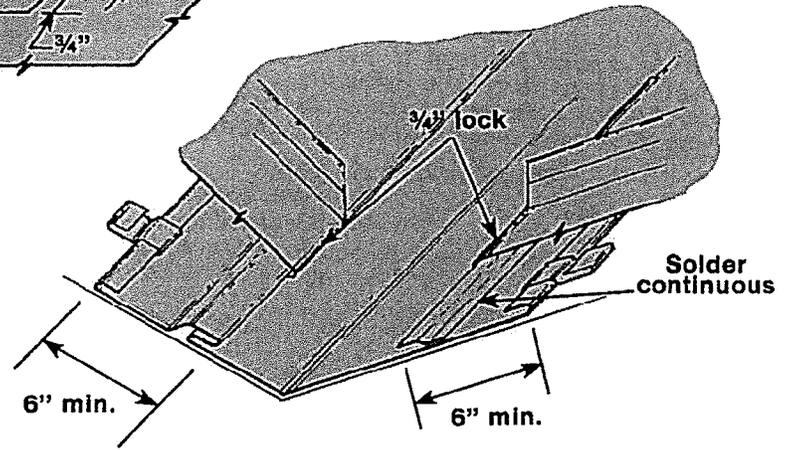
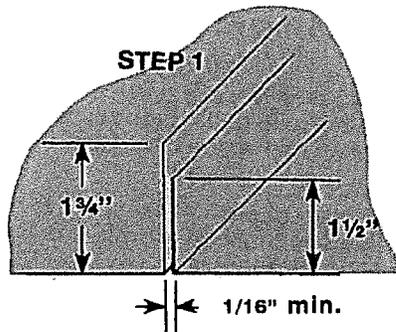
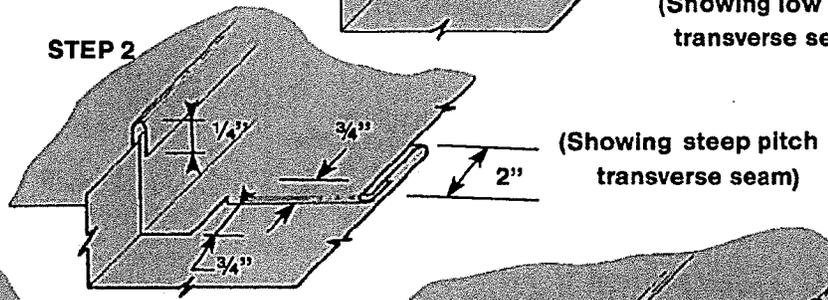
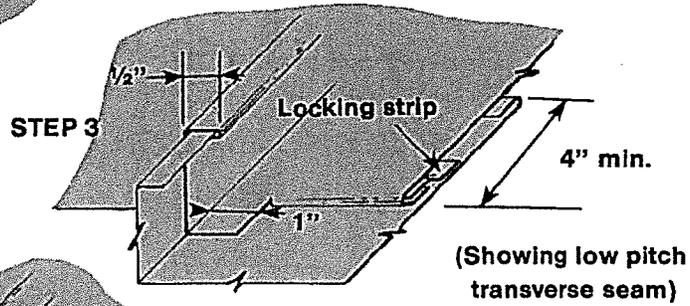
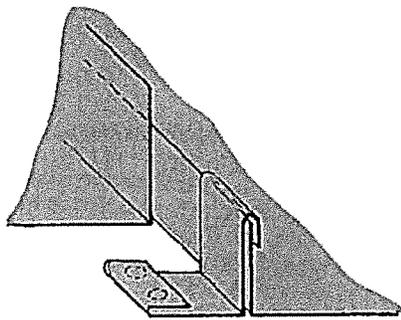
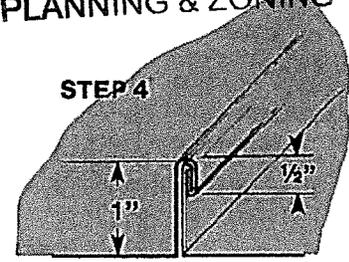
STANDING SEAM ROOFING (CONT'D.)

RECEIVED SECTION 3A
APR 15 2015

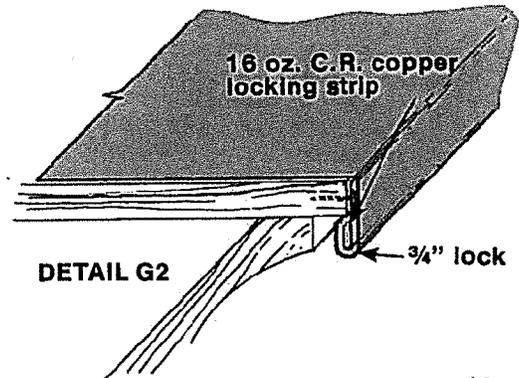
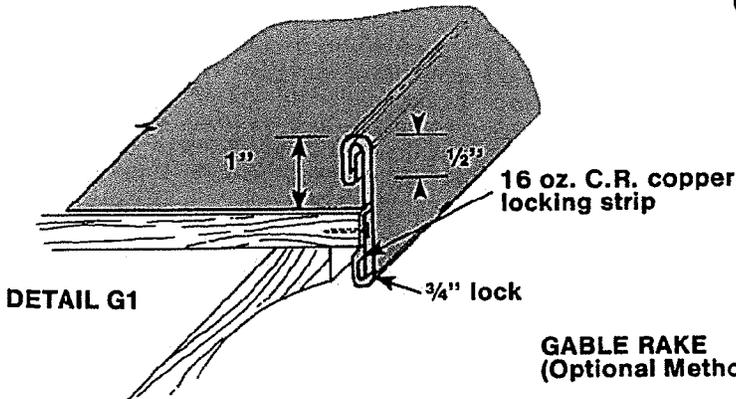
DEPARTMENT OF
PLANNING & ZONING



RIDGE OR HIP



VALLEY
(Showing optional locks for roofing)



Special conditions

When desirable to use a standing seam on roof slopes less than 3" per ft, a high grade butyl sealing tape or, alternately, a bead of comparable sealant can be applied to the top flange of the shorter leg (Figure 1). The standing seam is then closed and finished in the usual manner (Figure 2).

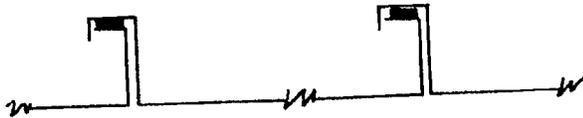


Figure 1

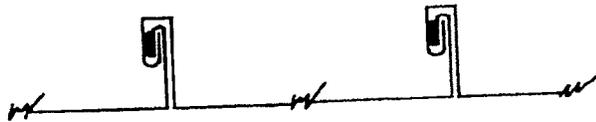


Figure 2

The low pitch transverse seam detail should be used and a bead of sealant should be applied in the lock formed by the soldered locking strip. The $\frac{3}{4}$ " fold on the lower end of the upper pan should hook into the locking strip of the underlying pan. The completed seam should be dressed down to a thickness of not less than $\frac{1}{8}$ " and a continuous bead of sealant should be visible the full width of the pan. The lap of the vertical portion or upstanding legs of the pans should also be set in sealant.

Machine formed pans

Standing seam pans may be made with power panformers, using either flat sheet or coiled sheet with this equipment. Available power panformers are adjustable to provide seam spacing from 6" to 24 $\frac{1}{2}$ " apart. Long rafter-length pans can be made from coiled sheet, eliminating the need for transverse seams.

Power seamers are also available providing full-finished, 1" high, double-locked standing seams. See Section 12 for further details.

Roofs over 30 feet

For standing seam roofs that exceed 30' up to 45', expansion cleats should be used. Several kinds of expansion type cleats are illustrated in Basic Standard Practices, page 14. Fixed cleats should be installed at the midpoint of the roof and for a distance of 3' to 6' in both directions. The balance of the cleats toward both extremities should be expansion type.

Hips, ridges

On hips and ridges the same type of standing seam should be formed, as on the roof run (see Detail, page 19). Each roof standing seam is laid flat 6" from the upper edge of the pans where it meets the ridge or hip.

Pans on opposite sides of the ridge or hip are turned up 1 $\frac{1}{2}$ " and 1 $\frac{3}{4}$ " to form a standing seam in the usual manner. To achieve continuity of seams at ridge and hips, the seams from different roofs must be notched before laying over to reduce the number of thicknesses of copper.

Eaves

At eaves, the end of each pan is hooked over a previously placed edge strip and secured with a minimum $\frac{3}{4}$ " loose lock. The edge strip may be formed as shown in Supplementary Roofing Details, Section 3F, or may take another required form. The ends of the standing seams at the eaves may be cut and folded back or turned down and locked to the edge strip. Connections to gutters are shown in Supplementary Roofing Details, Section 3F.

Gable rakes

At gables the standing seam is formed by turning up the edge of the last pan 1 $\frac{1}{2}$ " flush with the edge of the roof. The separate rake strip locks $\frac{3}{4}$ " at its lower edge over a previously placed edge strip. This rake is secured to the roof pan at its upper edge with the standing seam lock (Detail G1). The adjacent lengths of rake strip are lapped at least 3" in the direction of flow.

An alternate method of finishing the copper roofing at the gable omits the standing seam at the end. In this method the outer edge of the roof pan turns down the gable end and locks over a previously placed strip (Detail G2).

Valleys

The sides of each valley sheet are folded $\frac{1}{2}$ " for cleating. Into these folded edges copper cleats 2" wide are applied and spaced not more than 18" apart.

The upper edge of each valley sheet is nailed or otherwise secured to the roof deck. The lower edge of the upper valley sheet is lapped over the lower sheet not less than 6" (see Valley Flashing Section 4F). This lap should not be soldered. At a distance of 6" from the side edge a continuous locking strip should be soldered to the valley sheet. Alternately, at the same distance in from the side edge, a double fold may be formed in the valley sheet (Valley Detail). Over this strip, or into the fold, the lower edge of each roof pan is hooked and dressed down. Either method of side edge construction prevents water from forcing its way past the opposite side of the valley flashing. Where the ends of the standing seam hook into the fold formed in the valley sheet or into the separately applied locking strip, these ends are turned down in the direction of flow, or they may be cut and folded back.

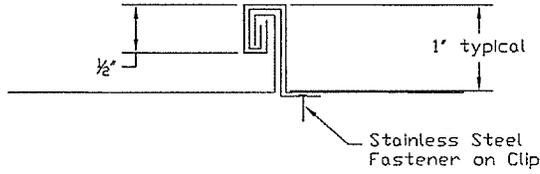
Where roofs are of different slopes or of unequal surface area, a 1" high inverted "V" member may be incorporated in the center of the valley, as shown under Valley Flashing Section 4F.

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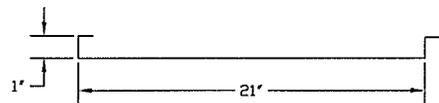
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Standing Seam Joint Detail

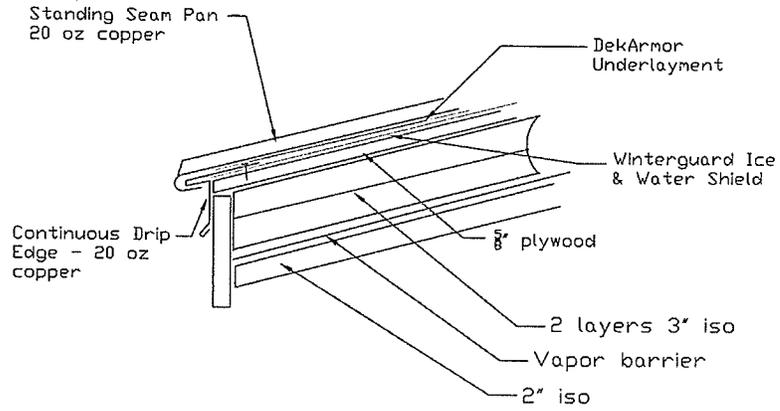
A.C. Hathorne Co.

Standing Seam Pan Detail - Typical

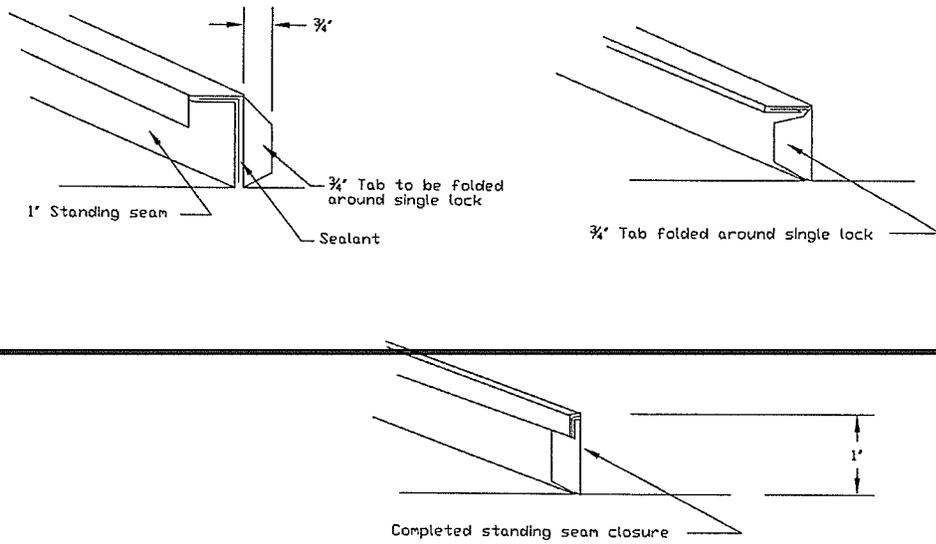


A.C. Hathorne Co.

Standard Eave Edge Detail



A.C. Hathorne Co.



Standing Seam Closure

A.C. Hathorne Co.

Trifab® VG (VersaGlaze®)

Trifab® VG 450, 451 & 451T (Thermal) Framing Systems &
Trifab® 451UT (Ultra Thermal) Framing System

Design + Performance
Versatility with Unmatched
Fabrication Flexibility

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DEPARTMENT OF
PLANNING & ZONING



Preston Pointe, Louisville, KY

Architect: Potter & Associates Architects PLLC, Louisville, KY

Glazing Contractor: Kentucky Mirror & Plate Glass Company, Louisville, KY

Trifab® VG (VersaGlaze®) is built on the proven and successful Trifab® platform – with all the versatility its name implies. There are enough framing system choices, fabrication methods, design options and performance levels to please the most discerning building owner, architect and installer. The Trifab® VG family's newest addition, Trifab® 451UT (Ultra Thermal) framing system, is designed for the most demanding thermal performance and employs a "dual" Isolock® Thermal Break.

Aesthetics

Trifab® VG framing systems offer designers a choice of front-, center-, back- or multi-plane glass applications. Structural silicone glazing (SSG) and Weatherseal glazing options further expand the designers' choices, allowing for a greater range of design possibilities for specific project requirements and architectural styles. All systems have a 4-1/2" frame depth – Trifab® VG 450 has 1-3/4" sightlines, while Trifab® VG 451/451T and Trifab® 451UT have 2" sightlines.

With seamless incorporation of Kawneer entrances or windows, including GLASSvent® visually frameless ventilators, Trifab® VG can be used on almost any project. These framing systems can also be packaged with Kawneer curtain walls and overhead glazing, thereby providing a full range of proven, and tested, quality products for the owner, architect and installer from a single source supplier.

Economy

Trifab® VG 450, 451 and 451T framing systems offer four fabrication choices to suit your project (Trifab® 451UT available as screw spline fabrication only):

- **Screw Spline** – for economical continuous runs utilizing two piece vertical members that provide the option to pre-assemble units with controlled shop labor costs and smaller field crews for handling and installation.
- **Shear Block** – for punched openings or continuous runs using tubular moldings with shear block clips that provide tight joints for transporting large pre-assembled multi-lite units.
- **Stick** – for fast, easy field fabrication. Field measurements and material cuts can be done when metal is on the job.
- **Type B** – Same fabrication benefits as shear block except head and sill run through.

All systems can be flush glazed from either the inside or outside. The Weatherseal option provides an alternative to SSG vertical



Brighton Landing, Cambridge, MA
Architects: ADD Inc., Cambridge, MA
Glazing Contractors: Ipswich Bay Glass Company, Inc., Rowley, MA

mullions for Trifab® VG 450, 451 and 451T. This ABS/ASA rigid polymer extrusion allows complete inside glazing and creates a flush glass appearance on the building exterior without the added labor of scaffolding or swing stages. Additionally, High-Performance (HP) Flashing options are engineered to eliminate perimeter sill fasteners and associated blind seals.

Finishes

Architectural Class I anodized aluminum finishes are available in clear and Permanodic® color choices.

Painted finishes, including fluoropolymer that meet or exceed AAMA 2605, are offered in many standard choices and an unlimited number of specialty-designed colors.

Solvent-free powder coatings add the “green” element with high performance, durability and scratch resistance that meet the standards of AAMA 2604.

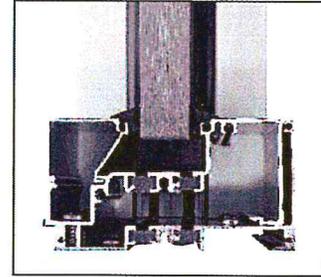
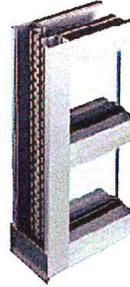
Kawneer Company, Inc.
Technology Park / Atlanta
555 Guthridge Court
Norcross, GA 30092

kawneer.com
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Performance

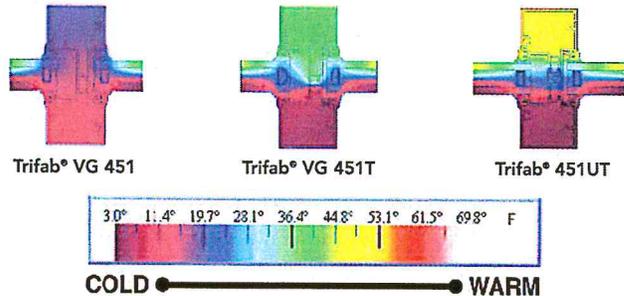
Kawneer's Isolock® Thermal Break process creates a composite section, prevents dry shrinkage and is available on Trifab® VG 451T. For even greater thermal performance, a “dual” Isolock® Thermal Break is used on Trifab® 451UT.



Trifab® 451UT uses a “dual” Isolock® Thermal Break (right) and features a new HP (High Performance) sill design, which incorporates a screw-applied end dam (left), ensuring positive engagement and tight joints between the sill flashing and end dam.

U-factor, CRF values and STC ratings for Trifab® VG vary depending upon the glass plane application. Project specific U-factors can be determined for each individual project. (See the Kawneer Architectural Manual or Kawneer.com for additional information).

Thermal simulations showing temperature variations from exterior/cold side to interior/warm side.



Performance Test Standards

Air Performance	ASTM E 283
Water	AAMA 501 and ASTM E 331
Structural	ASTM E 330
Thermal	AAMA 1503
Thermal Break	AAMA 505 and AAMA TIR-A8
Acoustical	AAMA 1801 and ASTM E 1425

Trifab® VG 450, 451 and 451T glazing options

(note: Trifab® 451UT available as center set glass plane only).

