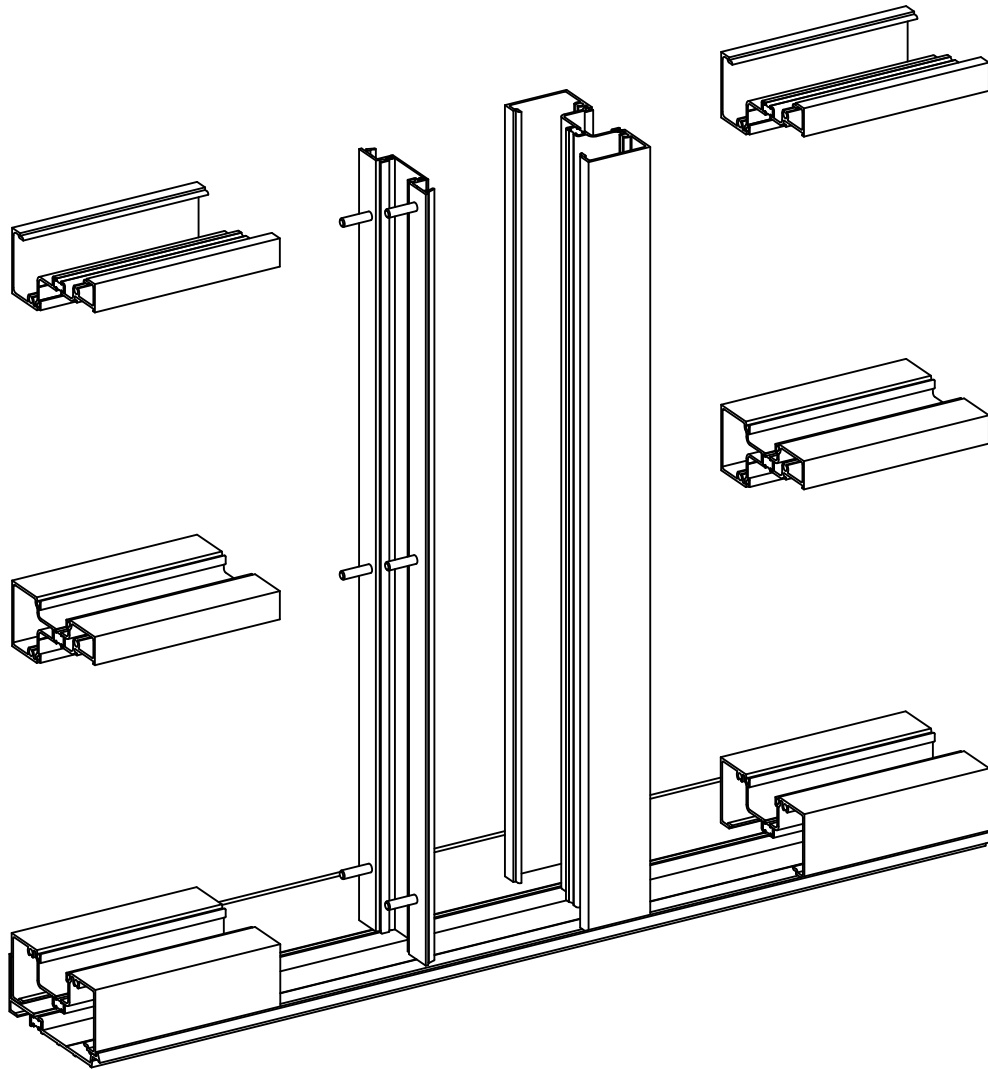


# INSTALLATION

## TRIFAB™ 451/451T - IR SCREW SPLINE ASSEMBLY



# INSTRUCTIONS

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

© Kawneer Company, Inc., 2010

These instructions show the general installation sequence and procedure for typical installation.  
They supplement the shop details and notations on installation and glazing.

<b>SECTION</b>	<b>PAGE</b>	
<b>I</b>	<b>3-4</b>	<b>GENERAL NOTES</b>
<b>II</b>	<b>5</b>	<b>TAKEOFF GUIDE</b>
<b>III</b>	<b>6</b>	<b>CUT FORMULAS</b>
<b>IV</b>	<b>7-8</b>	<b>PARTS IDENTIFICATION</b>
<b>V</b>	<b>9</b>	<b>BASIC FRAMING DETAILS</b>
<b>VI</b>	<b>10-11</b>	<b>FABRICATION</b>
<b>VII</b>	<b>12-15</b>	<b>INSTALLATION</b>
<b>VIII</b>	<b>16-17</b>	<b>GLAZING</b>
<b>IX</b>	<b>18-19</b>	<b>MISCELLANEOUS DETAILS</b>

Consult the KawneerDirect website for the latest updates to these instructions before beginning work on your project.

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.  
© Kawneer Company, Inc., 2010

**HANDLING, STORING, AND PROTECTION OF ALUMINUM**

The material must be protected against damage. The following precautions are recommended to assure early acceptance of your products and workmanship.

- A. HANDLE CAREFULLY** - Don't drop from the truck. Stack with adequate separation so material will not rub together. Store off the ground. Protect against elements and other construction trades. Wear hand protection to prevent injury due to sharp edges of cut extrusions.
- B. KEEP MATERIAL AWAY FROM WATER, MUD AND SPRAY** - Prevent cement, plaster, or other materials from damaging the finish.
- C. PROTECT THE MATERIALS AFTER ERECTION** - Protect by wrapping with Kraft paper or by erecting Visqueen or canvas splatter screen. Cement, plaster, terrazzo, other alkaline solutions and acid based materials used to clean masonry are very harmful to the finish and should be removed with water and mild soap IMMEDIATELY.

**GENERAL INSTALLATION NOTES**

The following practices are recommended for all installations:

- A. CHECK SHOP DRAWINGS, INSTALLATION INSTRUCTIONS and GLAZING INSTRUCTIONS** to become thoroughly familiar with the project. The SHOP DRAWINGS take precedence and include specific details for the project. The INSTALLATION INSTRUCTIONS are of a general nature and cover most common conditions.
- B.** All materials are to be INSTALLED PLUMB, LEVEL, AND TRUE.
- C.** All work should start from bench marks and/or column lines as established by the ARCHITECTURAL DRAWINGS and the GENERAL CONTRACTOR. Check mullion spacing from both ends of masonry opening to prevent dimensional build-up of day light opening.
- D.** Make certain that construction which will receive your materials is in accordance with the contract documents. If not, notify the GENERAL CONTRACTOR IN WRITING and resolve differences before proceeding with your work.
- E.** Isolate all aluminum to be placed directly in contact with uncured masonry or incompatible materials with a heavy coat of zinc chromate or bituminous paint.
- F.** Check all materials on arrival for quantity and be sure you have everything required to begin installation.
- G.** Sealants must be compatible with all materials with which they have contact, including other sealant surfaces. Consult with sealant manufacturer for recommendations relative to joint size, shelf life, compatibility, priming, tooling, adhesion, etc.
- H. PERIMETER FASTENING** - "Fastening" means any method of securing one part to another or to adjacent materials. These instructions specify only those fasteners used within the system. Due to varying perimeter conditions and job performance requirements, anchor fasteners are not specified in these instructions. Refer to the Shop Drawings or consult a structural engineer for fastener type, sizing, and location.
- I. CHECK OPENINGS** - Make certain that the opening which will receive your materials is in accordance with the contract documents. If not, notify the General Contractor in writing and resolve differences before proceeding with your work.
- J. BUILDING CODES** - Glass and glazing codes governing the design and use of products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility for these design considerations. It is the responsibility of the owner, specifier, architect, general contractor and the installer to make these selections in strict conformance with all applicable codes.
- K. EXPANSION JOINTS** - Expansion joints and perimeter seals shown in these instructions and in the shop drawings are shown at normal size. Actual dimensions may vary due to perimeter conditions and /or difference in metal temperature between the time of fabrication and time of installation. For example, a 12 foot unrestrained length of aluminum extrusion can expand or contract 3/32" over a 50° F temperature change. Any movement potential should be accounted for at the time of installation.

- L. FIELD TESTING** - It is recommended that a Water Hose Test be conducted once a sufficient portion of the framing is installed, glazed and caulked to ensure proper installation. The Water Hose Test shall be conducted in accordance with AAMA 501.2. In addition, larger projects should have periodic Water Hose Tests as additional precautionary measures.
- M. GASKET INVENTORY ROTATION** - These high quality rubber extrusions are coated with silicone lubricant. Silicone will dry over time leaving a white "chalky" residue. Please rotate your stock "FIRST IN - FIRST OUT". If the rubber becomes dry, you may use water ONE TIME to reconstitute the silicone, after that, use a soap water solution.

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

© Kawneer Company, Inc., 2010

	451 - IR CENTER SET OUTSIDE GLAZED	451T - IR CENTER SET OUTSIDE GLAZED
<b>SCREW SPLINE FRAMING</b>		
	NON-THERMAL	THERMAL
Mullion	451CG001	451TCG001
Filler	451CG002	451TCG002
Jamb	451CG001	451TCG001
Head	451CG003	451TCG003
Horizontal	451CG011	451TCG011
Sill	451CG001	451TCG001
Spline Screw		028856
Glass Stop		451CG004
HP Sill Flashing	451HP037	451THP037
HP Sill Flashing Clip (12" long)		451HP127
End Dam		450114
Drill Fixture		451VG201
<b>90° SNAP CORNERS</b>		
No-Pocket Corner Half		450017
One-Pocket Corner Half	451CG015	451TCG015
One-Pocket Corner Half <i>(OPPOSITE OF 451CG015)</i>	451CG035	451TCG035
Two-Pocket Corner Half	451CG016	451TCG016
Optional Ball-Point Spline Screw		128242
Optional Ball-Point Driver Bit		063040
<b>135° SNAP CORNERS</b>		
135° Mullion Center	452CG034	452TCG034
135° Pocket Insert	452CG028	452TCG028
<b>MISCELLANEOUS</b>		
Flat Filler	451CG163	451TCG163
<b>OPTIONAL MULLIONS &amp; STEEL REINFORCING</b>		
Medium Weight Mullion	451CG001A	451TCG001A
Heavy Weight Mullion	451CG013	451TCG013
Extra Heavy Weight Mullion	451CG113	451TCG113
Expansion Mullion - Male Half w/ Weathering	451CG540	451TCG540
Expansion Mullion - Female Half	451CG010A	451TCG010A
<b>GLAZING MATERIALS</b>		
Water Deflector		451105
Sill Setting Block		027073
Horizontal Setting Block		027081
Side Block		480520
Standard Push-On Gasket		027074
<b>ANCHORS</b>		
Flat Filler / Shim Support (3" long)		450126
Flat Filler / Shim Support (12" long)	451CG363	451TCG363

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

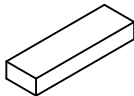
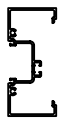

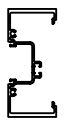
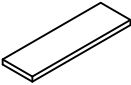



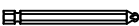



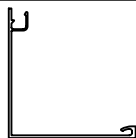



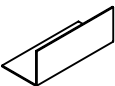
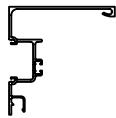

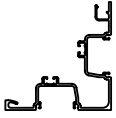

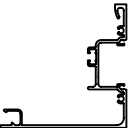


Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

© Kawneer Company, Inc. 2010

FRAMING MEMBER (CENTER)	CUT FORMULA
MULLIONS AND MULLION FILLERS	FRAME HEIGHT
JAMBS	FRAME HEIGHT
CORNER MULLIONS	FRAME HEIGHT
FLASHING	FRAME WIDTH PLUS 1/4"
EXPANSION MULLIONS	FRAME HEIGHT
HEAD MEMBERS	DLO
HORIZONTALS & HORIZONTAL FILLERS	DLO
SILL MEMBERS	DLO
GLASS STOPS	DLO MINUS 1/16"

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.


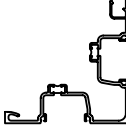

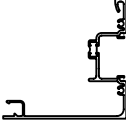










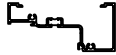
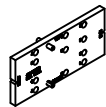



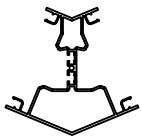


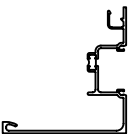
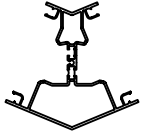
Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.  
© Kawneer Company, Inc., 2010

PART NO.	DESCRIPTION	ILLUSTRATION	PART NO.	DESCRIPTION	ILLUSTRATION
027073	SILL SETTING BLOCK		451CG001	MULLION / JAMB / SILL	
027074	STANDARD PUSH-ON GASKET		451CG001A	MEDIUM WEIGHT MULLION	
027081	HORIZONTAL SETTING BLOCK		451CG002	POCKET FILLER	
028856	SPLINE SCREW #12x1-1/8 PHTF TYPE "AB"		451CG003	HEAD	
Use optional 128242 spline screw and 063040 driver bit with 451(T)CG016 two pocket corner.					
063040	BALL-POINT DRIVER BIT FOR 128242		451CG004	GLASS STOP	
128242	OPTIONAL BALL-POINT SPLINE SCREW #12 x 1" SOCKET HEAD		451CG010A	EXPANSION MULLION - FEMALE HALF	
450017	90° NO-POCKET CORNER HALF		451CG011	HORIZONTAL	
450026	FLAT FILLER		451CG013	HEAVY WEIGHT MULLION	
450114	END DAM		451CG015	ONE-POCKET CORNER HALF	
450126	FLAT FILLER / SHIM SUPPORT (3" LONG)		451CG016	TWO-POCKET CORNER HALF	
			Use optional 128242 spline screw and 063040 driver bit with 451(T)CG016 two pocket corner.		
451105	WATER DEFLECTOR		451CG035	ONE-POCKET CORNER HALF	
480520	SIDE BLOCK		451HP037	HP SILL FLASHING	

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

© Kawneer Company, Inc., 2010

PART NO.	DESCRIPTION	ILLUSTRATION	PART NO.	DESCRIPTION	ILLUSTRATION
451CG113	EXTRA HEAVY WEIGHT MULLION		451TCG016	TWO-POCKET CORNER HALF	
			Use optional 128242 spline screw and 063040 driver bit with 451(T)CG016 two pocket corner.		
451HP127	HP SILL CLIP (12" LONG)		451TCG035	ONE-POCKET CORNER HALF	
451CG363	FLAT FILLER / SHIM SUPPORT (12" LONG)		451THP037	HP SILL FLASHING	
451CG540	EXPANSION MULLION - MALE HALF W/ WEATHERING		451TCG113	EXTRA HEAVY WEIGHT MULLION	
451TCG001	MULLION / JAMB / SILL		451TCG163	FLAT FILLER	
451TCG001A	MEDIUM WEIGHT MULLION		451TCG363	FLAT FILLER / SHIM SUPPORT (12" LONG)	
451TCG002	POCKET FILLER		451TCG540	EXPANSION MULLION - MALE HALF W/ WEATHERING	
451TCG003	HEAD		451VG201	DRILL FIXTURE (SCREW SPLINE / 451/451T)	
451TCG010A	EXPANSION MULLION - FEMALE HALF		452CG028	135° SNAP CORNER POCKET INSERT	
451TCG011	HORIZONTAL		452CG034	135° SNAP CORNER MULLION CENTER	
451TCG013	HEAVY WEIGHT MULLION		452TCG028	135° SNAP CORNER POCKET INSERT	
451TCG015	ONE-POCKET CORNER HALF		452TCG034	135° SNAP CORNER MULLION CENTER	

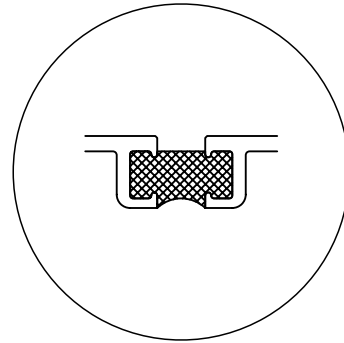
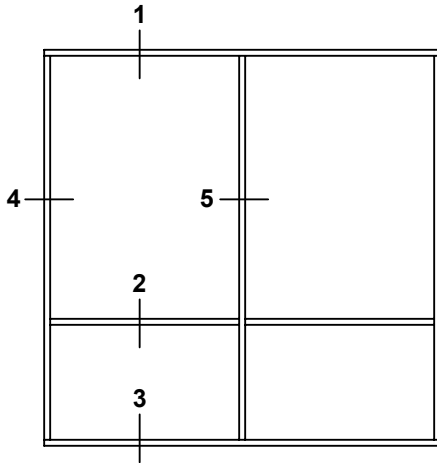
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

© Kawneer Company, Inc., 2010



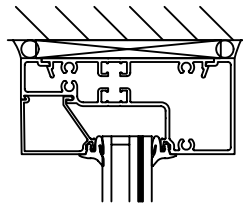
The Screw Spline System is a fabrication and erection method that permits the pre-assembly of single units in the shop or at the job site. These units are then erected by mating the male mullion half of one unit with the female half of the unit already installed.



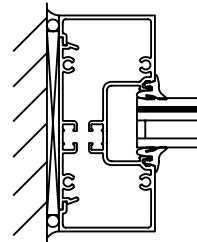
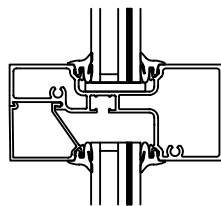
TRIFAB™ 451T - IR  
THERMALLY BROKEN MEMBERS

ELEVATION IS NUMBER KEYED TO DETAILS

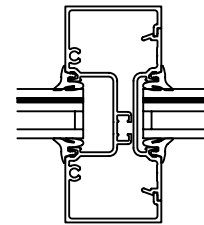
1  
HEAD



2  
HORIZONTAL

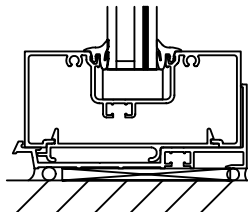


4  
JAMB



5  
VERTICAL

3  
SILL



Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

© Kawneer Company, Inc., 2010

**FRAME FABRICATION AND ASSEMBLY**

**STEP A:** Measure the opening to determine length of vertical and horizontal framing members. For all units that require sill flashing, allow a minimum of 7/16" for high performance flashing when measuring vertical lengths. Allow 1/4" min. clearance at the head, sill, and jamb to facilitate installation and provide space for caulking. If job conditions are uncertain, or masonry openings are irregular, or high-performance flashing is used, allow extra clearance to accommodate construction tolerance.

**STEP B:** Cut vertical members to required length. At desired horizontal locations drill the proper holes in the vertical members for attachment of the spline screws, as shown below.

**TRIFAB™ 451/451T (FRAMING)**  
PLACE ONTO MULLION AS SHOWN BELOW



HEAD PREP = HOLES (D, L)



HORIZONTAL PREP = HOLES (D, L)



SILL PREP = HOLES (A, C)

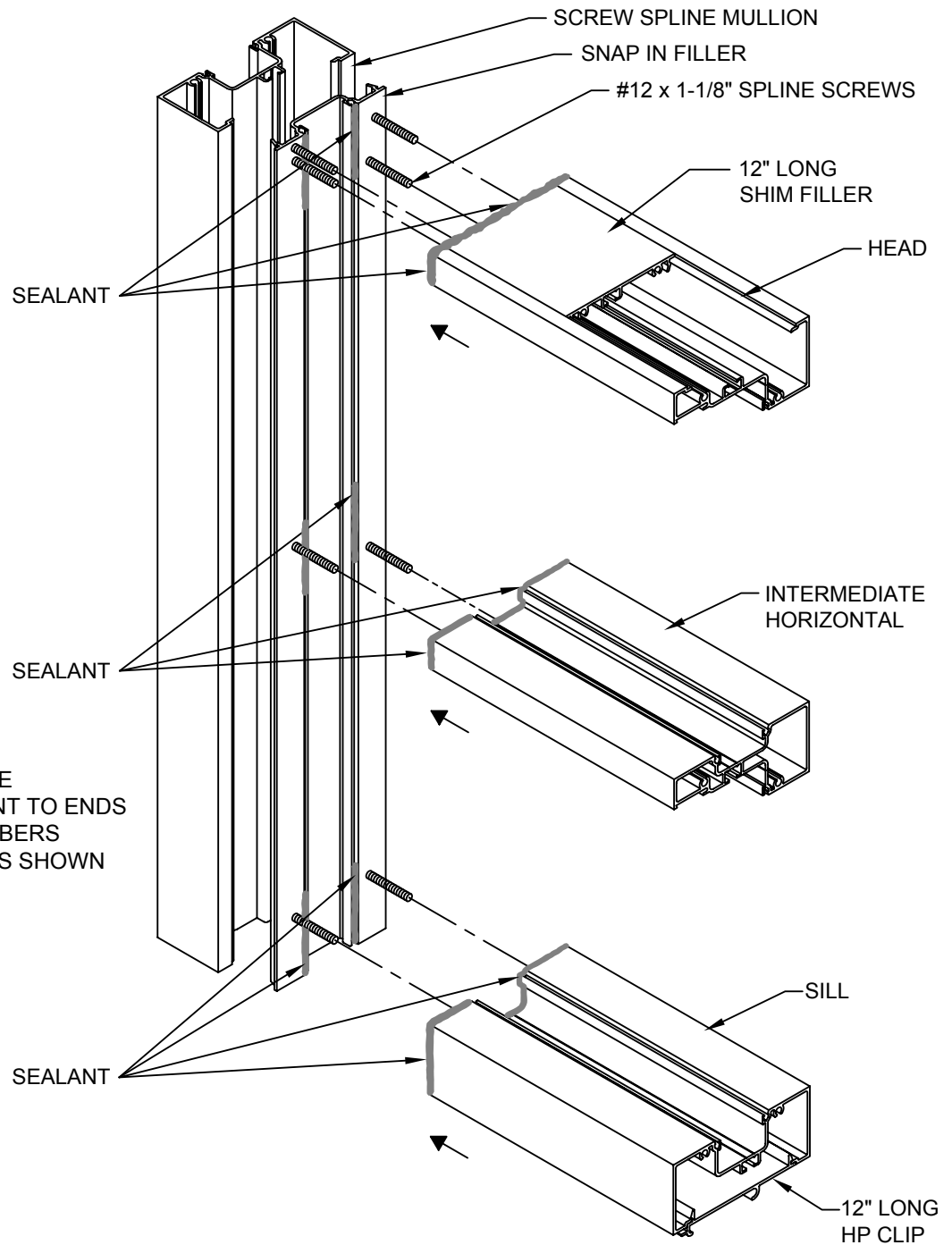
## FRAME FABRICATION & ASSEMBLY SCREW SPLINE ASSEMBLY

**STEP A:** Cut horizontals to length and apply sealant to the ends ensuring a good seal to the vertical member.

**STEP B:** Assemble the units using two 028856 screws (#12 x 1-1/8" PH) at each horizontal and sill; and four at head member as shown below. Be sure that each unit is fabricated with a male and female mullion half.

**NOTE:** Every unit must have at least one deep vertical pocket.

**STEP C:** When an entrance is required, Shear Block joinery must be used to attach horizontals to the immediate door frame. The other side of the sidelite will be fabricated for screw spline joinery as usual.



**NOTE:**  
IT IS IMPORTANT THAT THE  
INSTALLER APPLY SEALANT TO ENDS  
OF ALL HORIZONTAL MEMBERS  
AND GLAZING REGLETS AS SHOWN  
TO ENSURE GOOD SEAL.

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

© Kawneer Company, Inc., 2010

## INSTALLATION OF END DAMS AND SPLICES

Pin End Dam to Flashing prior to installation.  
Seal any fastener shanks that pierce flashing.

Install flashing at the sill and attach it to the floor. The flashing should be shimmed up a minimum of 1/4" to make sure that it is flat and level. It should run the full width of the opening - 1/4", and be interrupted only at entrances. The flashing must be carefully sealed at each end. Use end dams for all typical perimeter conditions, and seal the end dams to the flashing and perimeter conditions as shown below.

**Note:**

If the opening is over 24'-0" wide a splice joint is required every 12'-0", with a 1/2" joint between head and sill members at the center of the DLO. Do not locate splice directly under a vertical mullion.

Apply bond breaker tape to the underside of the aluminum splice sleeve as shown on center.

Clean splice area with solvent.

**Note:** For temperatures below 40°, take the following precautions.

Just prior to installing the sleeve, wipe flashing material with a solvent or cleaning solution recommended by the sealant manufacturer. This will remove any condensation or frost that may be present.

**Caution:** Carefully follow the recommendations contained in the material safety data sheet provided by the solvent / cleaning solution manufacturer regarding health and fire / explosion risks.

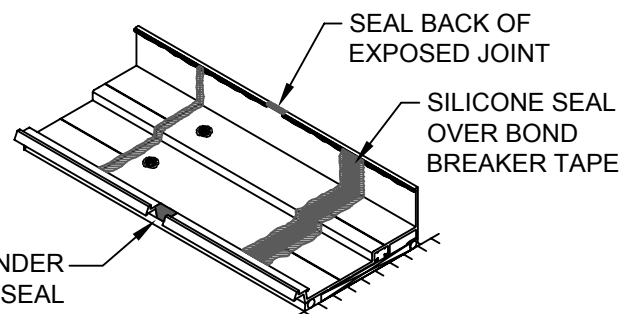
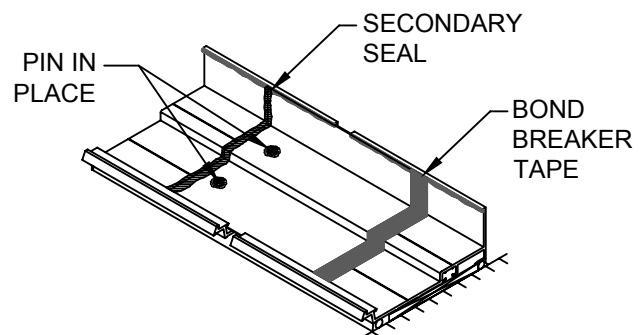
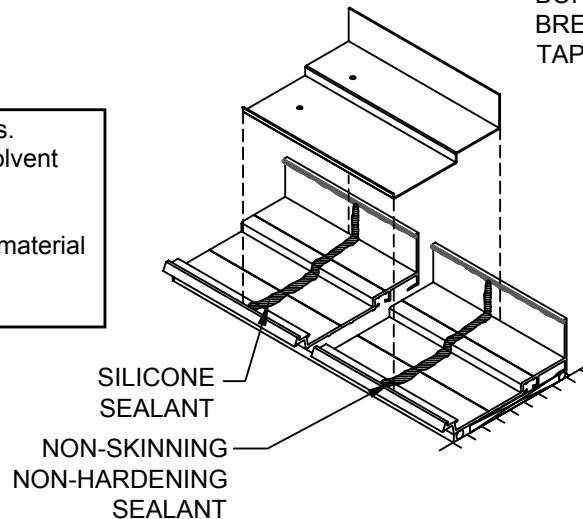
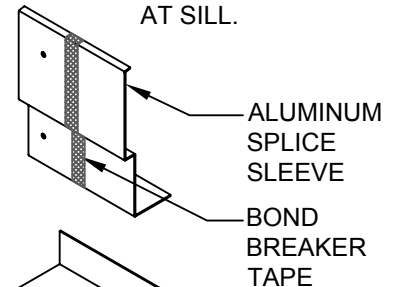
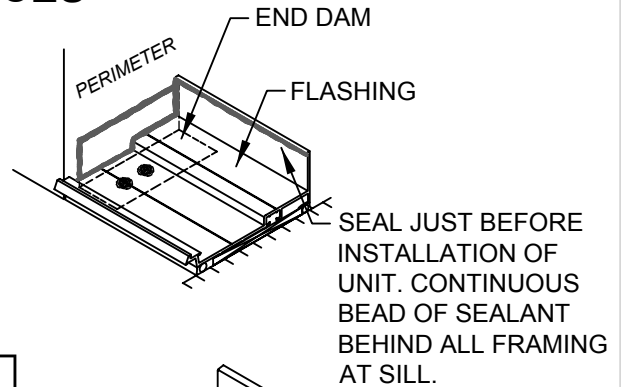
Apply heavy bead of silicone sealant on one receptor and bead of non-skinning, non-hardening sealant on the other receptor. Install splice sleeve so that bond breaker tape aligns with splice joint as shown.

Pin splice sleeve on the side with the silicone joint and seal over heads of pins. Apply a secondary silicone seal on the pinned side as shown.

Apply bond breaker tape over the joint between the splice and receptor on the bead of non-skinning, non hardening sealant side of splice.

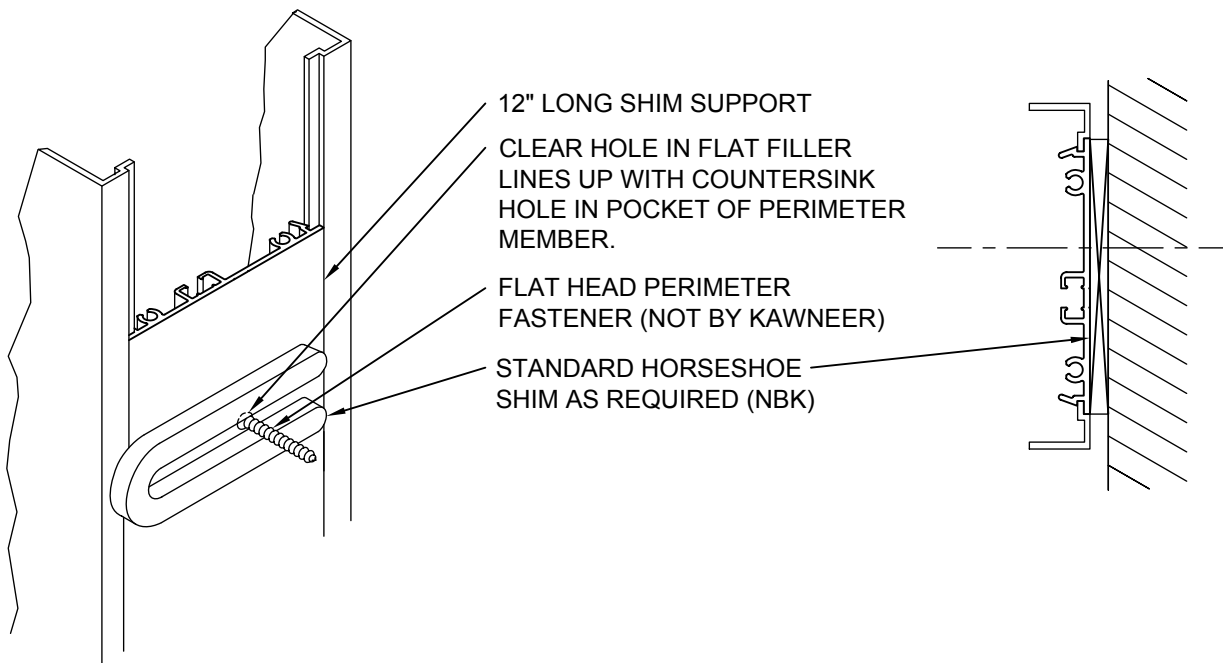
Apply silicone sealant over the bond breaker tape to create a water tight joint as shown.

Seal exposed joint at the back of the sill flashing, and force sealant up under the splice sleeve in the front.



### SHIM INSTALLATION

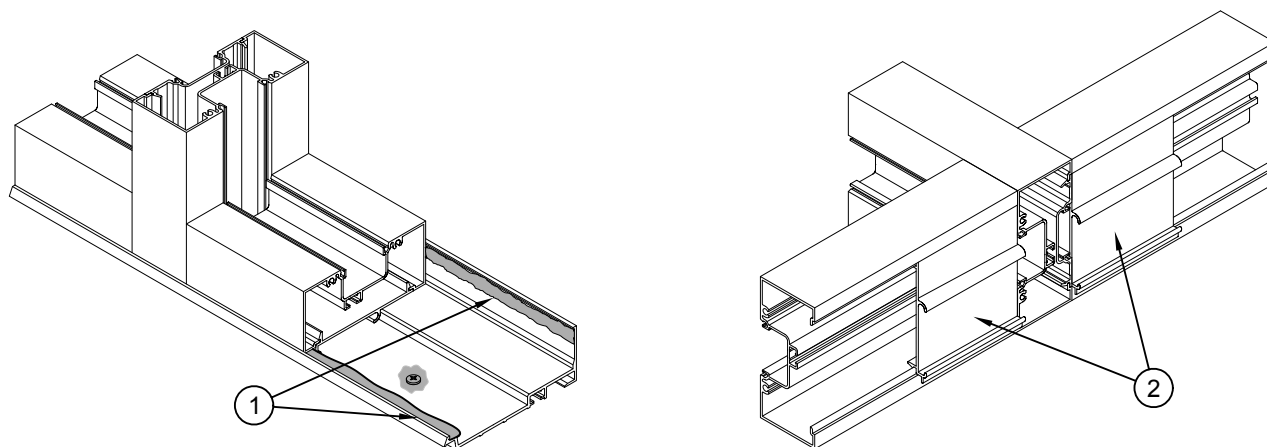
Install support shims at head, sill and jamb. Place between pocket filler and perimeter condition at perimeter anchor locations.



### HP SILL FLASHING

**STEP 1:** Apply sealant to the front ledge and upstanding leg on the flashing where indicated below.

**STEP 2:** Install HP interlocking sill clip into sill on each side of the vertical and crimp in place to prevent sliding.



Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

© Kawneer Company, Inc., 2010

**HP SILL FLASHING (Continued)**

**STEP 3:** Position assembled frame onto sill tilted out at approximately 20 degrees 1A. Allow the interlocking sill clip to engage with the lug of the flashing, and rotate to vertical position.

**STEP 4:** Caulk both interior and exterior at head, jamb and under sill flashing with high quality sealant. Do not block weep holes in flashing.

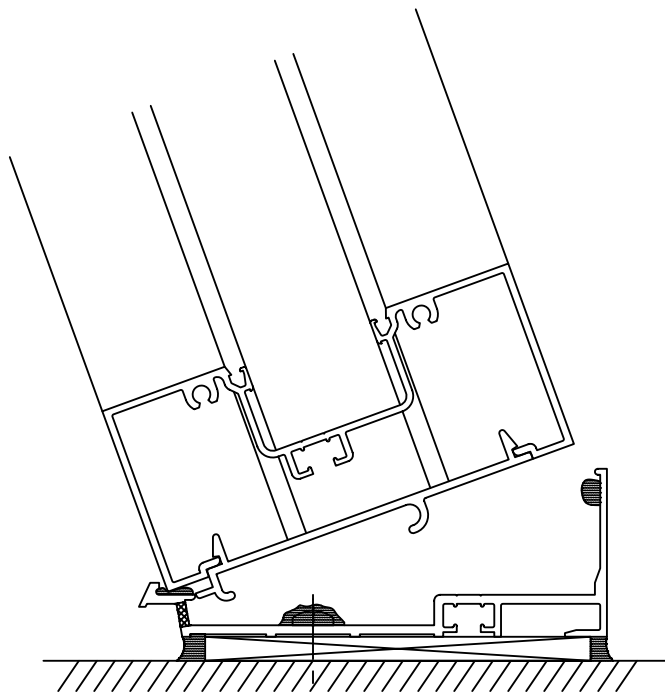


FIGURE 1A

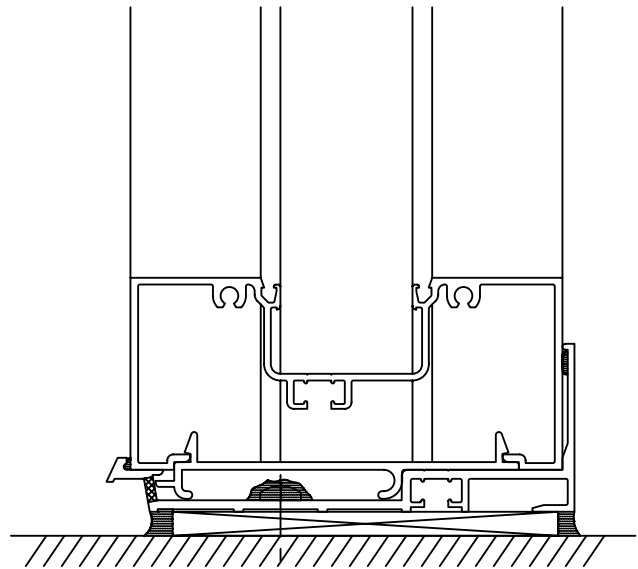
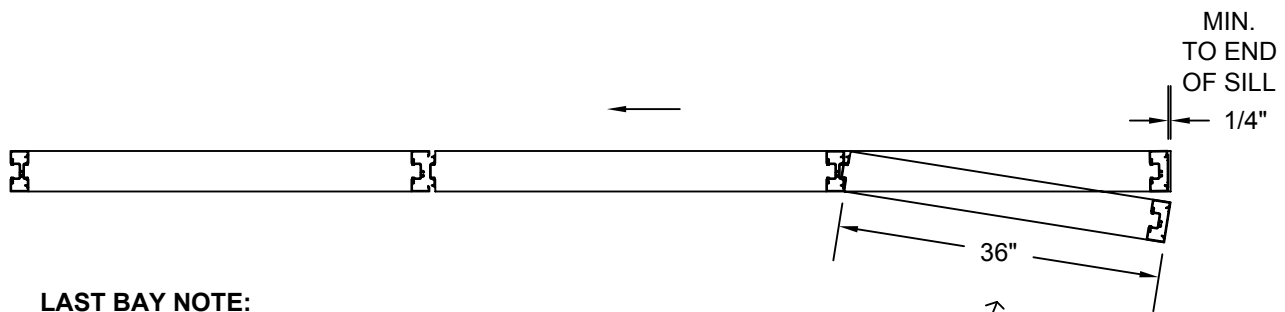


FIGURE 1B

**NOTE:**  
HP flashing must extend beyond the edge of the frame by 1/4" minimum.



**LAST BAY NOTE:**  
If the last bay is less than 36" width, a larger clearance will be required at the jamb, or you may snap it with the previous bay and install as one unit.

ROTATE LAST PANEL INTO POSITION

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.  
© Kawneer Company, Inc., 2010

### WATER DEFLECTOR

Install water deflectors on Intermediate Horizontals by removing the paper backing from the water deflectors. Install on a clean, dry surface centered in the glazing pocket and seal. (Figure 1) Be sure to extend Water Deflector past glass edge below. (Figure 2)

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.  
© Kawneer Company, Inc., 2010

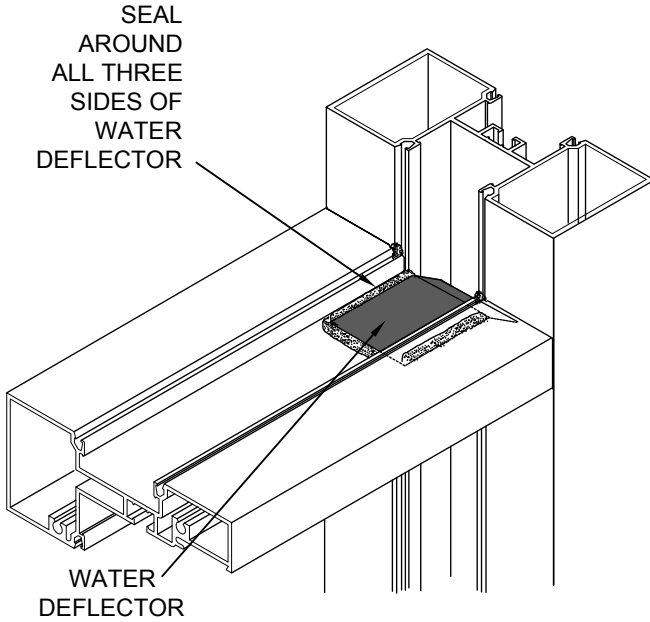


FIGURE 1

**COLD WEATHER NOTE:**  
For temperatures below 40° the following precautions should be taken. Just prior to installing the water deflector, wipe glazing pocket with a solvent or cleaning solution recommended by the sealant manufacturer.  
**\*CAUTION:**  
Carefully follow the recommendations contained in the material safety data sheet provided by the solvent/cleaning solution manufacturer regarding health and fire/explosion risks.

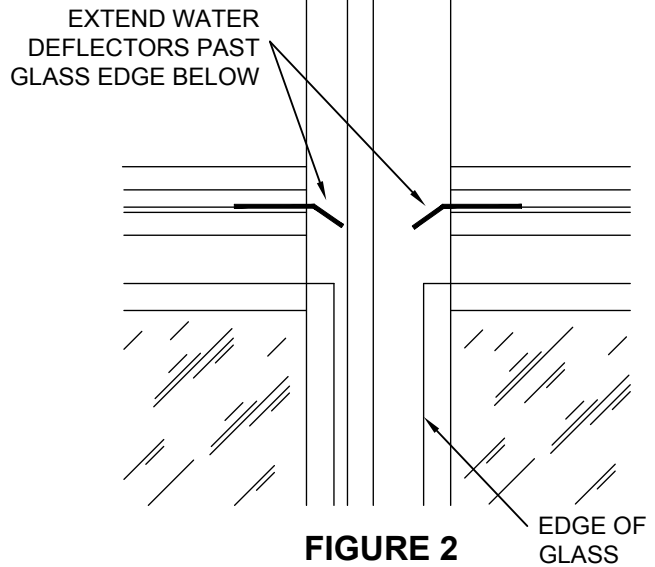


FIGURE 2

After the water deflector is installed, seal the joint between the back leg of the horizontal and the vertical. Make sure to fill the gasket reglets in the area to prevent water from running down the lite below. (Figure 3 and 4)

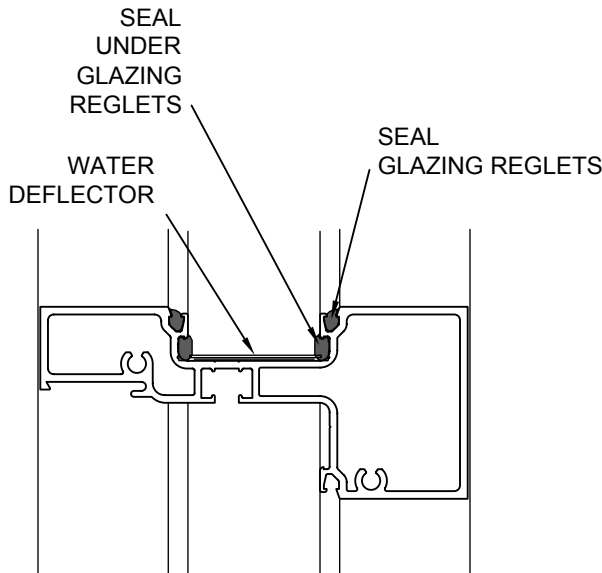


FIGURE 3

**NOTE:**  
FOR THERMAL MEMBERS,  
SEAL UNDER DEFLECTOR  
FILLING CAVITIES WITH  
SEALANT. (FIGURE 4)

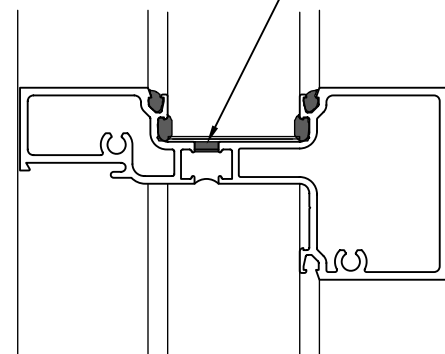


FIGURE 4

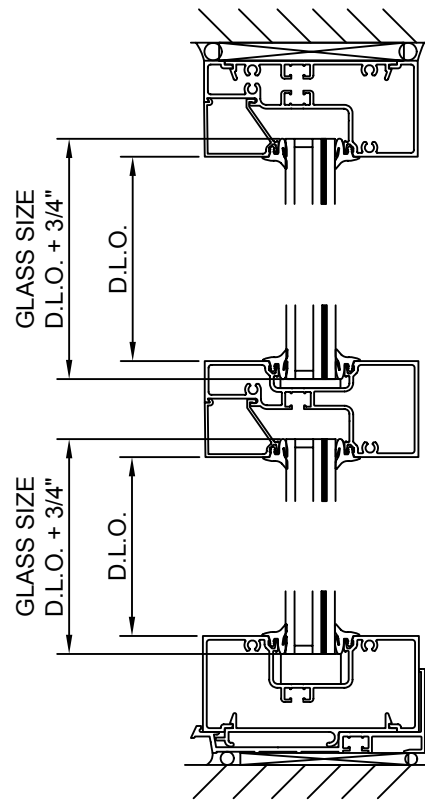
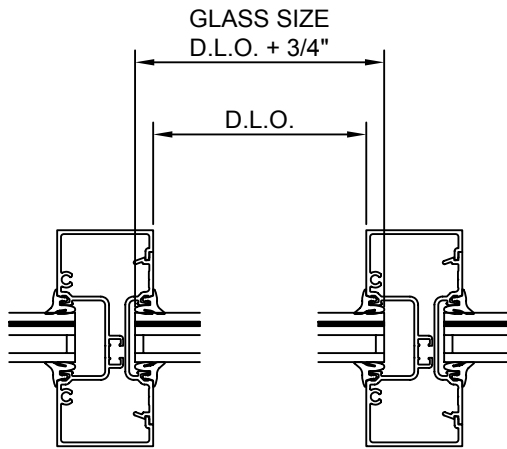
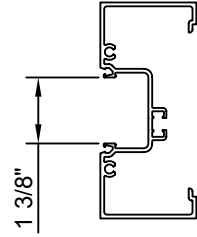
**GLAZING**

**STEP A:** All pockets are 1-3/8" in width and will accept 1" to 1-1/32" Laminated glass.

**STEP B:** Glass size is (Daylight Opening) D.L.O. + 3/4".

**NOTE 1:** This formula does not allow for undersize or out of square daylite openings.

**NOTE 2:** The glass manufacturer must indicate the specific glazing requirements for the material being used.



Infill Thickness	Weathering (Both Sides)
1"	027074 (Standard)
1-1/32"	027074 (Standard)

Glazing Types
<p><b>1-1/32" Laminated glass</b>                      3/16" HS Outboard / 3/8" Air Space / 3/16" HS Inboard /                      0.090 Dupont SG / 3/16" HS Inboard</p>

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.  
 © Kawneer Company, Inc., 2010

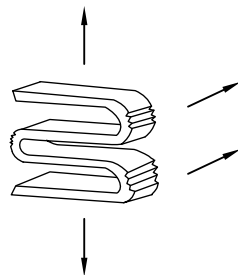
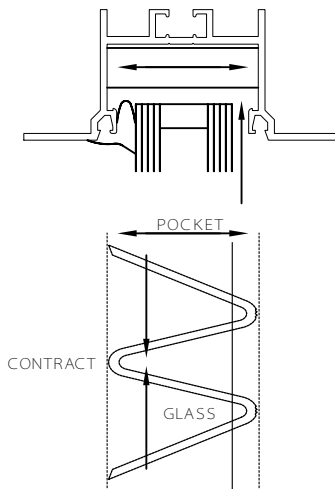


**GLAZING**

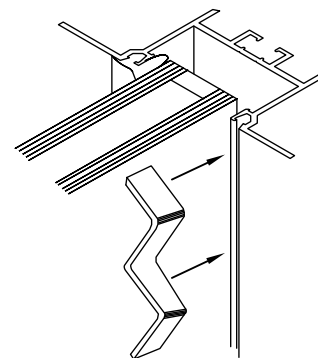
**"W" SIDE BLOCKS**

One "W" Side Block should be installed in the deep pocket of the mullion of each lite of glass in the opening.

**SIDE BLOCK INSTALLATION**



FLATTEN BLOCK & SLIDE BETWEEN REGLET AND GLASS LITE



INSERT BETWEEN GLASS AND FRAME

"W" Block will expand and wedge between walls of glazing pocket and prevent glass from shifting into the deep pocket.

**NOTE:** If deglazing of lite is required after "W" Block is installed, remove both interior and exterior weathering and use hook to pull "W" Block out of pocket.

**GASKET AND GLASS STOP INSTALLATION**

**STEP 1:** Cut horizontal and vertical gaskets to an approximate length of D.L.O. + 1/4" per foot of D.L.O..

**STEP 2:** Install gaskets on the side of frame **opposite** glass stop first. ①

Insert gaskets into the horizontal members first starting at the ends and work toward the center as shown.

(see Figure 1)

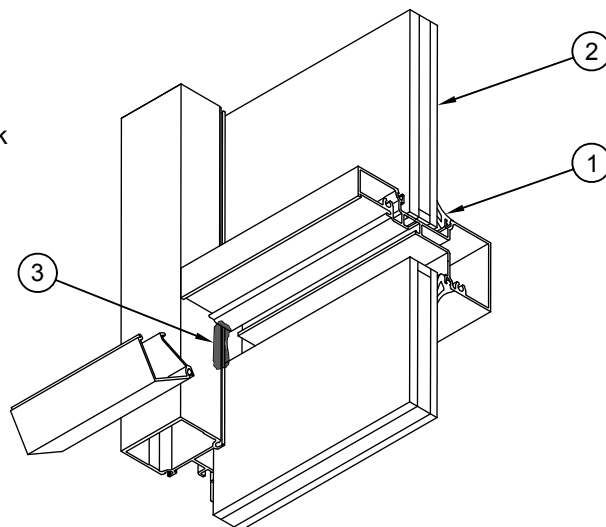
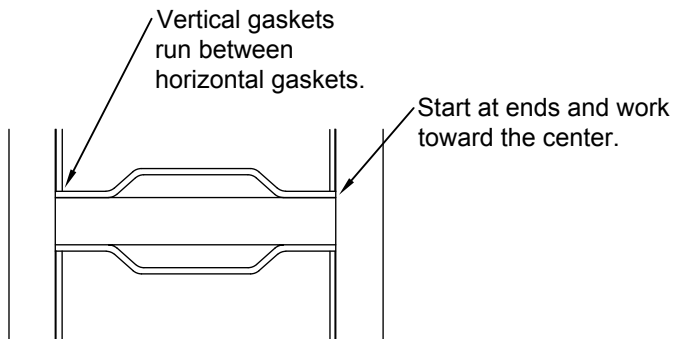
Install vertical gaskets into the same side of frame after horizontal gaskets are in place in the same manner.

**STEP 3:** Position setting blocks at points under glass as required.

**STEP 4:** Install glass into frame using standard flush glazing technique. ②

**STEP 5:** Run bead of sealant along vertical reglets where glass stop meets, then install glass stop. ③

**STEP 6:** Install horizontal and vertical gasket into **glass stop side** of frame in the same manner as described in Step #2.



Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

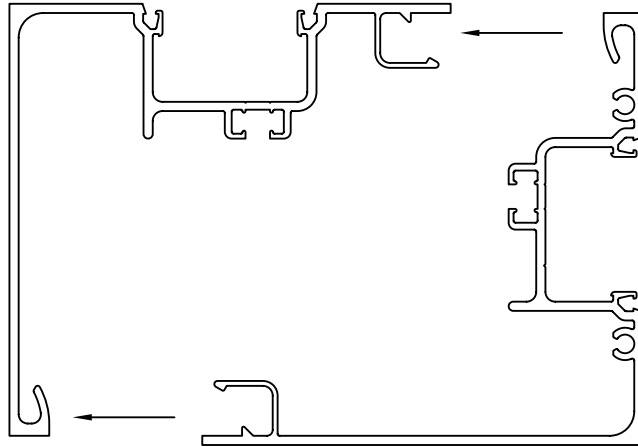
Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

© Kawneer Company, Inc., 2010

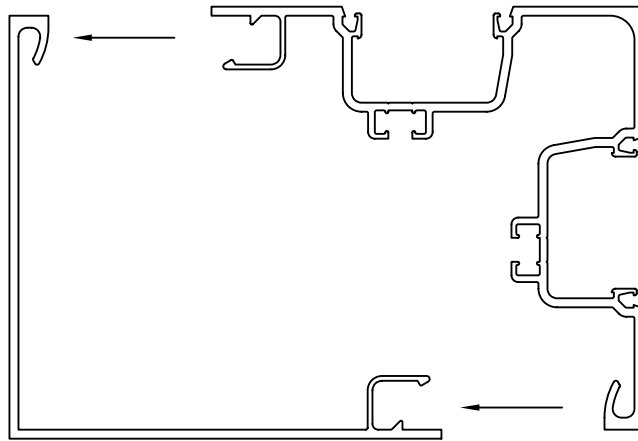
### SNAP CORNERS

Snap corners together as shown

**NOTE:** Tight snaps may be waxed to make engagement easier. Corners are not designed to be unsnapped.



90° CORNER



90° CORNER

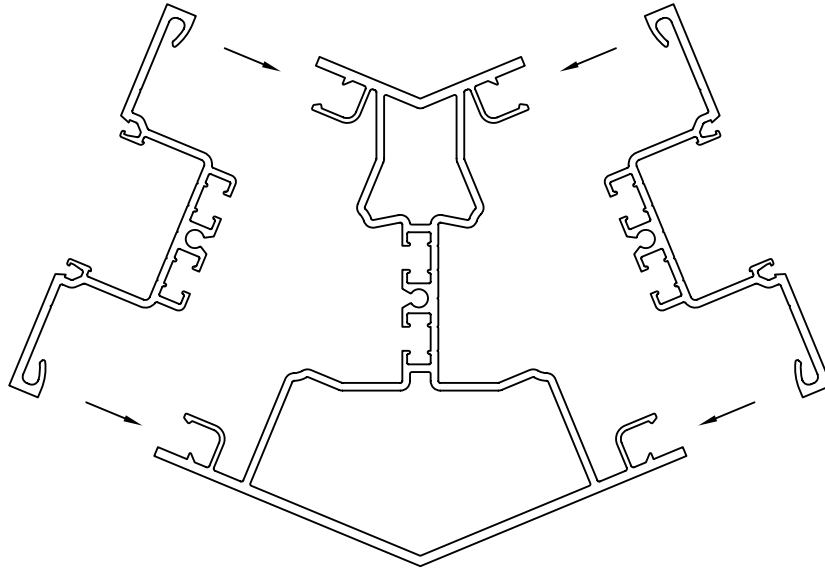
Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.  
© Kawneer Company, Inc., 2010

### SNAP CORNERS (Continued)

Snap corners together as shown

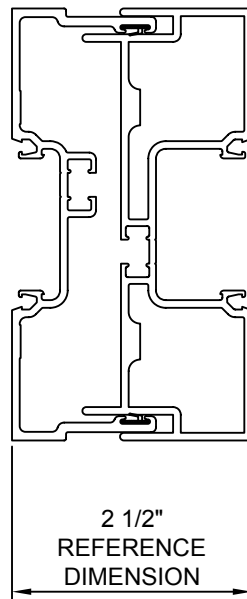
NOTE: Tight snaps may be waxed to make engagement easier. Corners are not designed to be unsnapped.



135° CORNER

### EXPANSION MULLION

An Expansion Mullion is to be used every 20' in large openings, regardless of the method of construction. The dimension of the assembly should be adjusted based on the temperature at the time of assembly and expected high and low service temperatures use reference dimension. (For examples, the sight line will be reduced slightly when installed in hot weather and increased slightly when installed in cold weather).



2 1/2"  
REFERENCE  
DIMENSION

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

© Kawneer Company, Inc., 2010



**KAWNEER COMPANY, INC.  
TECHNOLOGY PARK/ATLANTA  
555 GUTHRIDGE COURT  
NORCROSS, GEORGIA 30092**