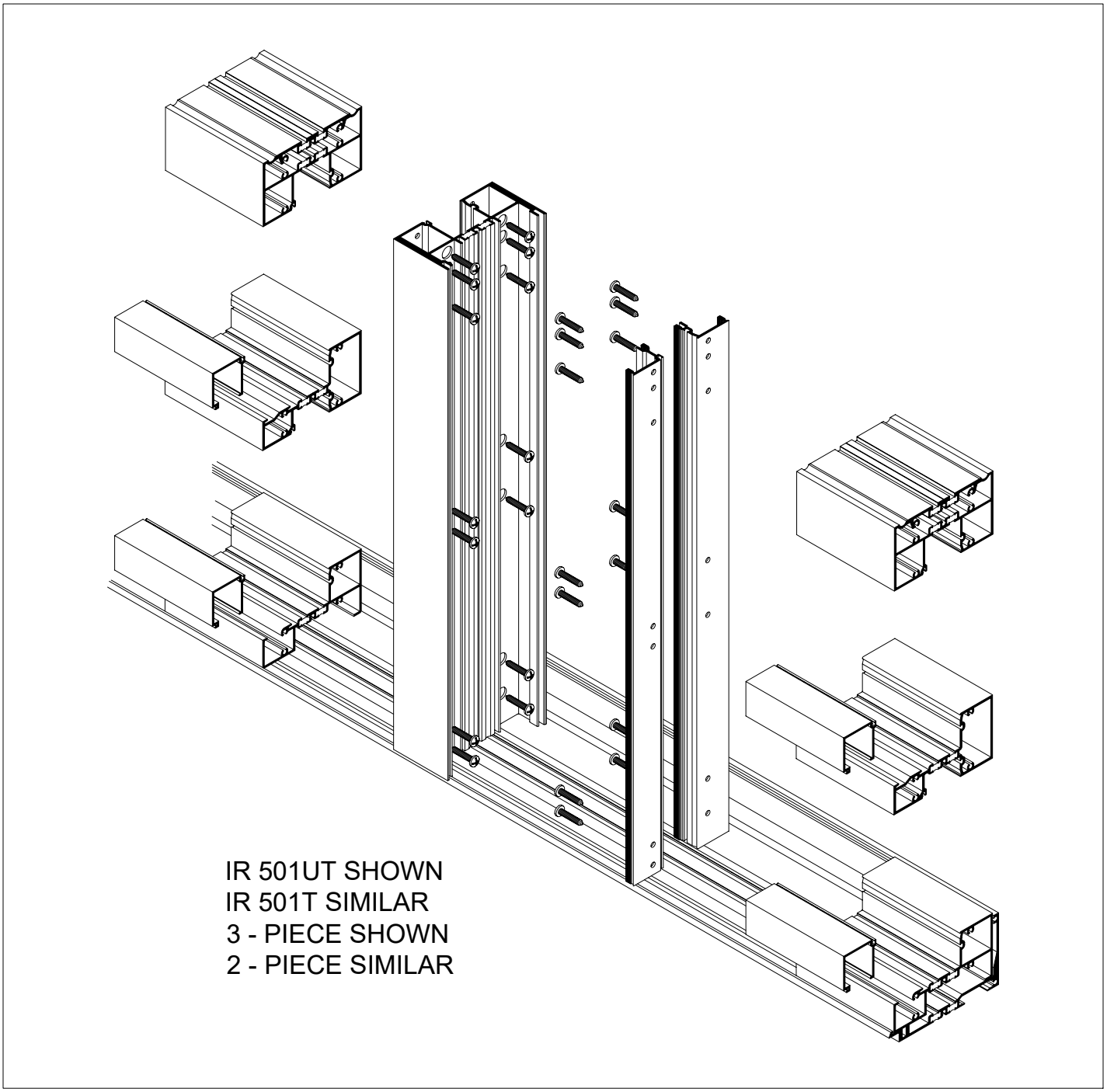
E.C. 97904-179

INSTALLATION



IR 501UT SHOWN
IR 501T SIMILAR
3 - PIECE SHOWN
2 - PIECE SIMILAR

INSTRUCTIONS

IR 501T / IR 501UT INSTALLATION INSTRUCTIONS

These instructions provide the general fabrication, assembly, installation sequence and erection procedures for typical applications. They are intended to supplement the project shop drawings and/or published details.

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

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- Do not 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. **Work safely - always wear proper personal protective equipment. 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, and 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 the 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 ends of masonry opening to prevent dimensional build-up of day light opening.

D. Make certain that the construction and openings which will receive your materials are in accordance with the contract documents. If not, notify the GENERAL CONTRACTOR IN WRITING and resolve the 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. 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, perimeter anchor fasteners are not specified in these instructions. For perimeter anchor fastening, refer to the Shop Drawings or Engineering Calculations.

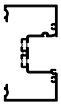
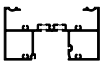
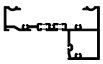
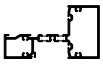
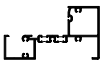
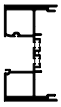
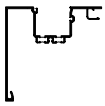
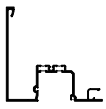
I. CHECK OPENINGS - Make certain that the opening which will receive your materials is in accordance with the contract documents. If not, notify the General Contractor in writing and resolve differences before proceeding with your work.

J. BUILDING CODE - Building 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 a 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 degree 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 frame 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.

ILLUSTRATION	NO.	DESCRIPTION
	575531	MULLION INSERT INTERIOR HALF
	575532	MULLION INSERT EXTERIOR HALF
	575UT500	JAMB
	575UT501	HEAD
	575UT503	OPTIONAL HEAD
	575T509	THERMAL EXPANSON MULLION MALE HALF
	575T510	THERMAL EXPANSON MULLION FEMALE HALF
	575UT511	TUBE HORIZONTAL
	575UT513	SILL
	575UT514	TUBE VERTICAL
	575UT515	90° L.S. / OUTSIDE CORNER HALF
	575UT516	90° L.S. / INSIDE CORNER HALF
	575UT526	THERMAL SHIM SUPPORT
	575UT528	DEEP POCKET MULLION INSERT

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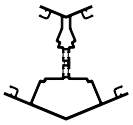
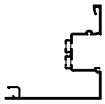
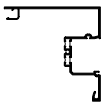
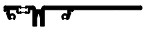
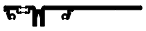
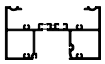
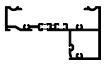
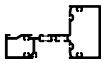
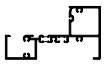
	575UT534	135° CORNER
	575UT535	90° R.S. / OUTSIDE CORNER HALF
	575UT536	90° R.S. / INSIDE CORNER HALF
	575UT537	SILL FLASHING
	575T214	6" LONG THERMAL STRAP ANCHOR FOR 575T500/501/503, 575UT500/501/503
	575T215	12" LONG THERMAL STRAP ANCHOR FOR 575T500/501/503, 575UT500/501/503
	575UT216	6" LONG THERMAL FILLER
	575UT217	12" LONG THERMAL FILLER
	575T500	JAMB
	575T501	HEAD
	575T503	OPTIONAL HEAD
	575T511	TUBE HORIZONTAL
	575T513	SILL

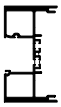
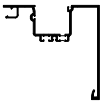
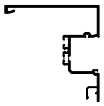
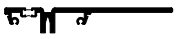
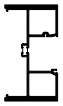
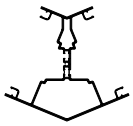
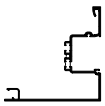
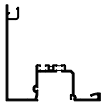
ILLUSTRATION	NO.	DESCRIPTION
	575T514	TUBE VERTICAL
	575T515	90° L.S. / OUTSIDE CORNER HALF
	575T516	90° L.S. / INSIDE CORNER HALF
	575T520	STRAP ANCHOR EXTRUSION FOR 575T500/501/503, 575UT500/501/503
	575T521	2 PIECE TUBE MULLION
	575T522	THERMAL SHALLOW POCKET FILLER
	575T526	THERMAL SHIM SUPPORT
	575T528	DEEP POCKET MULLION INSERT
	575T534	135° CORNER
	575T535	90° R.S. / OUTSIDE CORNER HALF
	575T536	90° R.S. / INSIDE CORNER HALF
	575T537	SILL FLASHING
	575504	GLASS STOP

ILLUSTRATION	NO.	DESCRIPTION
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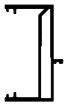
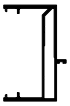
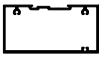
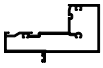
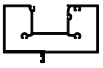
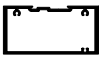
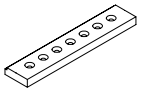
	575051	OPEN BACK DOOR JAMB WITH EXTRUDED FIN
	575551	2-3/4" DOOR JAMB WITH EXTRUDED FIN
	575062	C.O.C. TRANSOM BAR (IR 500 / 501)
	069177	CONCEALED SCREW APPLIED DOOR STOP
	575120	TRANSOM BAR
	575122	TRANSOM BAR WITH FIN
	575123	ONE PIECE TRANSOM BAR WITH FIN
	575133	TRANSOM POCKET FILLER
	575135	POCKET FILLER DEEP
	575160	TRANSOM BAR STOP - EXTERIOR (IR 501)
	575161	TRANSOM BAR STOP - INTERIOR (IR 501)
	575162	H.W. C.O.C. TRANSOM BAR (IR 500 / 501)
	575297	DOOR JAMB ANCHOR BLOCK

ILLUSTRATION	NO.	DESCRIPTION
	575310	VERTICAL STEEL REINFORCEMENT

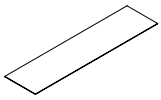
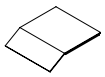
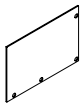
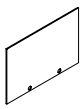
ILLUSTRATION	NO.	DESCRIPTION
	027806	FIXED GASKET
	127121	INTERIOR FIXED GASKET (IR 501)
	127127	EXTERIOR GLAZING GASKET (IR 501)
	127138	TRANSOM BAR SETTING BLOCK (IR 501)
	127178	SILICONE SPLICE SLEEVE FOR STANDARD FLASHING 575T537/575UT537
	127179	SETTING BLOCK (IR 501UT)
	451105	WATER DEFLECTOR (IR 501)
	422434	"W" SIDE BLOCK
	127209	MATING GASKET
	575205	END DAM 501T, 501UT & 501 Non-Thermal
	575208	END DAM 500 & 501
	127191	PUSH-IN SPACER
	027074	EXTERIOR STANDARD PUSH-ON GASKET
	575209	SILL FLASHING END CAP

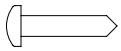
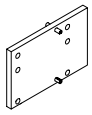
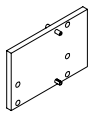
ILLUSTRATION	NO.	DESCRIPTION
	028260	APPLIED DOOR STOP #8 x 3/8" PHTF "AB"
	128267	SPLINE SCREW/END DAM #12 x 1" S.S. PHTF "AB"
	128271	STEEL ATTACHMENT SCREW #12 x 5/8" PHTF "B"
	128369	SILL TO FLASHING SCREW 1/4"-20 x 7/16" PHTC
	128910	T-BAR GLASS STOP SCREW #10 x 1/2" FHTF "B" (UC)
	028268	HORIZONTAL TO STRAP ATTACHMENT 1/4"-20 x 1" FHTC
	128125	CORNER MULLION ATTACHMENT 1/4"-20 x 5/8" FHTC (UC)

ILLUSTRATION	NO.	DESCRIPTION
	575206	DRILL JIG (Head)
	575207	DRILL JIG (Intermediate and Sill)

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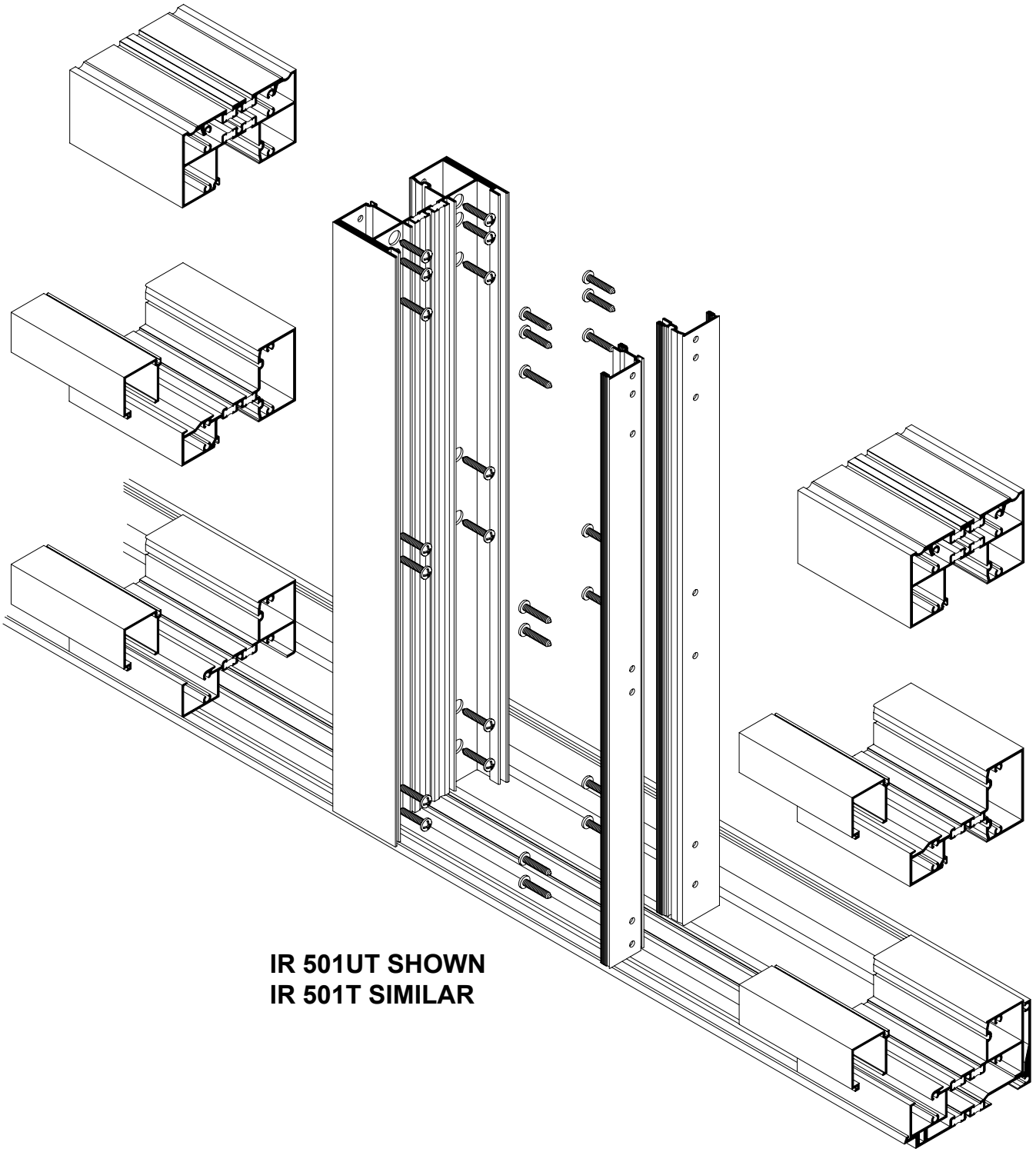
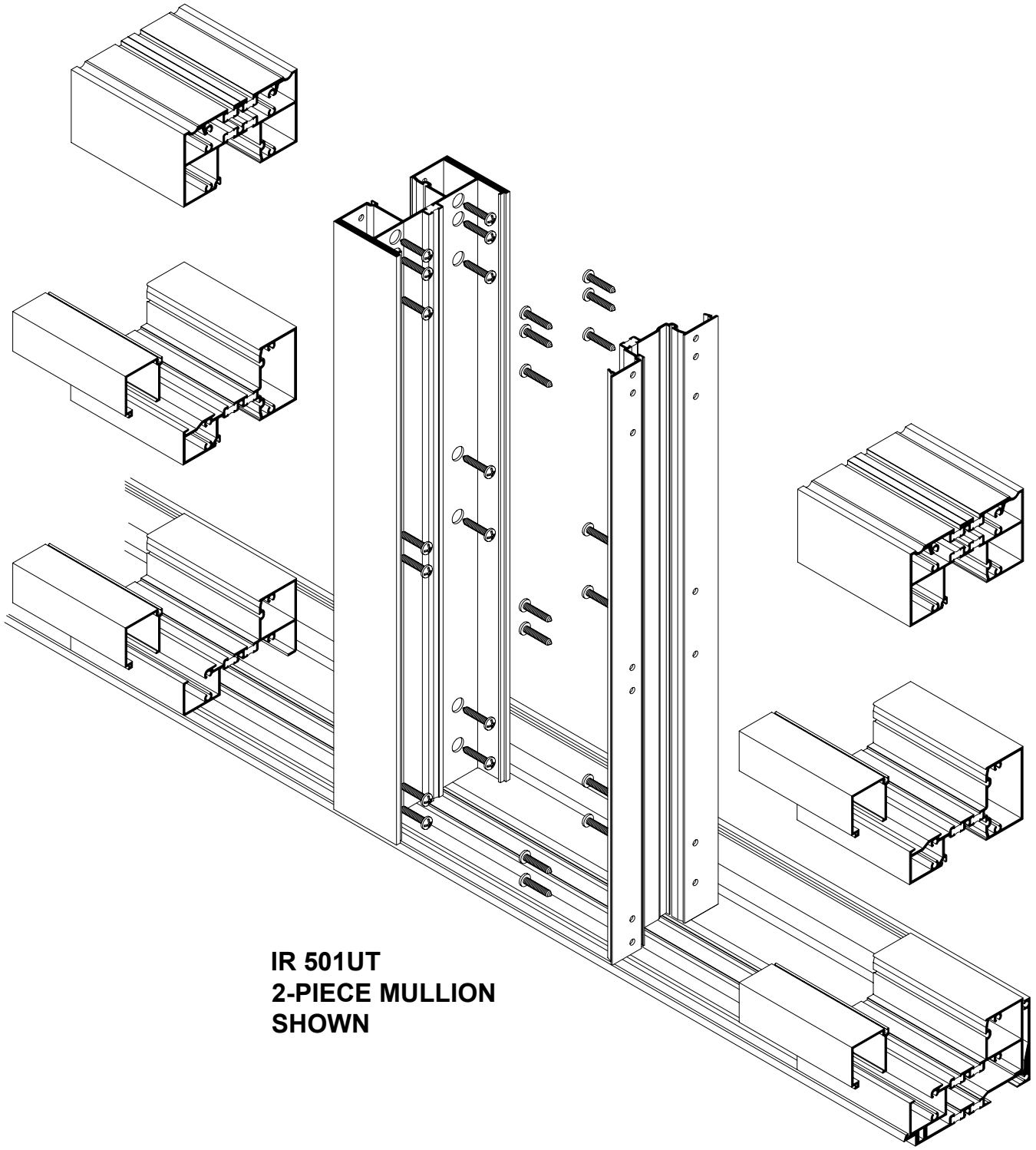
E.C. 97904-179



IR 501UT SHOWN
IR 501T SIMILAR

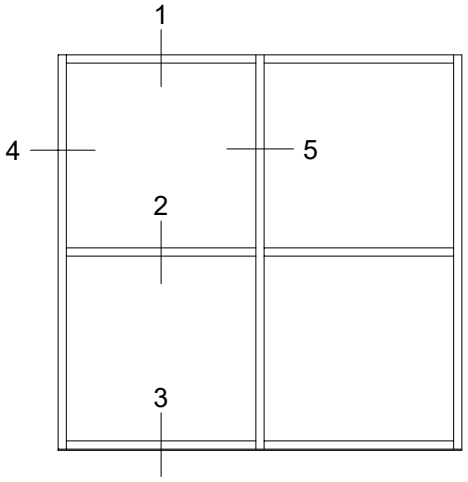


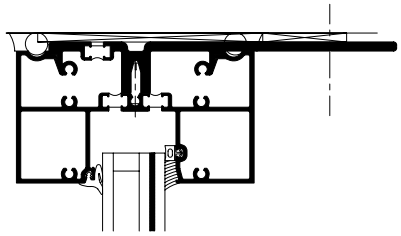
IR 501UT
2-PIECE MULLION
SHOWN

SCALE: 3" = 1'-0"

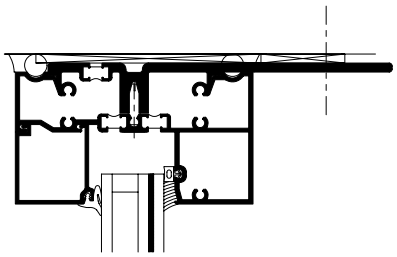
The Screw Spline method of fabrication and erection permits pre-assembly of single units in the shop or at the job site. These units are then erected by mating the male mullion half of one unit with the female mullion half of a unit already installed.

Note: 1-5/16" infill shown

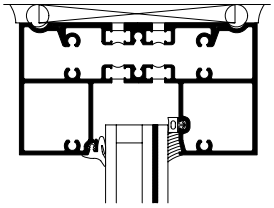




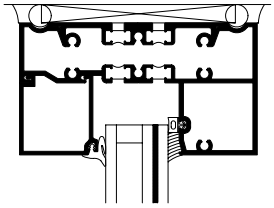
1
HEAD
WITH STRAP ANCHOR



1
OPTIONAL HEAD
WITH STRAP ANCHOR

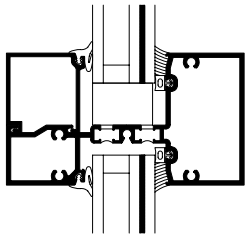


1
HEAD
WITH FILLER

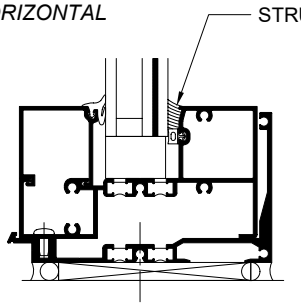


1
OPTIONAL HEAD
WITH FILLER

IR 501UT SHOWN
IR 501T SIMILAR

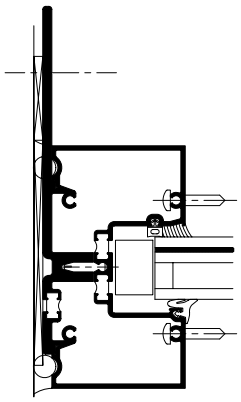


2
HORIZONTAL

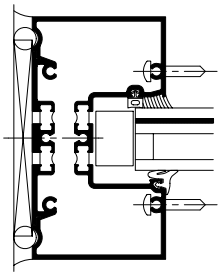


3
SILL

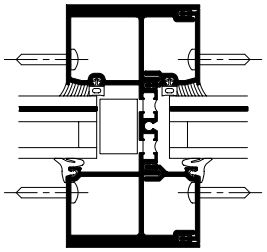
* Installer Note: Installer is responsible for all required compatibility review and approvals with the Structural Silicone Sealant Manufacturer and the Insulating Glass Manufacturer.



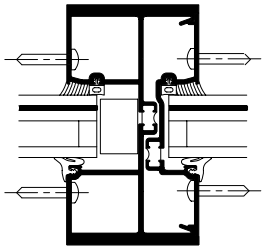
4
JAMB WITH
STRAP ANCHOR



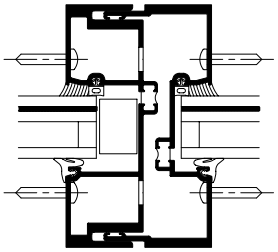
4
JAMB
WITH FILLER



5
VERTICAL MULLION
3 - PIECE



5
VERTICAL MULLION
2 - PIECE

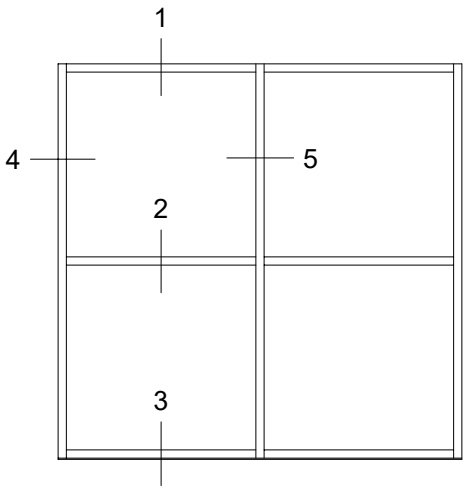


5
EXPANSION MULLION

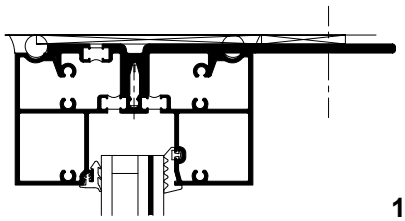
SCALE: 3" = 1'-0"

The Screw Spline method of fabrication and erection permits 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 mullion half of a unit already installed.

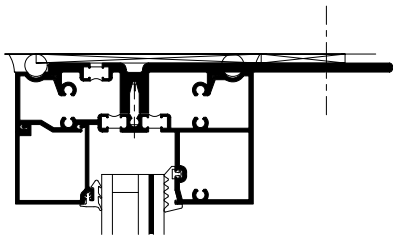
Note: 1-5/16" infill shown.



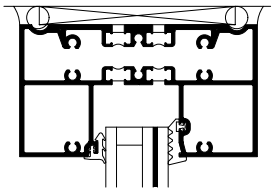
IR 501UT SHOWN
IR 501T SIMILAR



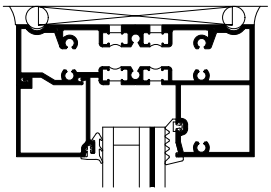
1
HEAD
WITH STRAP ANCHOR



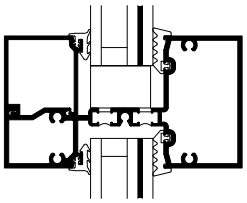
1
OPTIONAL HEAD
WITH STRAP ANCHOR



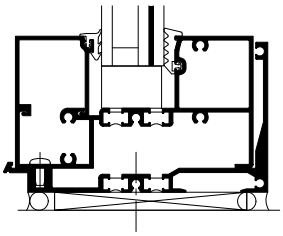
1
HEAD
WITH FILLER



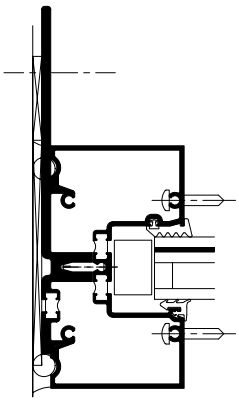
1
OPTIONAL HEAD
WITH FILLER



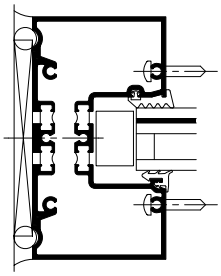
2
HORIZONTAL



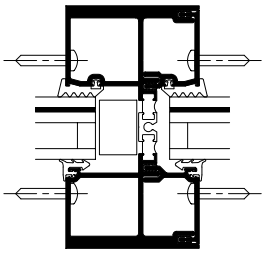
3
SILL



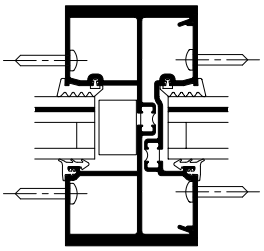
4
JAMB WITH
STRAP ANCHOR



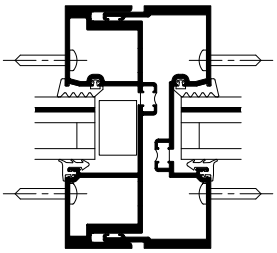
4
JAMB
WITH FILLER



5
VERTICAL MULLION
3 - PIECE

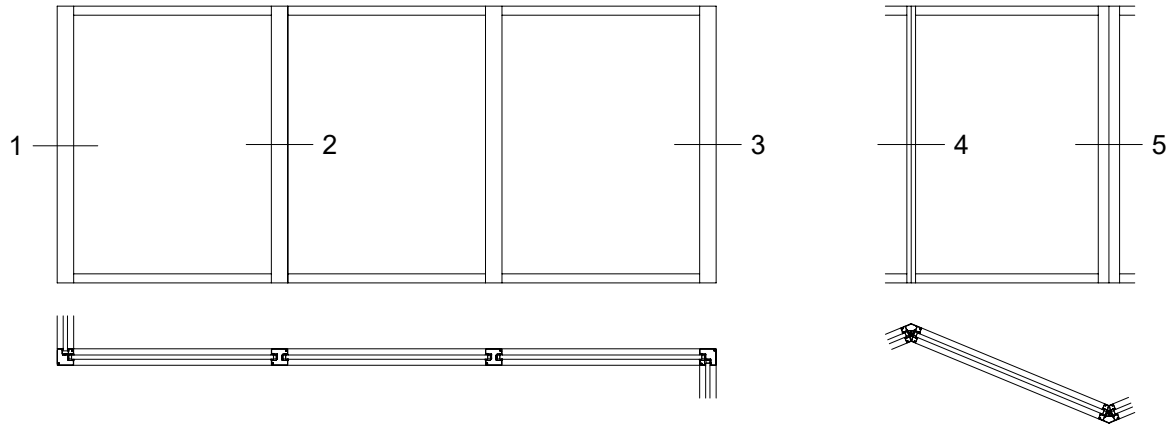


5
VERTICAL MULLION
2 - PIECE



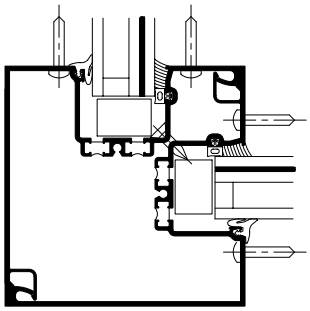
5
EXPANSION MULLION

SCALE: 3" = 1'-0"

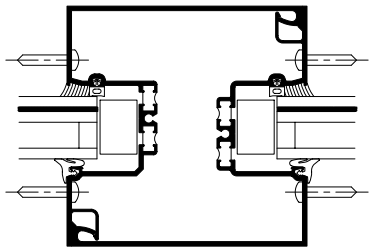


Note: 1-5/16" infill shown

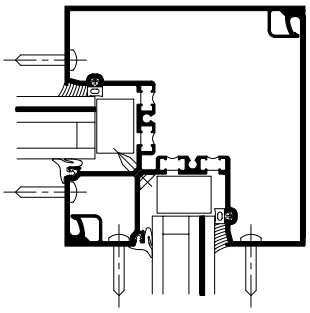
IR 501UT SHOWN
IR 501T SIMILAR



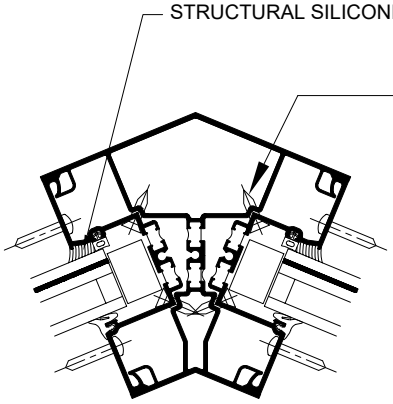
1
OUTSIDE 90° CORNER



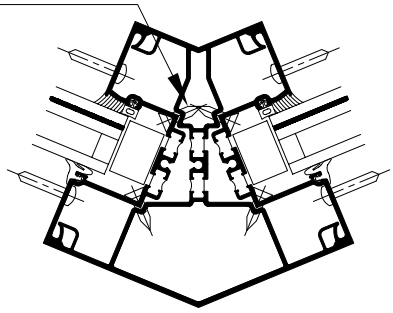
2
5" MULLION POST



3
INSIDE 90° CORNER



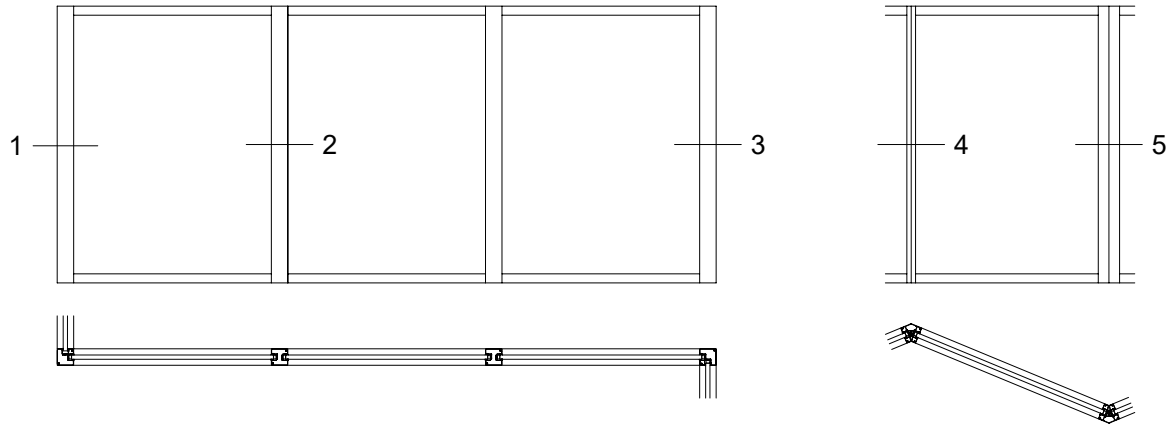
4
INSIDE 135° CORNER



5
OUTSIDE 135° CORNER

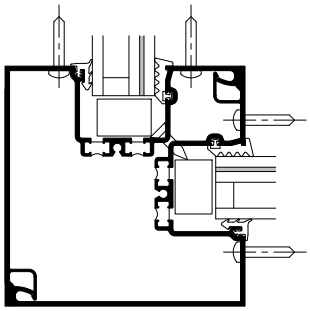
* Installer Note: Installer is responsible for all required compatibility review and approvals with the Structural Silicone Sealant Manufacturer and the Insulating Glass Manufacturer.

SCALE: 3" = 1'-0"

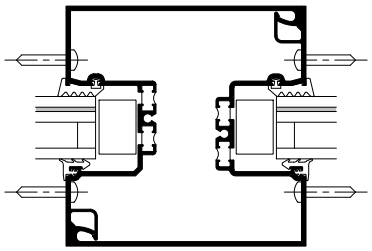


IR 501UT SHOWN
IR 501T SIMILAR

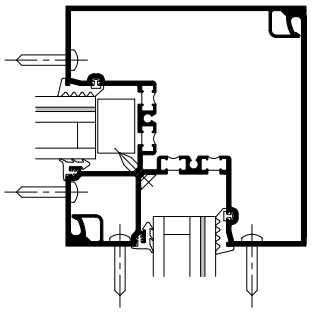
Note: 1-5/16" infill shown



1
OUTSIDE 90° CORNER

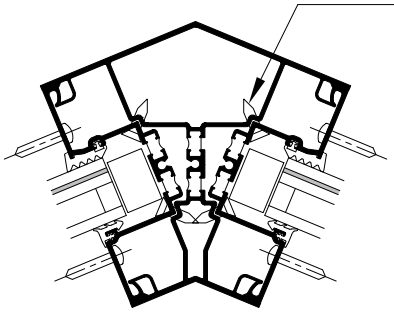


2
5" MULLION POST

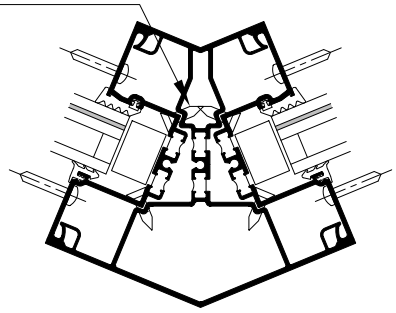


3
INSIDE 90° CORNER

128125 1/4-20 X 5/8" FHTC, LOCATE 6" FROM EACH END AND 18" O.C.



4
INSIDE 135° CORNER

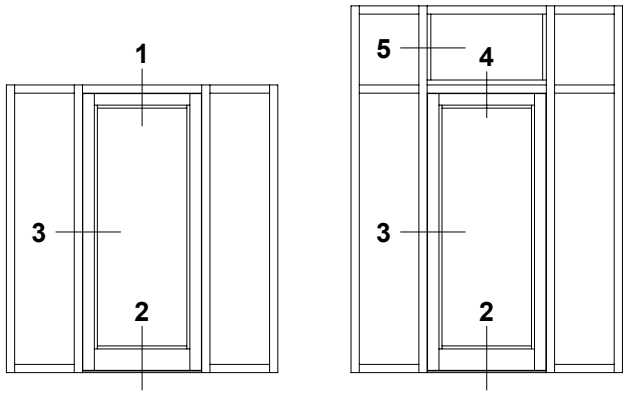


5
OUTSIDE 135° CORNER

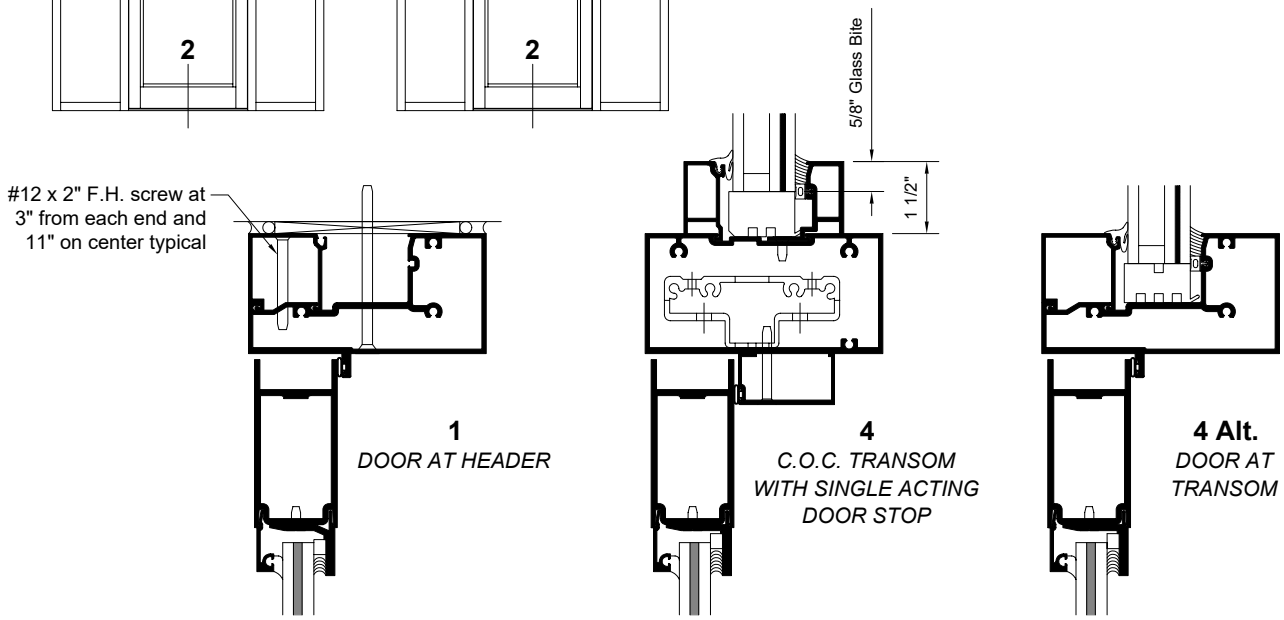
SCALE: 3" = 1'-0"

The Screw Spline method of fabrication and erection permits 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 mullion half of a unit already installed.

Note: *1-5/16" infill shown.*



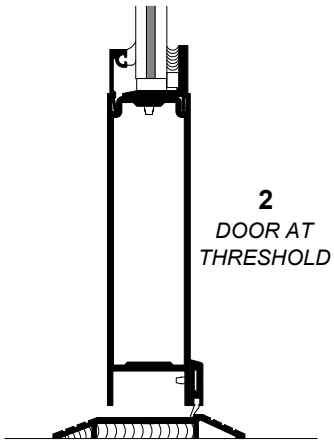
IR 501UT SHOWN
IR 501T SIMILAR



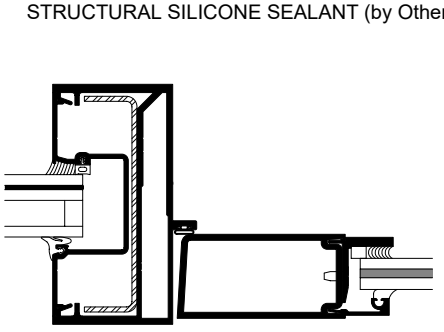
1
DOOR AT HEADER

4
C.O.C. TRANSOM WITH SINGLE ACTING DOOR STOP

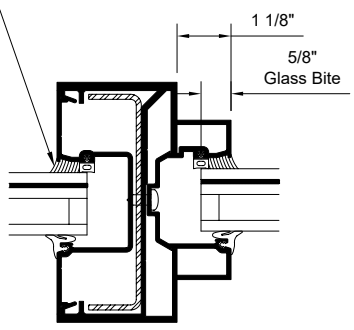
4 Alt.
DOOR AT TRANSOM



2
DOOR AT THRESHOLD



3
DOOR AT JAMB



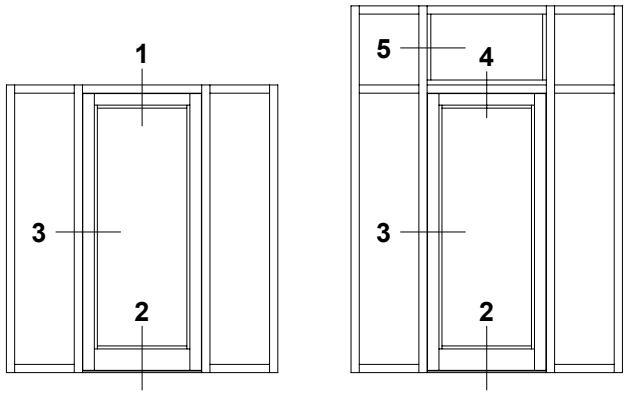
5
VERTICAL TRANSOM ABOVE DOOR

* Installer Note: Installer is responsible for all required compatibility review and approvals with the Structural Silicone Sealant Manufacturer and the Insulating Glass Manufacturer.

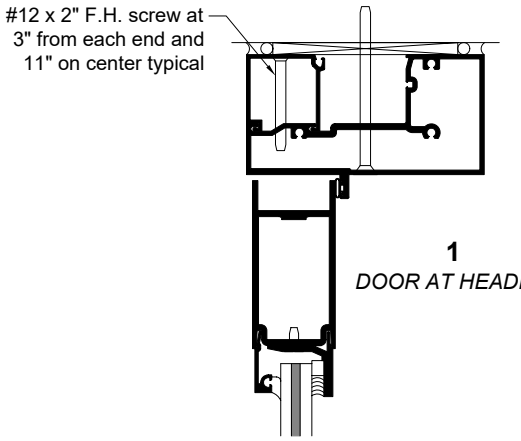
SCALE: 3" = 1'-0"

The Screw Spline method of fabrication and erection permits 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 mullion half of a unit already installed.

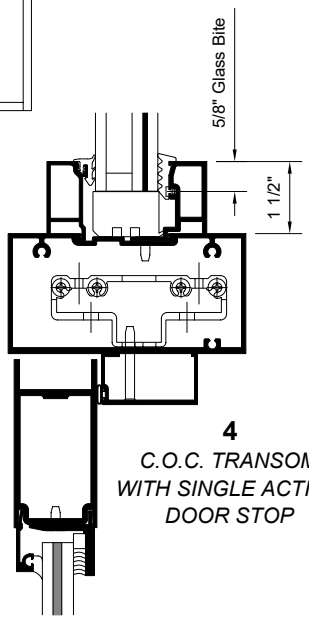
Note: 1-5/16" infill shown.



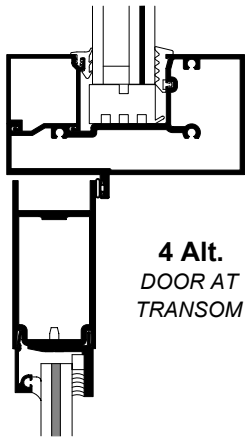
IR 501UT SHOWN
IR 501T SIMILAR



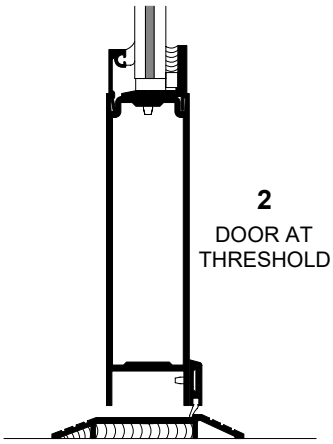
1
DOOR AT HEADER



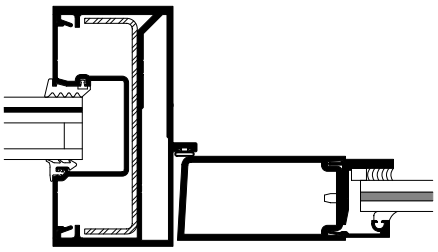
4
C.O.C. TRANSOM WITH SINGLE ACTING DOOR STOP



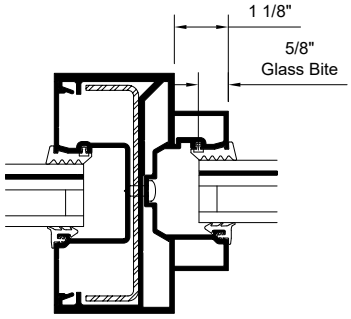
4 Alt.
DOOR AT TRANSOM



2
DOOR AT THRESHOLD



3
DOOR AT JAMB



5
VERTICAL TRANSOM ABOVE DOOR

FABRICATION (Vertical 3-Piece Mullion)
Fabricate Vertical Mullions

Measure minimum height of opening to determine Opening Dimension (OD). Allow 3/8" (9.5) minimum Shim Space clearance at the head (SSH), and sill (SSS), to facilitate installation and provide space for sealant joint. Allow 1/2" (12.7) for Sill Flashing Height (SFH). Frame Height (FH) equals Opening Dimension (OD) minus (SSH + SSS). If job conditions are uncertain, or masonry openings are irregular, allow extra clearance to accommodate construction tolerances.

Cut vertical members to required Mullion Height (MH). Vertical Mullion Height (MH) equals Opening Dimension (OD) minus 1-1/4" (31.8).
At required horizontal locations using drill jigs, drill fastener holes in the verticals as shown below. Cut horizontal members to length (DLO).
Cut glass stops to required length (DLO + 0", -1/16").

MH = OD - (SSH + SSS + SFH)
FH = OD - (SSH + SSS)
MH = FH - SFH

EXAMPLE:
SFH = 1/2" (12.7)
SHIM SPACE (SSH or SSS) = 3/8" (9.5) minimum (Note: Typically specified by sealant manufacturer)
$MH_{IMPERIAL}$ = OD - (3/8" + 3/8" + 1/2")
$MH_{IMPERIAL}$ = OD - 1-1/4"
MH_{METRIC} = OD - (9.5 + 9.5 + 12.7)
MH_{METRIC} = OD - 31.8

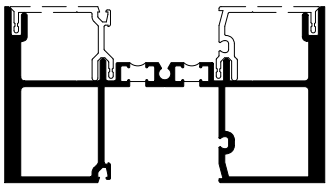
Please refer to Step A under GENERAL INSTALLATION NOTES on page 3 as approved shop drawings take precedence over the formula indicated.

FABRICATION (Vertical 3-Piece Mullion)
Fabricate Vertical Mullions

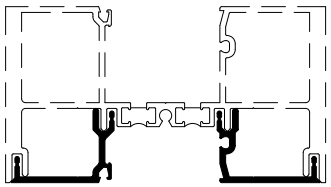
RIGHT HAND SHOWN
LEFT HAND OPPOSITE

IR 501UT SHOWN
IR 501T SIMILAR

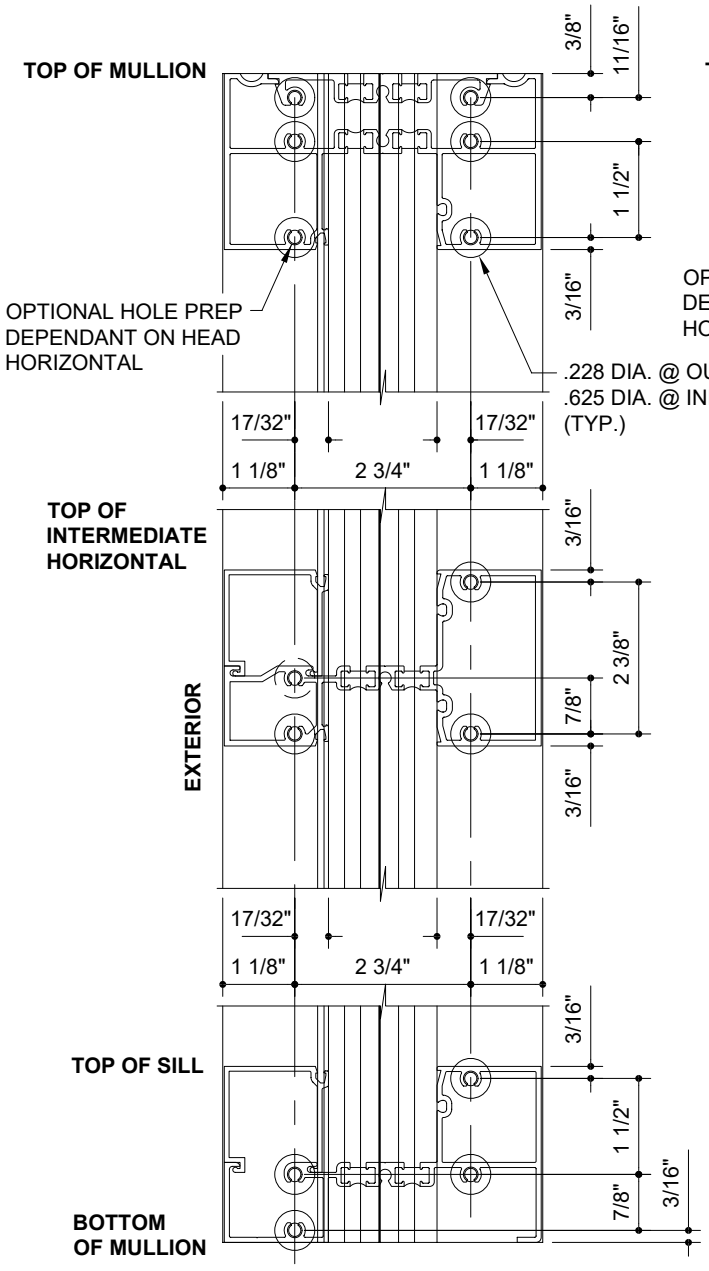
575UT514 SHOWN,
575UT500,
575UT509,
575UT510 SIMILAR

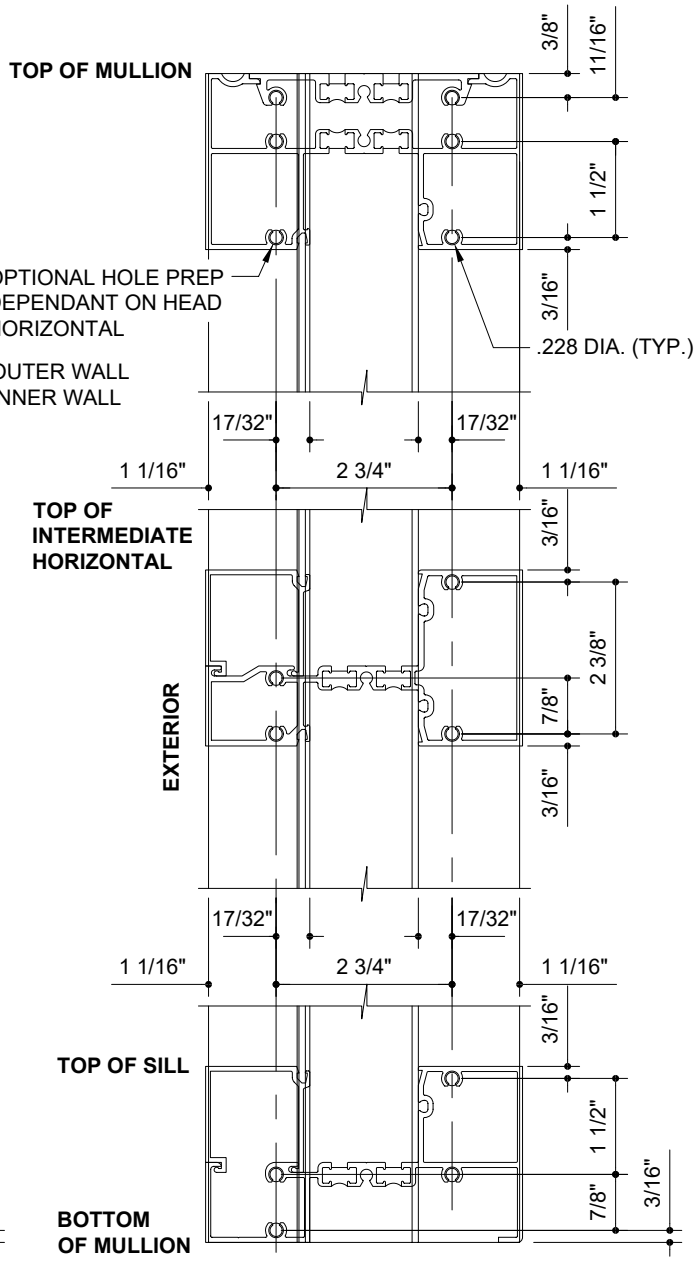


SCREW SPLINE PREPS
TO VERTICAL MEMBERS



575532 **575531**





FABRICATION (Vertical 2-Piece Mullion)
Fabricate Vertical Mullions

Measure minimum height of opening to determine Opening Dimension (OD). Allow 3/8" (9.5) minimum Shim Space clearance at the head (SSH), and sill (SSS), to facilitate installation and provide space for sealant joint. Allow 1/2" (12.7) for Sill Flashing Height (SFH). Frame Height (FH) equals Opening Dimension (OD) minus (SSH + SSS). If job conditions are uncertain, or masonry openings are irregular, allow extra clearance to accommodate construction tolerances.

Cut vertical members to required Mullion Height (MH). Vertical Mullion Height (MH) equals Opening Dimension (OD) minus 1-1/4" (31.8).
At required horizontal locations using drill jigs, drill fastener holes in the verticals as shown below. Cut horizontal members to length (DLO).
Cut glass stops to required length (DLO + 0", -1/16").

MH = OD - (SSH + SSS + SFH)
FH = OD - (SSH + SSS)
MH = FH - SFH

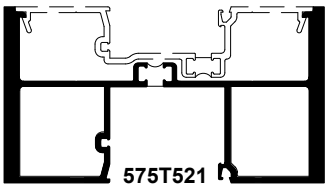
EXAMPLE:
SFH = 1/2" (12.7)
SHIM SPACE (SSH or SSS) = 3/8" (9.5) minimum (Note: Typically specified by sealant manufacturer)
$MH_{IMPERIAL}$ = OD - (3/8" + 3/8" + 1/2")
$MH_{IMPERIAL}$ = OD - 1-1/4"
MH_{METRIC} = OD - (9.5 + 9.5 + 12.7)
MH_{METRIC} = OD - 31.8

Please refer to Step A under GENERAL INSTALLATION NOTES on page 3 as approved shop drawings take precedence over the formula indicated.

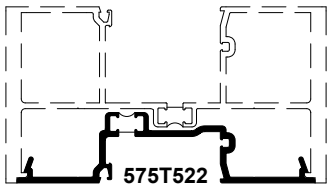
FABRICATION (Vertical 2-Piece Mullion)
Fabricate Vertical Mullions

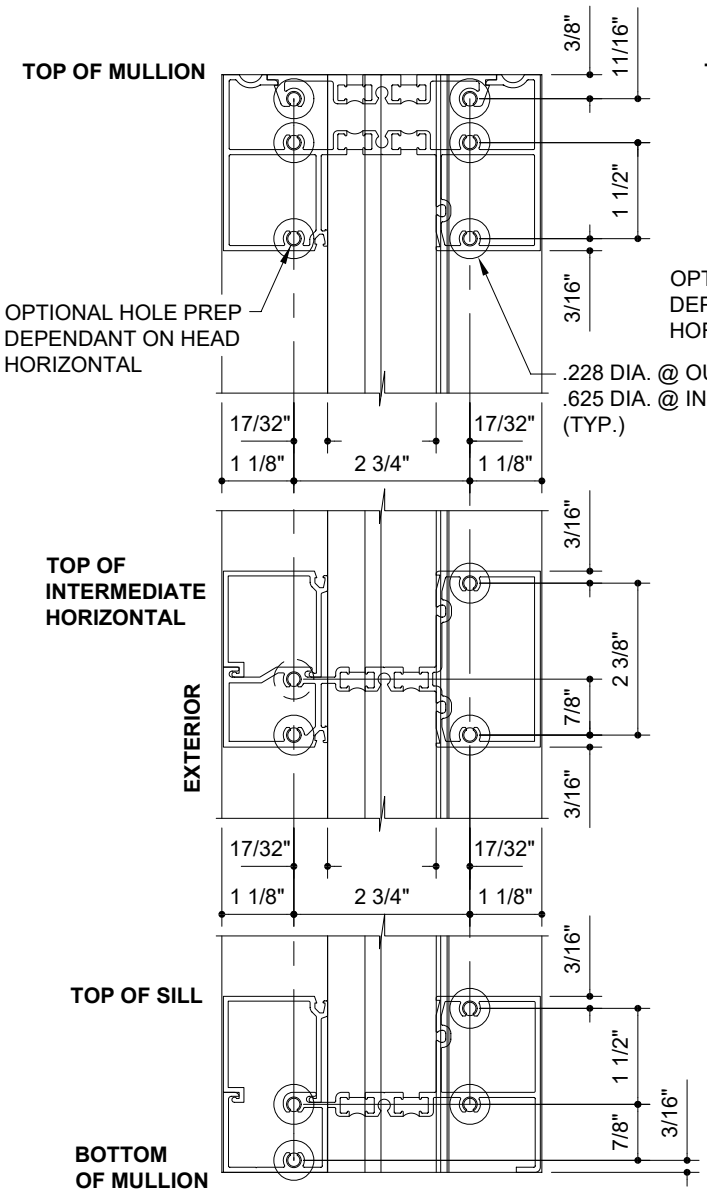
RIGHT HAND SHOWN
LEFT HAND OPPOSITE

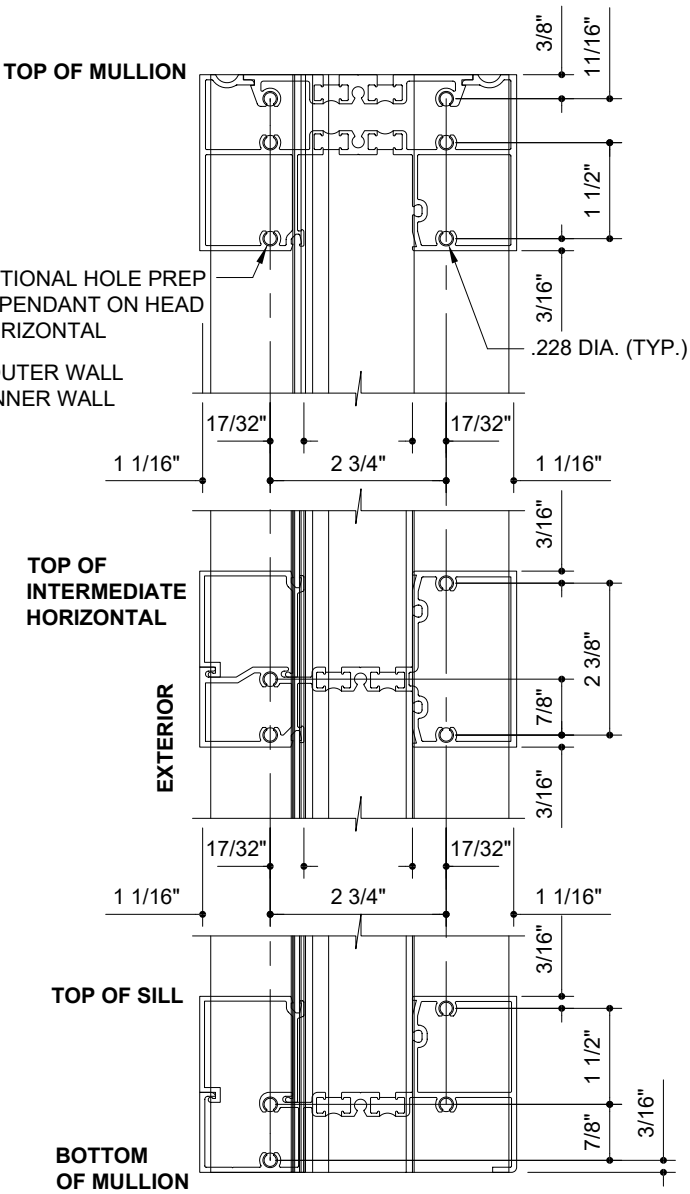
IR 501UT SHOWN
IR 501T SIMILAR



SCREW SPLINE PREPS
TO VERTICAL MEMBERS







FABRICATION (Continued)
Fabricate Vertical Mullions

Measure minimum height of opening to determine Opening Dimension (OD). Allow 3/8" (9.5) minimum Shim Space clearance at the head (SSH), and sill (SSS), to facilitate installation and provide space for sealant joint. Allow 1/2" (12.7) for Sill Flashing Height (SFH). Frame Height (FH) equals Opening Dimension (OD) minus (SSH + SSS). If job conditions are uncertain, or masonry openings are irregular, allow extra clearance to accommodate construction tolerances.

Cut vertical members to required Mullion Height (MH). Vertical Mullion Height (MH) equals Opening Dimension (OD) minus 1-1/4" (31.8).
At required horizontal locations using drill jigs, drill fastener holes in the verticals as shown below. Cut horizontal members to length (DLO).
Cut glass stops to required length (DLO + 0", -1/16").

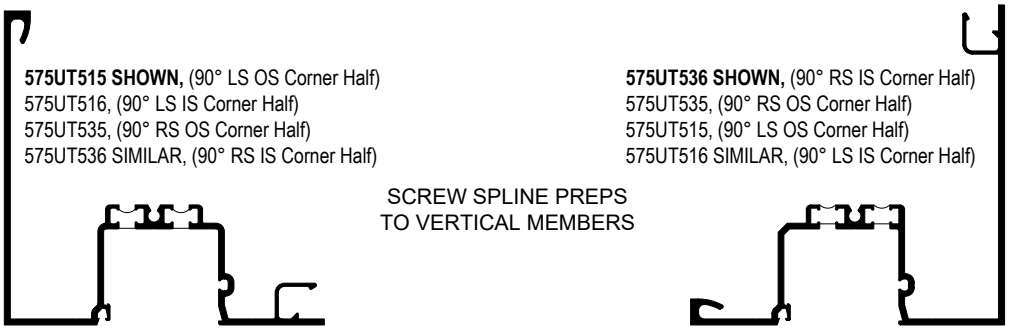
MH = OD - (SSH + SSS + SFH)
FH = OD - (SSH + SSS)
MH = FH - SFH

EXAMPLE:
SFH = 1/2" (12.7)
SHIM SPACE (SSH or SSS) = 3/8" (9.5) minimum (Note: Typically specified by sealant manufacturer)
$MH_{IMPERIAL}$ = OD - (3/8" + 3/8" + 1/2")
$MH_{IMPERIAL}$ = OD - 1-1/4"
MH_{METRIC} = OD - (9.5 + 9.5 + 12.7)
MH_{METRIC} = OD - 31.8

Please refer to Step A under GENERAL INSTALLATION NOTES on page 3 as approved shop drawings take precedence over the formula indicated.

FABRICATION (Continued)
Fabricate Vertical Mullions

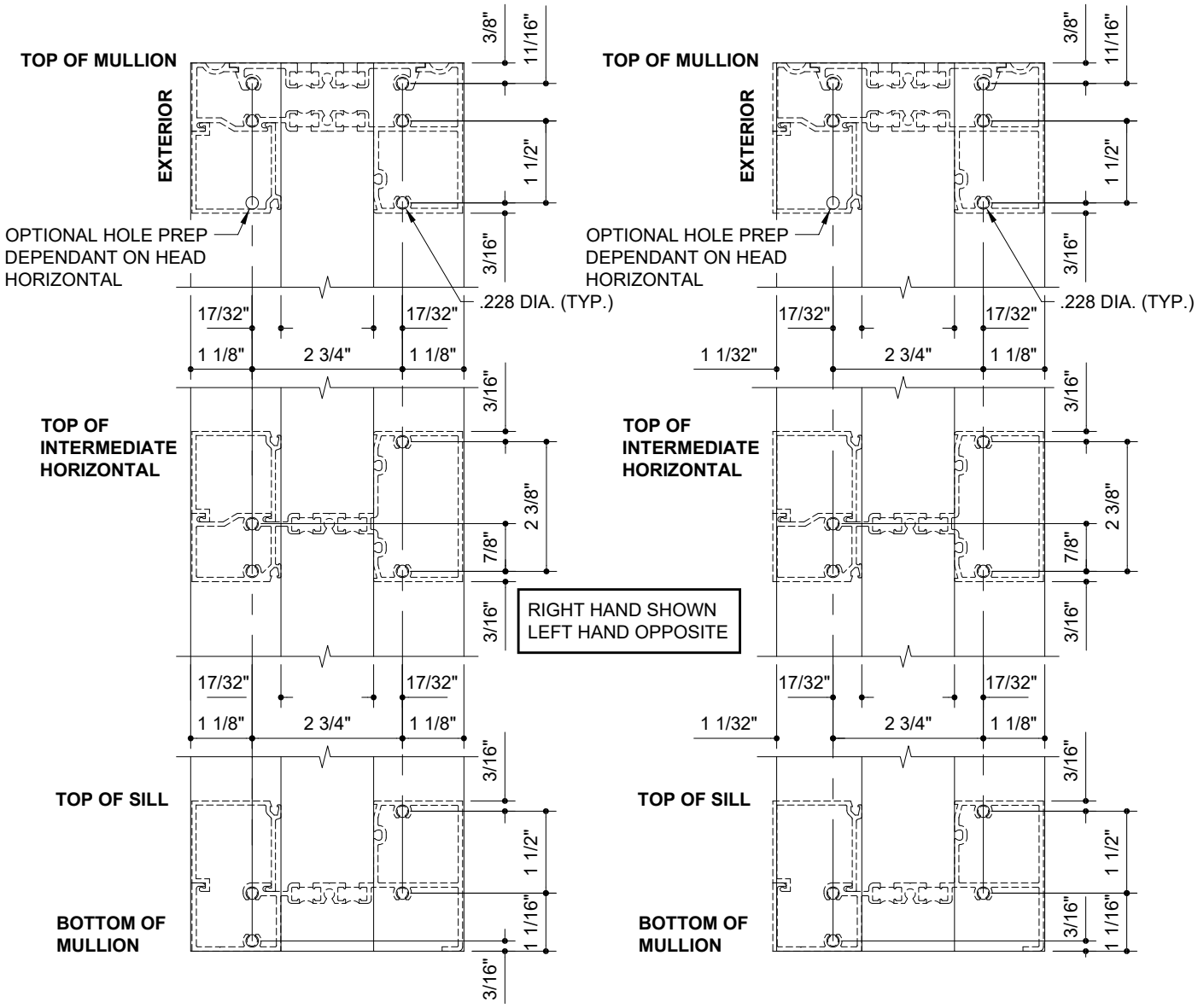
IR 501UT SHOWN
IR 501T SIMILAR



575UT515 SHOWN, (90° LS OS Corner Half)
575UT516, (90° LS IS Corner Half)
575UT535, (90° RS OS Corner Half)
575UT536 SIMILAR, (90° RS IS Corner Half)

575UT536 SHOWN, (90° RS IS Corner Half)
575UT535, (90° RS OS Corner Half)
575UT515, (90° LS OS Corner Half)
575UT516 SIMILAR, (90° LS IS Corner Half)

SCREW SPLINE PREPS
TO VERTICAL MEMBERS



FABRICATION (Continued)
Fabricate Vertical Mullions

Measure minimum height of opening to determine Opening Dimension (OD). Allow 3/8" (9.5) minimum Shim Space clearance at the head (SSH), and sill (SSS), to facilitate installation and provide space for sealant joint. Allow 1/2" (12.7) for Sill Flashing Height (SFH). Frame Height (FH) equals Opening Dimension (OD) minus (SSH + SSS). If job conditions are uncertain, or masonry openings are irregular, allow extra clearance to accommodate construction tolerances.

Cut vertical members to required Mullion Height (MH). Vertical Mullion Height (MH) equals Opening Dimension (OD) minus 1-1/4" (31.8).
At required horizontal locations using drill jigs, drill fastener holes in the verticals as shown below. Cut horizontal members to length (DLO).
Cut glass stops to required length (DLO + 0", -1/16").

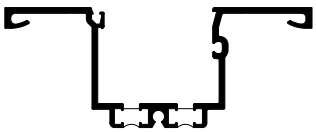
MH = OD - (SSH + SSS + SFH)
FH = OD - (SSH + SSS)
MH = FH - SFH

EXAMPLE:
SFH = 1/2" (12.7)
SHIM SPACE (SSH or SSS) = 3/8" (9.5) minimum (Note: Typically specified by sealant manufacturer)

$MH_{IMPERIAL}$ = OD - (3/8" + 3/8" + 1/2") MH_{METRIC} = OD - (9.5 + 9.5 + 12.7)
$MH_{IMPERIAL}$ = OD - 1-1/4" MH_{METRIC} = OD - 31.8

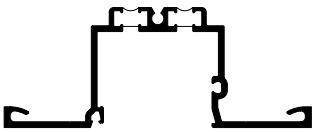
Please refer to Step A under GENERAL INSTALLATION NOTES on page 3 as approved shop drawings take precedence over the formula indicated.

FABRICATION (Continued)
Fabricate Vertical Mullions

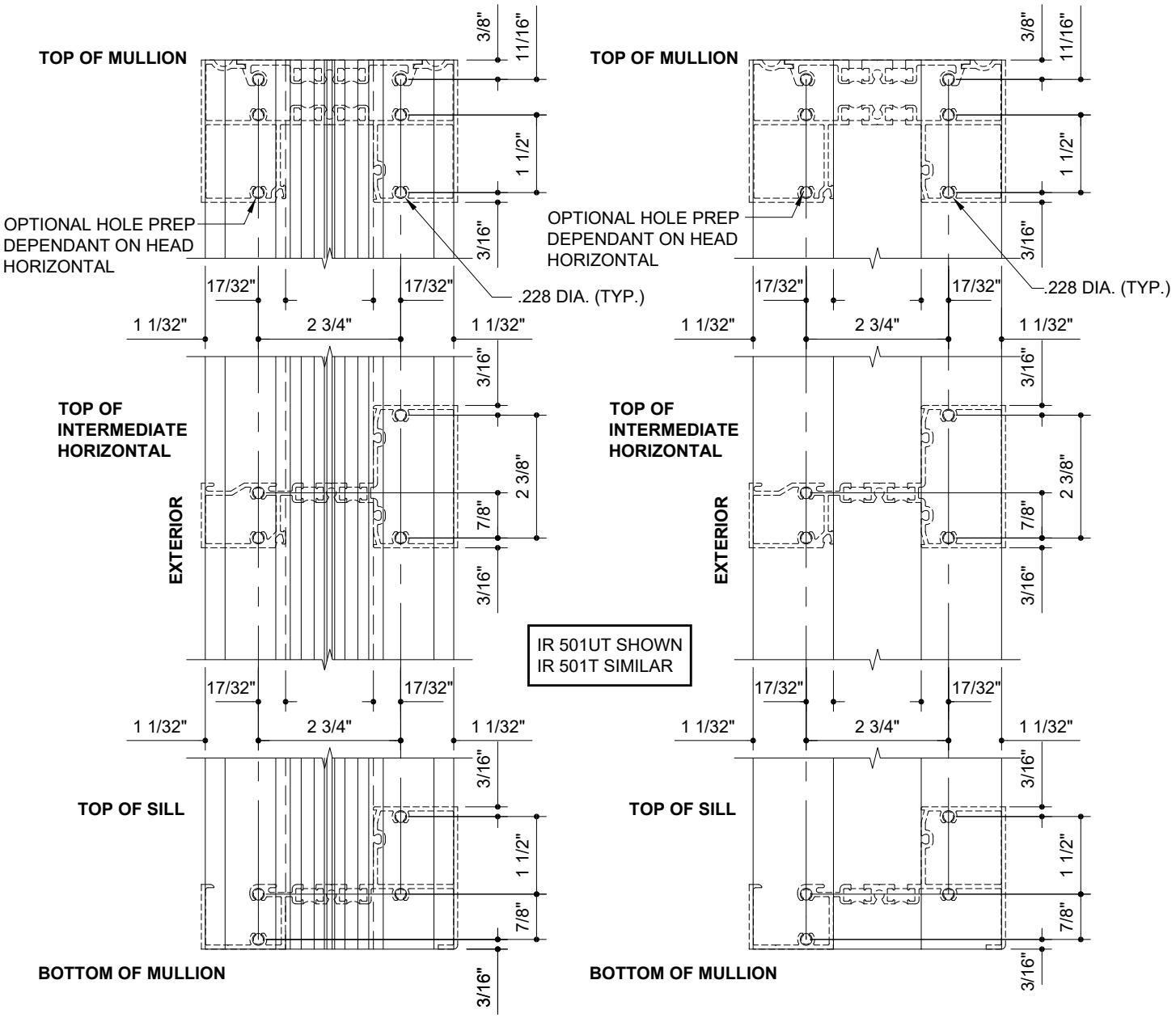


575UT528 RIGHT HAND SHOWN

SCREW SPLINE PREPS
TO VERTICAL MEMBERS



575UT528 LEFT HAND SHOWN

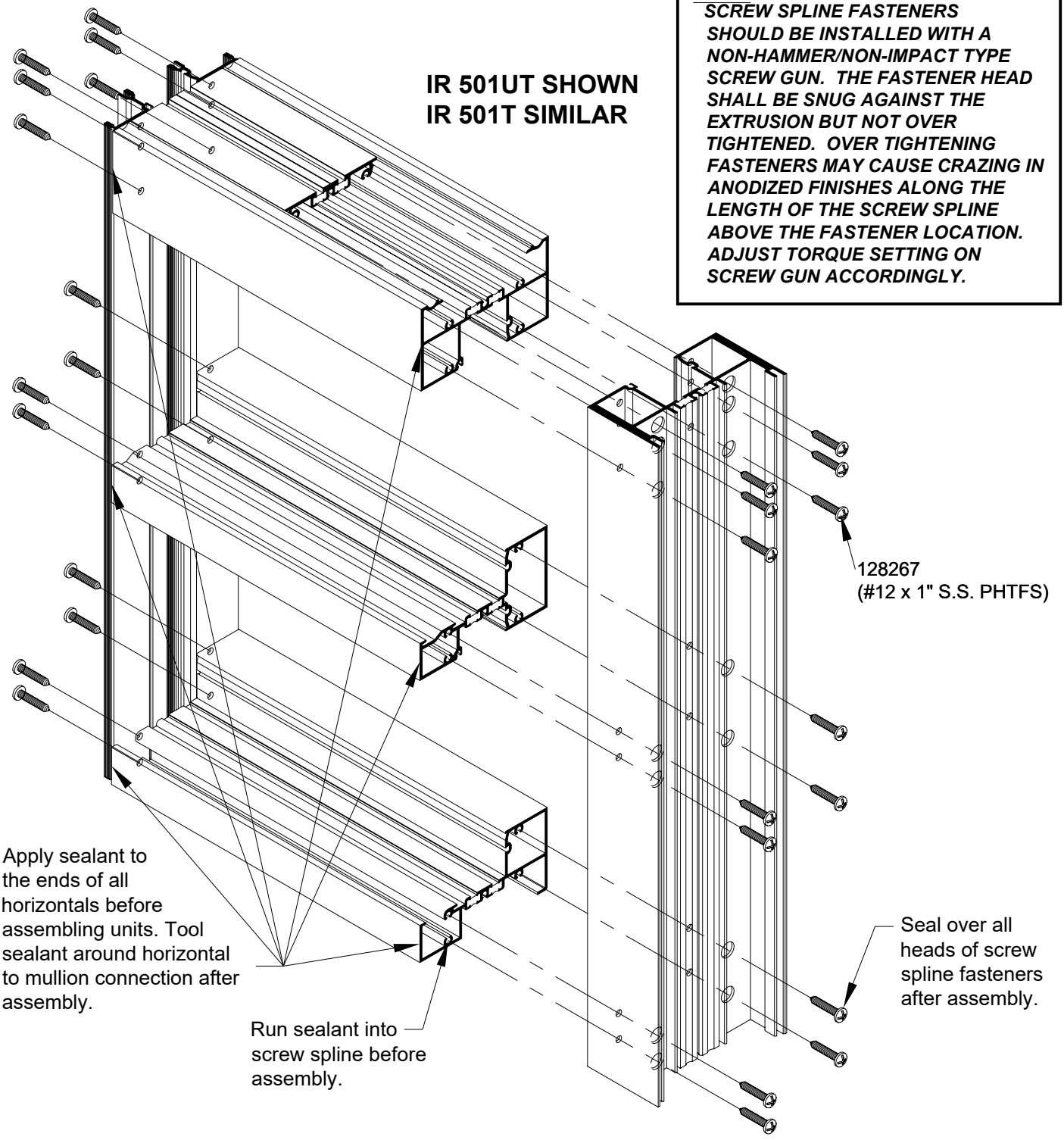


ASSEMBLY (Typical Vertical 3-Piece Mullion)

Apply sealant to the ends of all horizontal members to provide a good seal at the vertical members. Vertical mullions always run through, and horizontal mullions butt between the vertical mullions.

Assemble the units using three (3) or four (4) 128267 (#12 x 1" S.S. PHTFS) screws at each joint as shown below. Each unit includes a mullion and two (2) mullion inserts. A deep pocket is required in at least one of the vertical members in each unit. Install cut to length thermal filler or strap anchor into each end of the head horizontal. Attach to vertical member with two (2) 128267 (#12 x 1" S.S. PHTFS).

NOTE:
SCREW SPLINE FASTENERS SHOULD BE INSTALLED WITH A NON-HAMMER/NON-IMPACT TYPE SCREW GUN. THE FASTENER HEAD SHALL BE SNUG AGAINST THE EXTRUSION BUT NOT OVER TIGHTENED. OVER TIGHTENING FASTENERS MAY CAUSE CRAZING IN ANODIZED FINISHES ALONG THE LENGTH OF THE SCREW SPLINE ABOVE THE FASTENER LOCATION. ADJUST TORQUE SETTING ON SCREW GUN ACCORDINGLY.

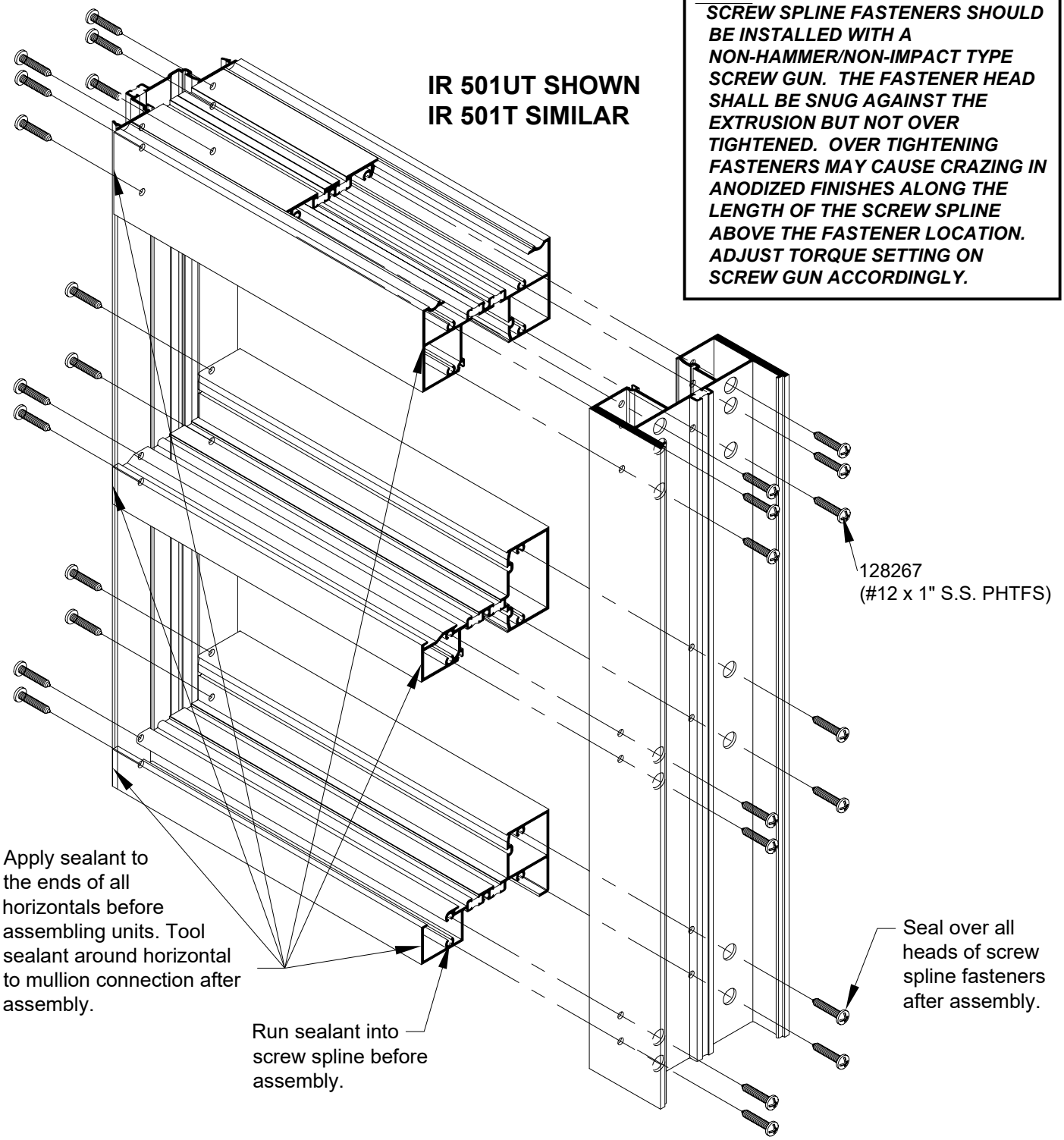


ASSEMBLY (Typical Vertical 2-Piece Mullion)

Apply sealant to the ends of all horizontal members to provide a good seal at the vertical members. Vertical mullions always run through, and horizontal mullions butt between the vertical mullions.

Assemble the units using three (3) or four (4) 128267 (#12 x 1" S.S. PHTFS) screws at each joint as shown below. Each unit includes a mullion and two (2) mullion inserts. A deep pocket is required in at least one of the vertical members in each unit. Install cut to length thermal filler or strap anchor into each end of the head horizontal. Attach to vertical member with two (2) 128267 (#12 x 1" S.S. PHTFS).

NOTE:
SCREW SPLINE FASTENERS SHOULD BE INSTALLED WITH A NON-HAMMER/NON-IMPACT TYPE SCREW GUN. THE FASTENER HEAD SHALL BE SNUG AGAINST THE EXTRUSION BUT NOT OVER TIGHTENED. OVER TIGHTENING FASTENERS MAY CAUSE CRAZING IN ANODIZED FINISHES ALONG THE LENGTH OF THE SCREW SPLINE ABOVE THE FASTENER LOCATION. ADJUST TORQUE SETTING ON SCREW GUN ACCORDINGLY.



INSTALLATION
Fabricate Sill Flashing

Measure minimum width of the opening to determine Opening Dimension (OD). Allow 3/8" (9.5) minimum Shim Space clearance (SSL and SSR) at the jambs to facilitate installation and provide space for sealant joint. If job conditions are uncertain, or masonry openings are irregular, allow extra clearance to accommodate construction tolerances. For opening widths less than 24' (7.32m), cut Sill Flashing to require length. Sill Flashing Length (SFL) equals Opening Dimension (OD) minus 1/2" (12.7).

For openings less than 24' (7.32 m) wide, length.

SFL = OD - (SSL + SSR) + 1/4" (6.4)
FW = OD - (SSL + SSR)
SFL = FW + 1/4" (6.4)

EXAMPLE:
SHIM SPACE (SSL or SSR) = 3/8" (9.5) minimum (Note: Typically specified by sealant manufacturer)
$SFL_{IMPERIAL}$ = OD - (3/8" + 3/8") + 1/4"
$SFL_{IMPERIAL}$ = OD - 1/2"
SFL_{METRIC} = OD - (9.5 + 9.5) + 6.4
SFL_{METRIC} = OD - 12.7

Please refer to Step A under GENERAL INSTALLATION NOTES on page 3 as approved shop drawings take precedence over the formula indicated. For opening widths greater than 24' (7.32 m), refer to approved shop drawings.
(See Sill Flashing Splice).

For openings greater than 24' (7.32 m) wide, splicing is required every 12' (3.66 m) and splices must be located at the center of DLO. (See Splice Joint Installation)

INSTALLATION (Continued)

IR 501UT SHOWN
IR 501T SIMILAR

Install 575UT537 flashing at the sill and attach it to the floor. The flashing should be shimmed a minimum of 3/8" (9.5) and should be interrupted only at entrances, refer to approved shop details for sill flashing lengths when entrances are used. The flashing must be carefully sealed at each end *.

Sill flashing end cap is not designed to be water-tight, but to provide a backing surface for the sealant inside the sill flashing between the sill flashing leg and the door jamb.

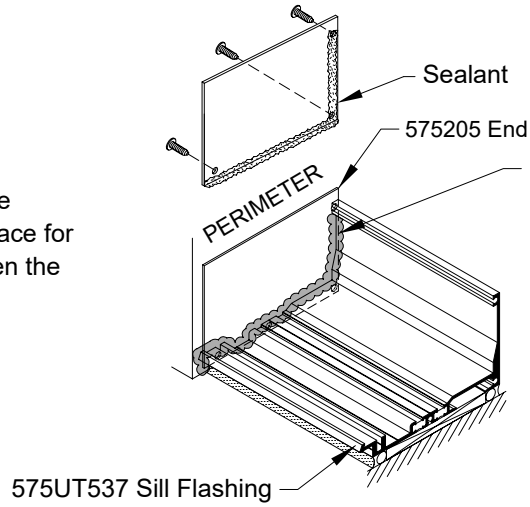
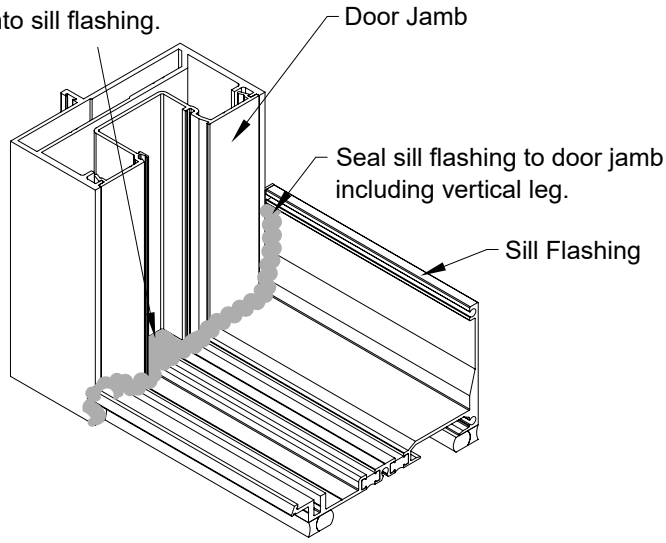
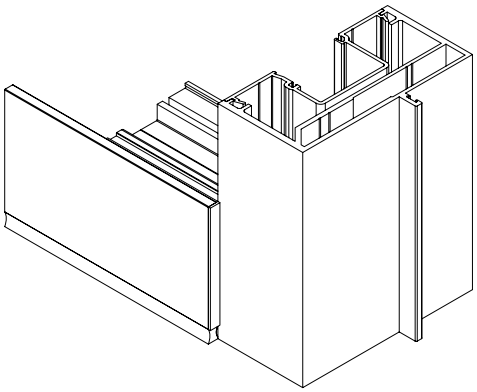


FIGURE 1

Fill glass pocket completely with sealant. tool sealant to slope into sill flashing.



EXTERIOR



INTERIOR

SILL FLASHING SPLICE

IR 501UT SHOWN
IR 501T SIMILAR

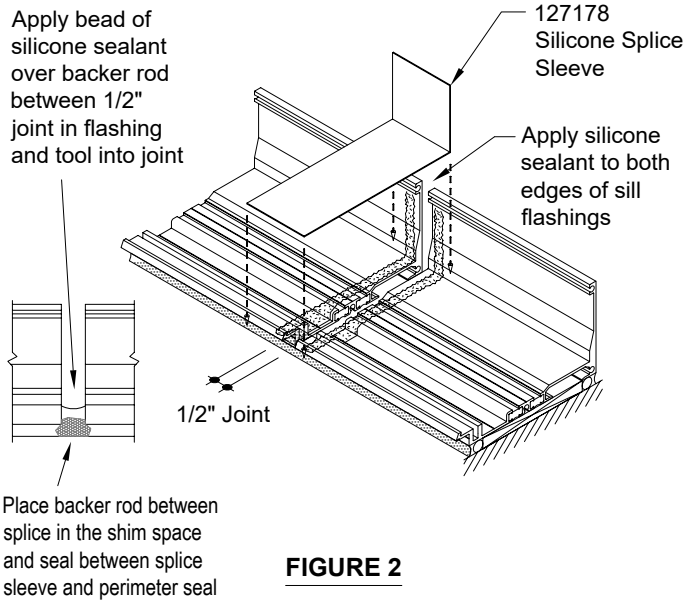


FIGURE 2

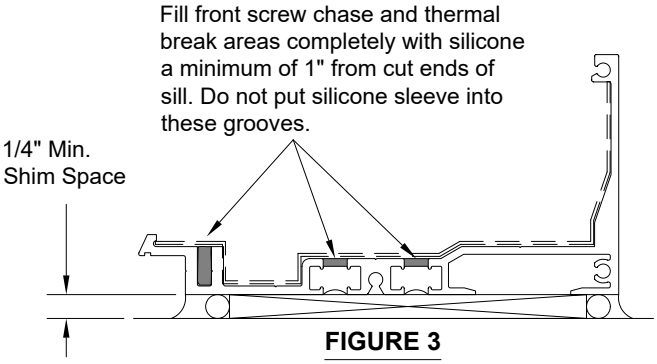


FIGURE 3

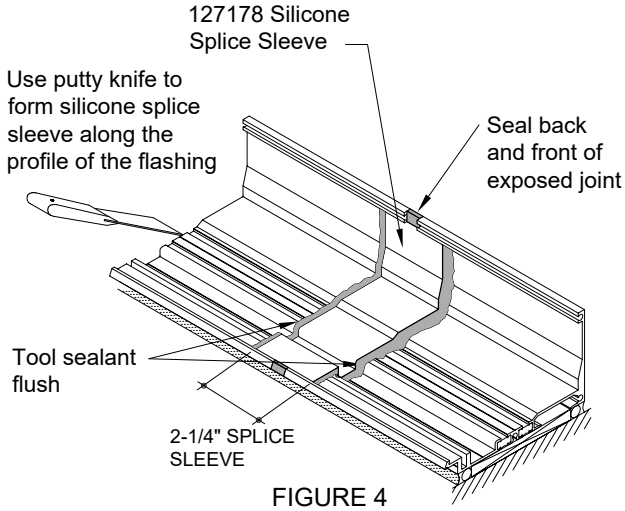


FIGURE 4

NOTE:

1) *SPLICES SHOULD BE INSTALLED EVERY 12' WHEN FLASHING IS OVER 24'. SPLICE SLEEVES ARE TO BE LOCATED AT THE CENTER OF A DLO.*

   DO NOT LOCATE SPLICE SLEEVES AT MULLIONS.

2) *IF THERE IS AN ENTRANCE, THE ENTRANCE FRAME AND ATTACHED SIDELITE(S) SHOULD BE INSTALLED FIRST, BEING CAREFUL TO LOCATE THEM ACCURATELY IN THE OPENING. FASTEN THE ENTRANCE FRAME TO THE PERIMETER CONDITION AS NECESSARY USING THE REQUIRED PERIMETER FASTENERS.*

3) *SILICONE MUST BE TESTED AND APPROVED FOR COMPATIBILITY AND ADHESION BY THE SEALANT MANUFACTURER.*

PROCEDURE FOR INSTALLING SILICONE SPLICE SLEEVE

1. Cut Silicone Splice Sleeve (127178) to length 8" long. (Figure 2)
2. Clean splice area with solvent.
3. Install backer rod into splice. Insure backer rod is set back enough to allow for perimeter backer rod and seal to run through.
4. Apply bead of silicone within 1/2" of the edge of the sill members on each side of the 1/2" joint. (Figure 2)
5. Fill front screw chase and thermal break areas completely with silicone beyond splice a minimum of 1 inch from cut end of sill. (Figure 3)
6. Remove protective liner from Splice Sleeve. ***(For cold weather see note below.)***
7. Center the Splice Sleeve over the joint. Then, using a putty knife, form the Splice Sleeve along the profile of the flashing. (Figure 4)
8. Silicone will squeeze out from under the Splice Sleeve. Use putty knife to tool excess silicone over edges of Splice Sleeve. (Figure 4)
9. Seal back and front exposed joint. Be sure to force sealant up under the Splice Sleeve in front. Seal the exposed joint. (Figure 4)

COLD WEATHER NOTE:
FOR TEMPERATURES BELOW 40° THE FOLLOWING PRECAUTIONS SHOULD BE TAKEN. JUST PRIOR TO INSTALLING THE SPLICE SLEEVE, WIPE SILL FLASHING 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.

INSTALLATION (Continued)

Prior to installing assembled frame into opening, drill 1/2" weep holes in each sill member at centerline of horizontals as shown in Figure 1.

Position the assembled frame in the opening to align it with the sill flashing, checking to make sure that the unit is level and plumb.

Insert shims as needed at the head and jambs, and anchor the frame to the perimeter condition as required. Shims should be continuous and extend to both return caulk legs on the head and jambs. Contact your Area Application Engineering Dept. for help in selecting fasteners if necessary. Seal over the heads of all perimeter fasteners at the sill.

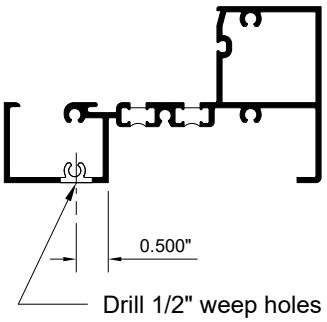
Caulk the exterior perimeter joints at the head, jambs and under the sill flashing with a high quality sealant.

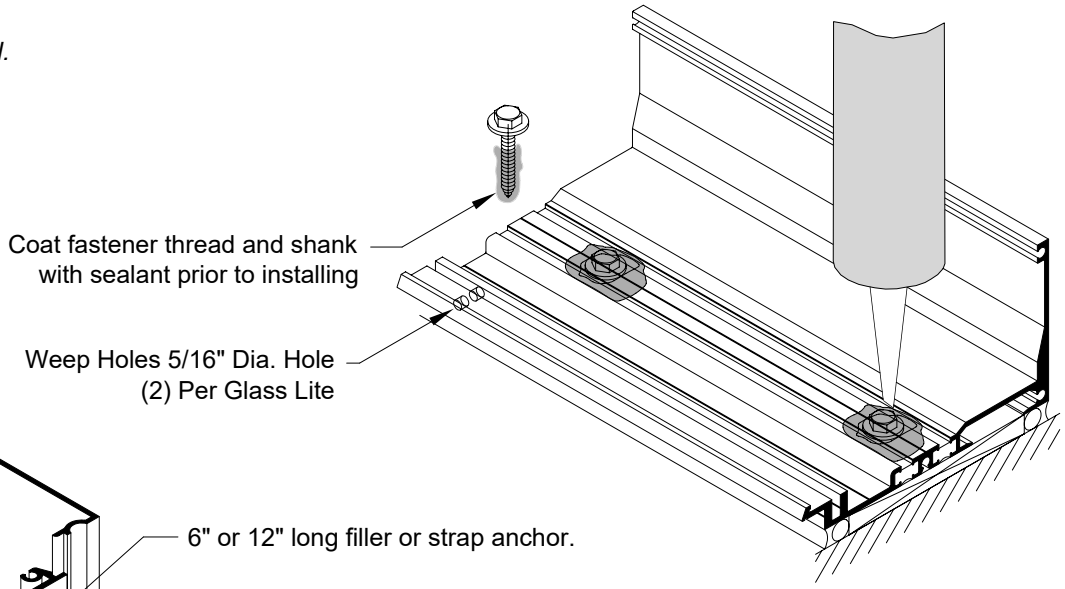
NOTE: *FORCE SEALANT INTO THE HOLES FOR SILL PERIMETER FASTENERS PRIOR TO INSERTING THE FASTENERS. THIS IS IMPORTANT TO INSURE THAT THE HOLES IN THE SILL FLASHING ARE SEALED BEFORE THE FASTENERS ARE INSTALLED.*

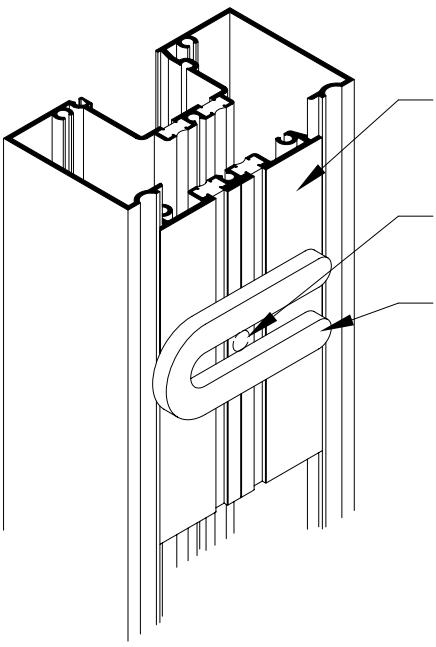
Seal over fastener heads at sill.

IR 501UT SHOWN
IR 501T SIMILAR

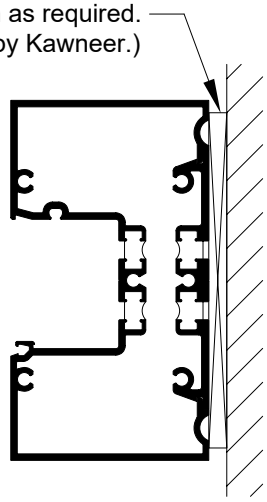
FIGURE 1







INSTALLATION (Continued)



SHIM INSTALLATION

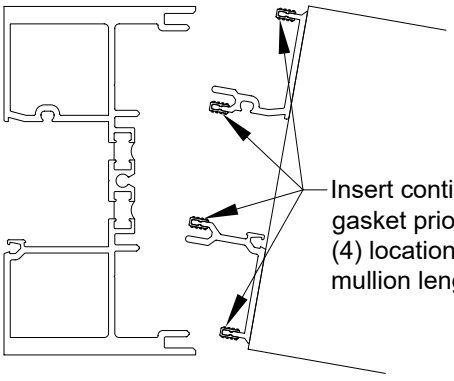
Install filler or strap anchor at head, sill and jamb. Place between pocket filler and perimeter condition at perimeter anchor locations.

IR 501UT SHOWN
IR 501T SIMILAR

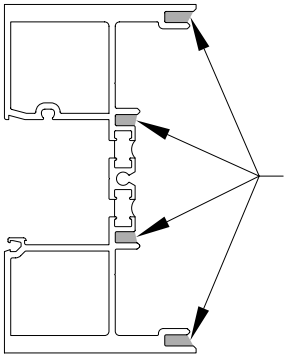
Install the frame units starting at the entrance and working towards the other end. If there is no entrance, start at one jamb and then work toward the other jamb. NOTE THAT IF STRAP ANCHORS ARE USED AT THE JAMB, THEY MUST BE SLID ONTO THE JAMBS BEFORE INSTALLATION OF THE END UNITS. Crimp one of the retaining legs at the bottom of the jambs to prevent strap anchors from sliding off the jambs during installation. Slide strap anchors up to the required locations after the frame is set in place.

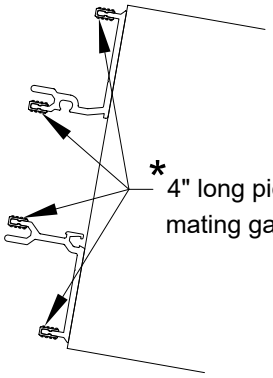
The first unit should be attached to the perimeter condition as required at the head, sill and jamb. The remaining units are installed by pressing together the female mullion half with the male mullion half of the adjacent unit as shown below.
NOTE: Mullions are not designed to be disengaged after installation.

VERTICAL FRAME ASSEMBLY DRY GLAZED



OPTIONAL VERTICAL FRAME ASSEMBLY DRY GLAZED

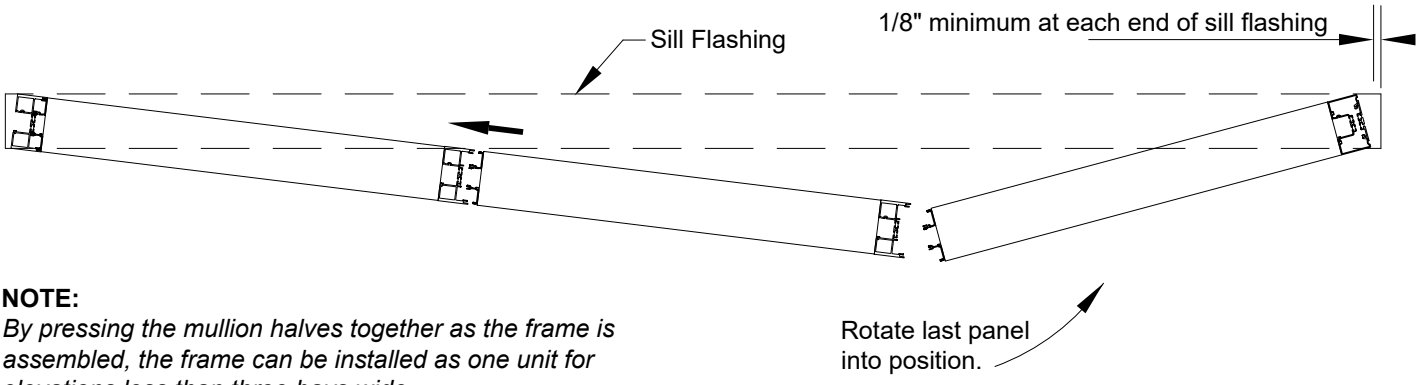




* Insert 4" long pieces of 127209 mating gasket at 3rd points of mullion in wet seal locations to temporarily hold mullion in place while silicone cures.

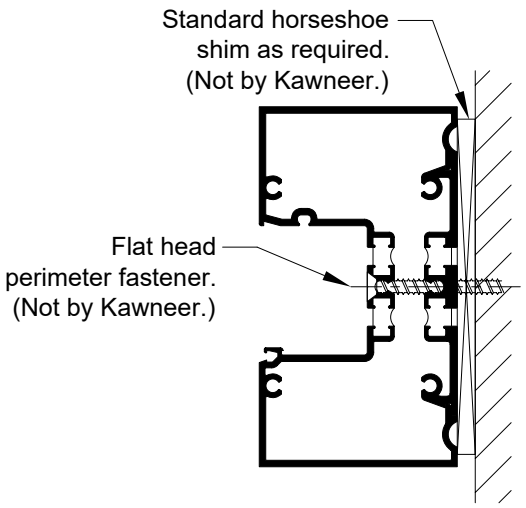
INSTALLATION (Continued)

The last unit should be pivoted into position using the last installed mullion half as a pivot point. With narrow units (under 4') the last two units should be snapped together and installed as a single unit.

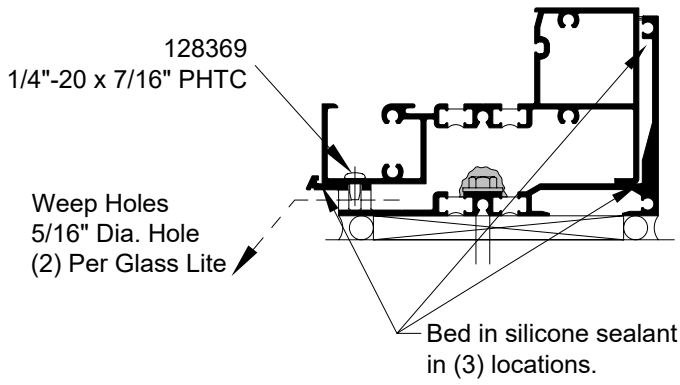


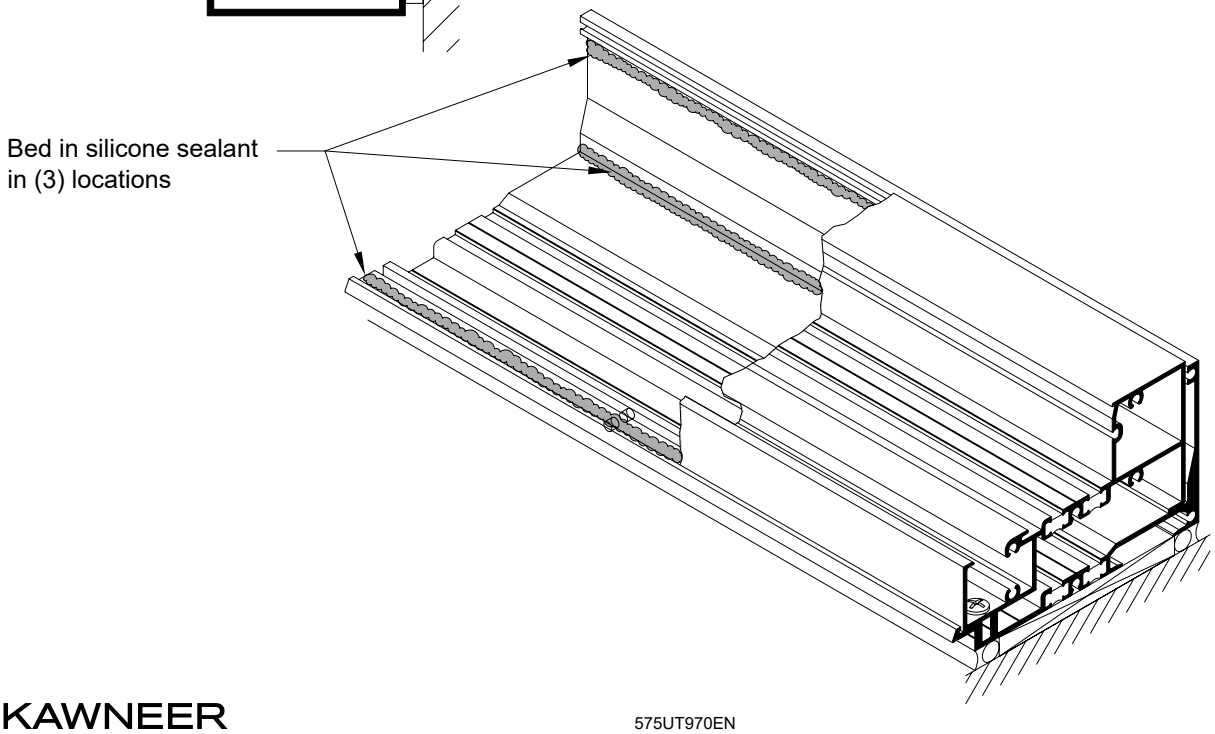
NOTE:
By pressing the mullion halves together as the frame is assembled, the frame can be installed as one unit for elevations less than three bays wide.

Attach the sill horizontal to the sill flashing with 128369 1/4-20 x 7/16" PHTC fasteners. Quantities are determined per project.



EXTERIOR ATTACHMENT





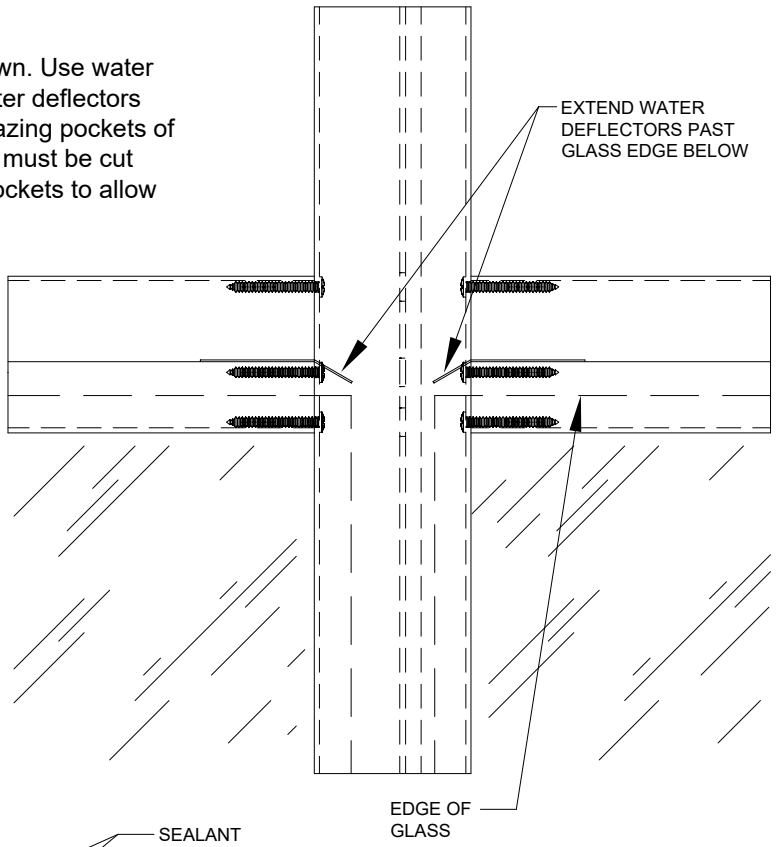
INSTALLATION (Continued)

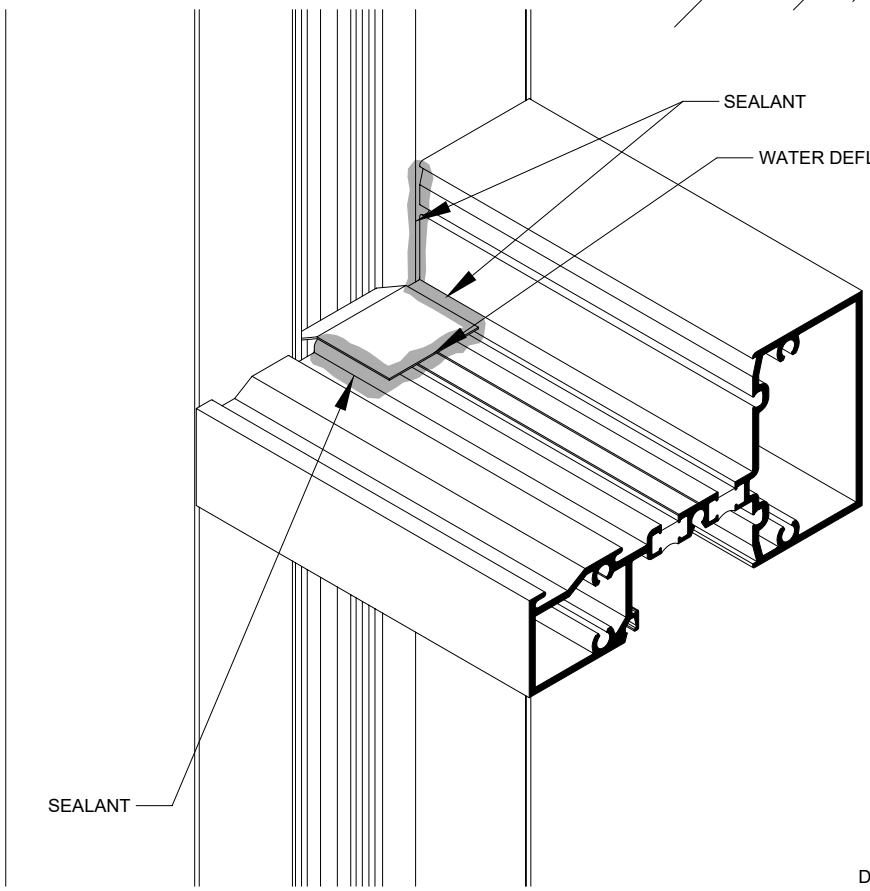
Install water deflectors on intermediate horizontals as shown. Use water deflector 451105. Remove the paper backing from the water deflectors and install them on a clean, dry surface centered in the glazing pockets of the intermediate horizontals. Note that the 127191 spacer must be cut short or notched at the top of all intermediate horizontal pockets to allow installation of the water deflectors.

COLD WEATHER NOTE:

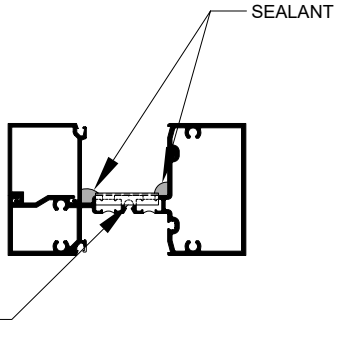
For temperatures below 40° the following precautions should be taken: Just prior to installing the water deflectors, wipe glazing pocket with a solvent or cleaning solution recommended by the manufacturer.

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





IR 501UT SHOWN
IR 501T SIMILAR

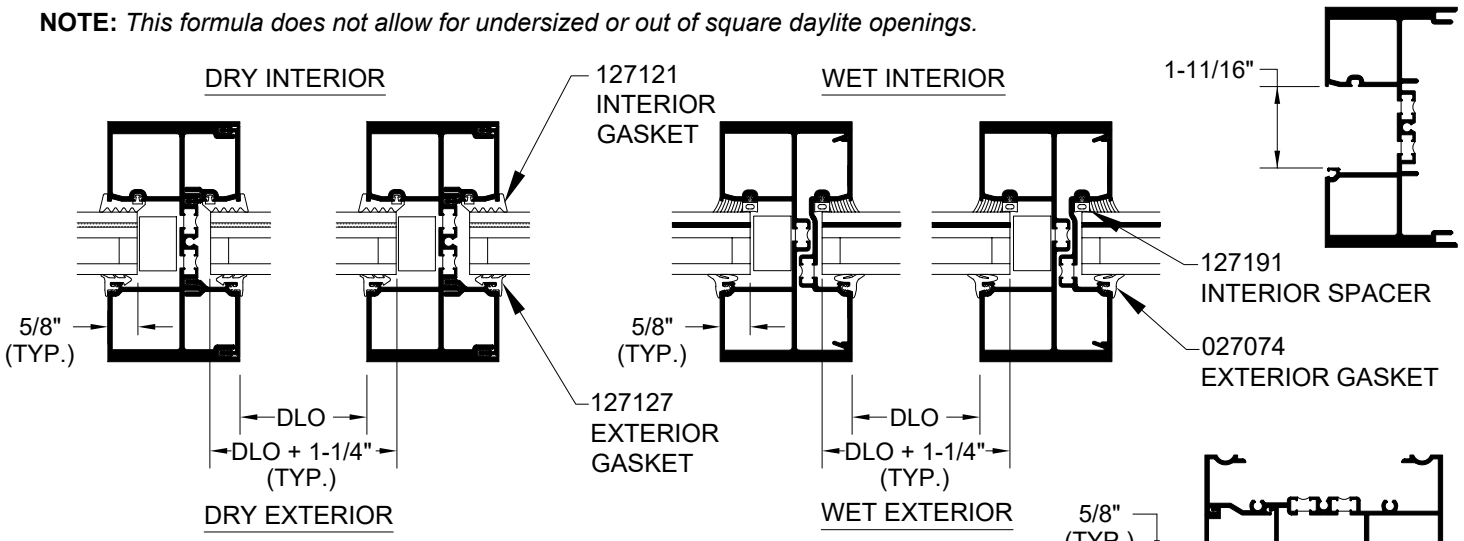


AFTER THE WATER DEFLECTOR IS INSTALLED, APPLY SEALANT AROUND THE EDGES OF THE DEFLECTOR AS SHOWN. SEAL THE JOINT BETWEEN THE BACK OF THE HORIZONTAL AND THE VERTICAL AND AROUND THE WATER DEFLECTOR. MAKE SURE TO SEAL THE JOINT BETWEEN ANY GLAZING ADAPTERS AND ANY VOID IN THE GLAZING REGLETS IN THIS AREA TO PREVENT WATER FROM RUNNING DOWN TO THE LITE BELOW.

The standard glass pocket is approximately 1-11/16" in width, and accommodates 1-5/16" glazing. These pockets are designed for glass products that are typically used in applications that must conform to hurricane impact/cycling requirements. **Contact your Kawneer representative for specific glazing applications.**

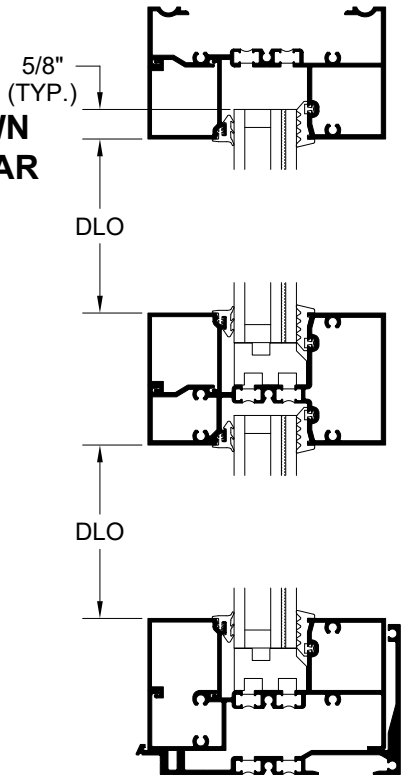
Typical glass size is daylite opening (DLO) + 1-1/4".

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



3-PIECE DRY SHOWN
2-PIECE DRY SIMILAR

2-PIECE WET SHOWN
3-PIECE WET SIMILAR

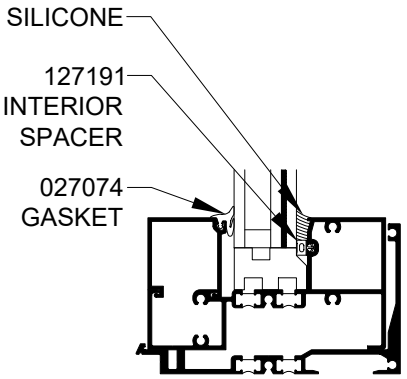


Glazing Chart for IR 501UT Framing					
Nominal Infill Thickness	**Actual Infill Thickness**	**Glazing Method**	**Exterior Gasket**	**Interior Spacer**	**Impact Rating**
1-5/16"	1.263" - 1.325"	Wet Glaze	027074	127191	Large
1-5/16"	1.263" - 1.325"	Dry Glaze	127127	127121	Large & Small

Exterior Glazing Gaskets		**Interior Spacers**	
			
027074	127127	127191	127121

Position the glass in the frame using the standard flush glazing technique. Place setting blocks under the glass at 1/4 points or as otherwise specified by engineering calculations. Make sure that there is a consistent glass bite of 5/8" on each side of the glass.

IR 501UT SHOWN
IR 501T SIMILAR



Wet Glazing

"W" SIDE BLOCKS

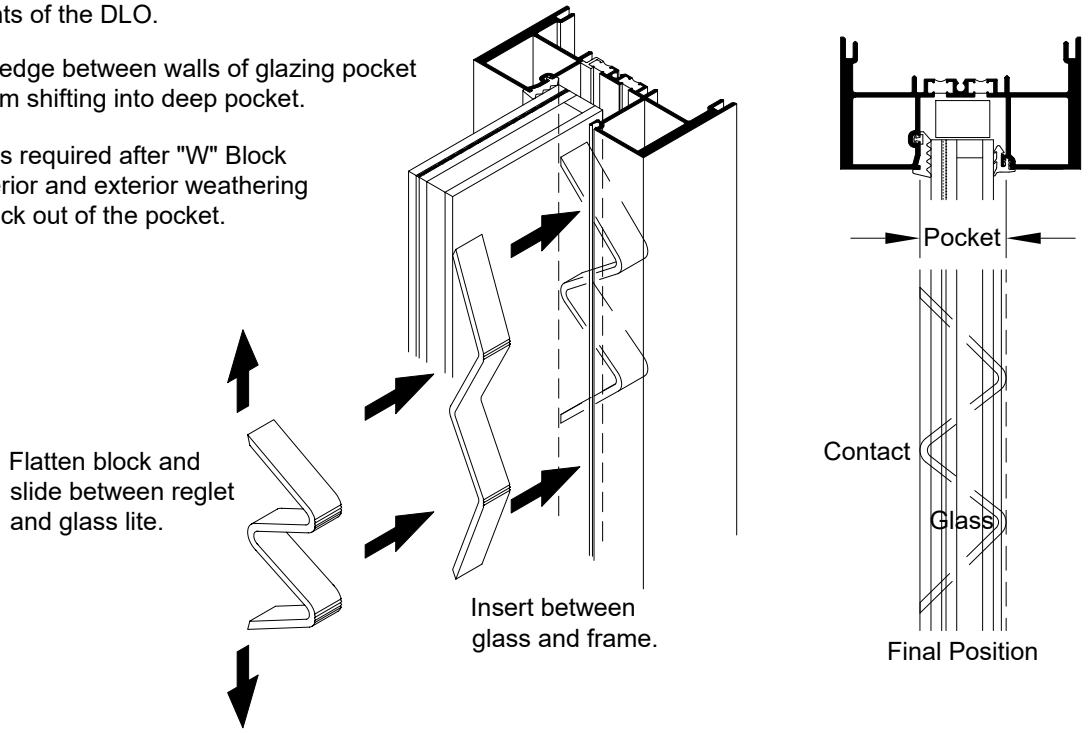
One "W" Side Block should be installed into the deep pocket of the mullion of each lite of glass in the opening. When there are two deep pockets at a glass lite, install two “W” Side Blocks into each side. Locate at 1/3 points of the DLO.

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

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

Side Block Installation

IR 501UT SHOWN
IR 501T SIMILAR
3-PIECE SHOWN
2-PIECE SIMILAR



GASKET AND GLASS STOP INSTALLATION (Dry Glazing)

Step 1: Square cut horizontal and vertical gaskets to an approximate length of D.L.O. + 1/4" per foot of D.L.O.
Step 2: Install gasket 127121 on the interior side of frame first. Insert gaskets into the horizontal members first starting at the ends and work toward the center as shown. (See Figure #1)
Step 3: Install vertical 127121 gaskets into the interior side of frame after horizontal gaskets are in place in the same manner. Vertical gasket runs through, trim edge of vertical gasket to pass by horizontal gasket.
Step 4: Peel back corners of gasket. Apply sealant between gasket and metal approximately 1" from corner. Push gasket back into place.
Step 5: Apply sealant between vertical and horizontal gaskets.
Step 6: Position setting blocks at points under glass as required.
Step 7: Install glass into frame using standard flush glazing technique.
Step 8: Run bead of sealant along vertical reglets where glass stop meets, then install glass stop.
Step 9: Install exterior gasket into frame in the same manner as described in Step #2.

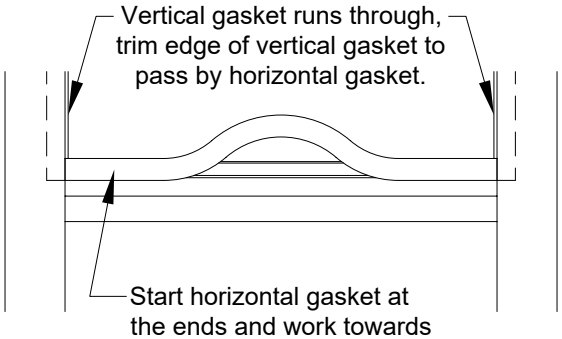
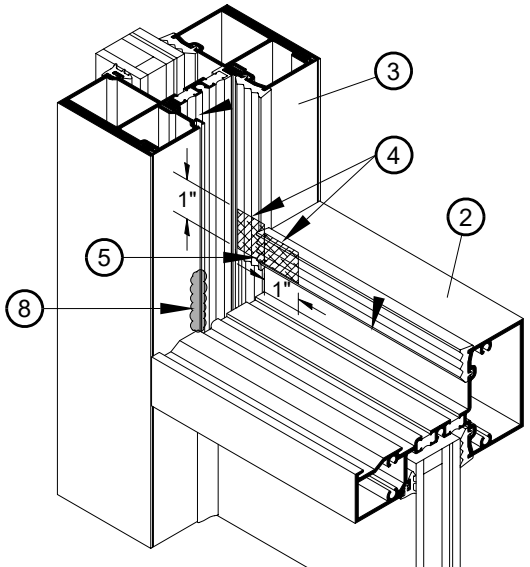
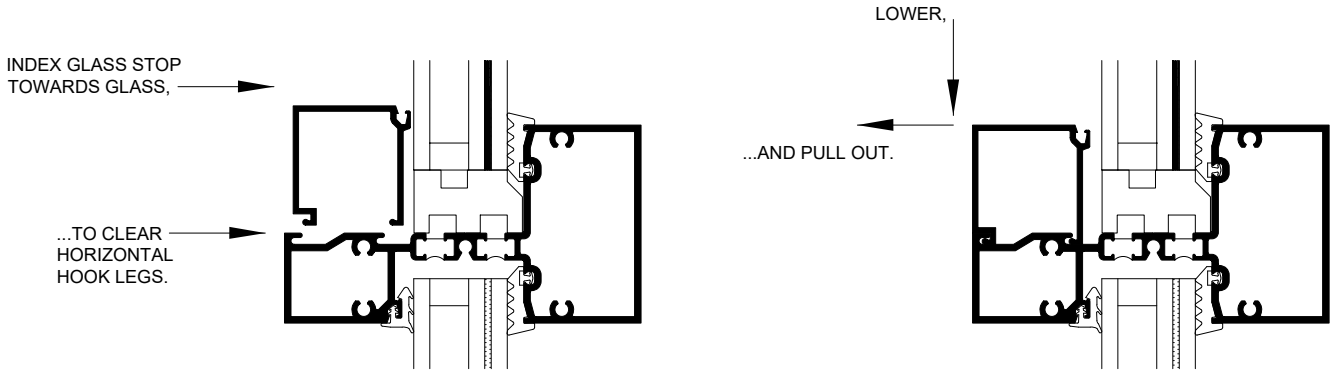


Figure #1



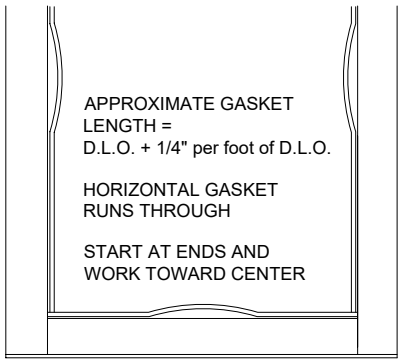
3 PIECE MULLION SHOWN
2 PIECE MULLION SIMILAR

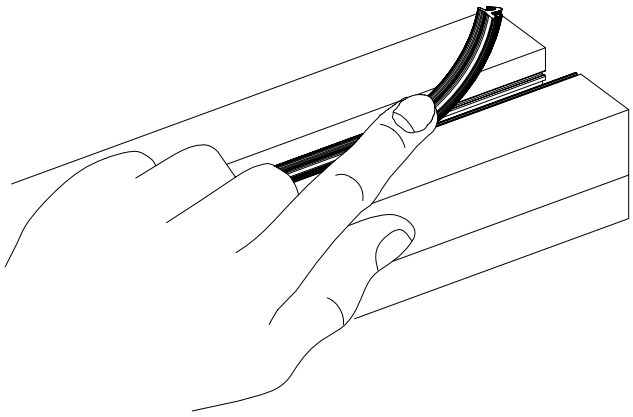
Install the glass stops by indexing them toward the glass to clear the hook legs on the horizontal members. Lower (raise at head) the stop to the horizontal member and pull out, making sure that both hook legs engage.



IR 501UT SHOWN
IR 501T SIMILAR

Cut the exterior push-in gasket to an approximate length of DLO + 1/4" per foot of DLO. Start the installation of the gaskets at the ends and work toward the center. The horizontal gaskets run through.

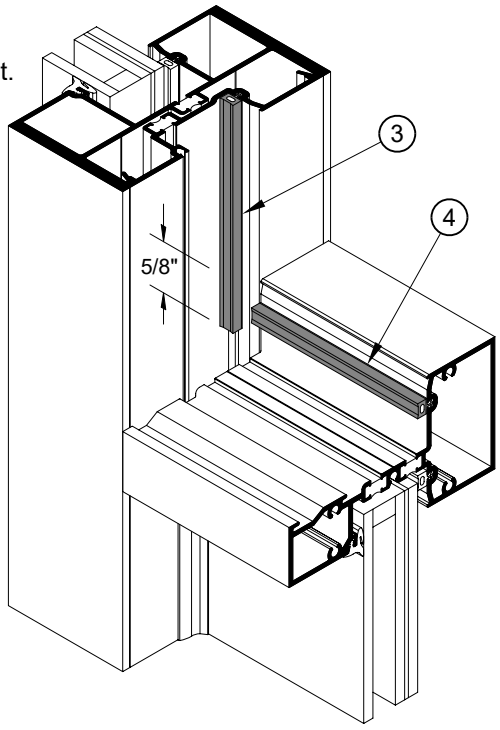




GASKET AND GLASS STOP INSTALLATION (Wet Glazing)

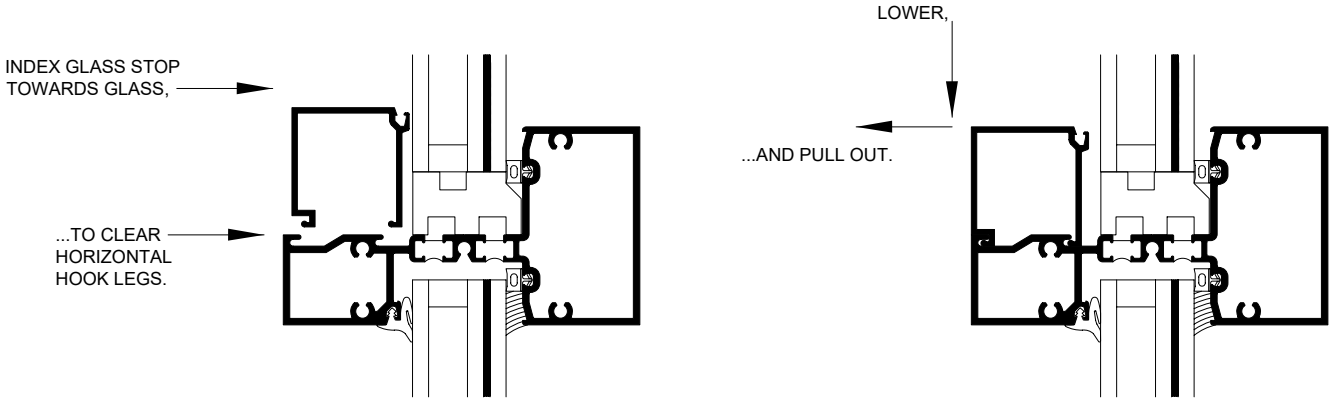
Step 1: Square cut horizontal and vertical gaskets to an approximate length length of D.L.O. + 1/4" per foot of D.L.O.
Step 2: Install gasket 127191 on the interior side of frame by pushing into the reglet.
Step 3: Run vertical gasket approximately 5/8" past the horizontal.
Step 4: Run horizontal gasket D.L.O.

Option:
Gasket may be pre-loaded into the frame members.
If choosing the pre-load option, run vertical gasket mullion length.

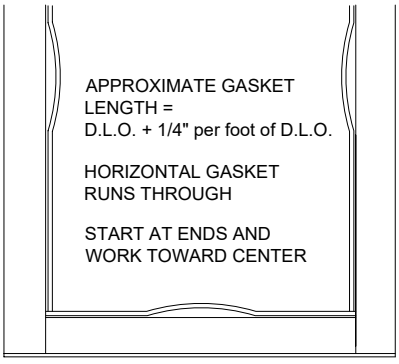


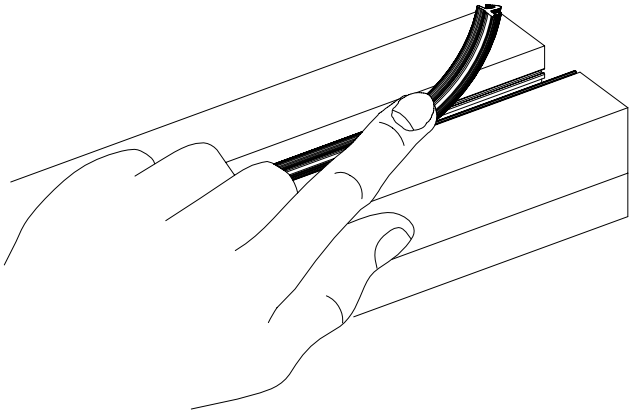
IR 501UT SHOWN
IR 501T SIMILAR
2-PIECE SHOWN
3-PIECE SIMILAR

Install the glass stops by indexing them toward the glass to clear the hook legs on the horizontal members.
Lower (raise at head) the stop to the horizontal member and pull out, making sure that both hook legs engage.



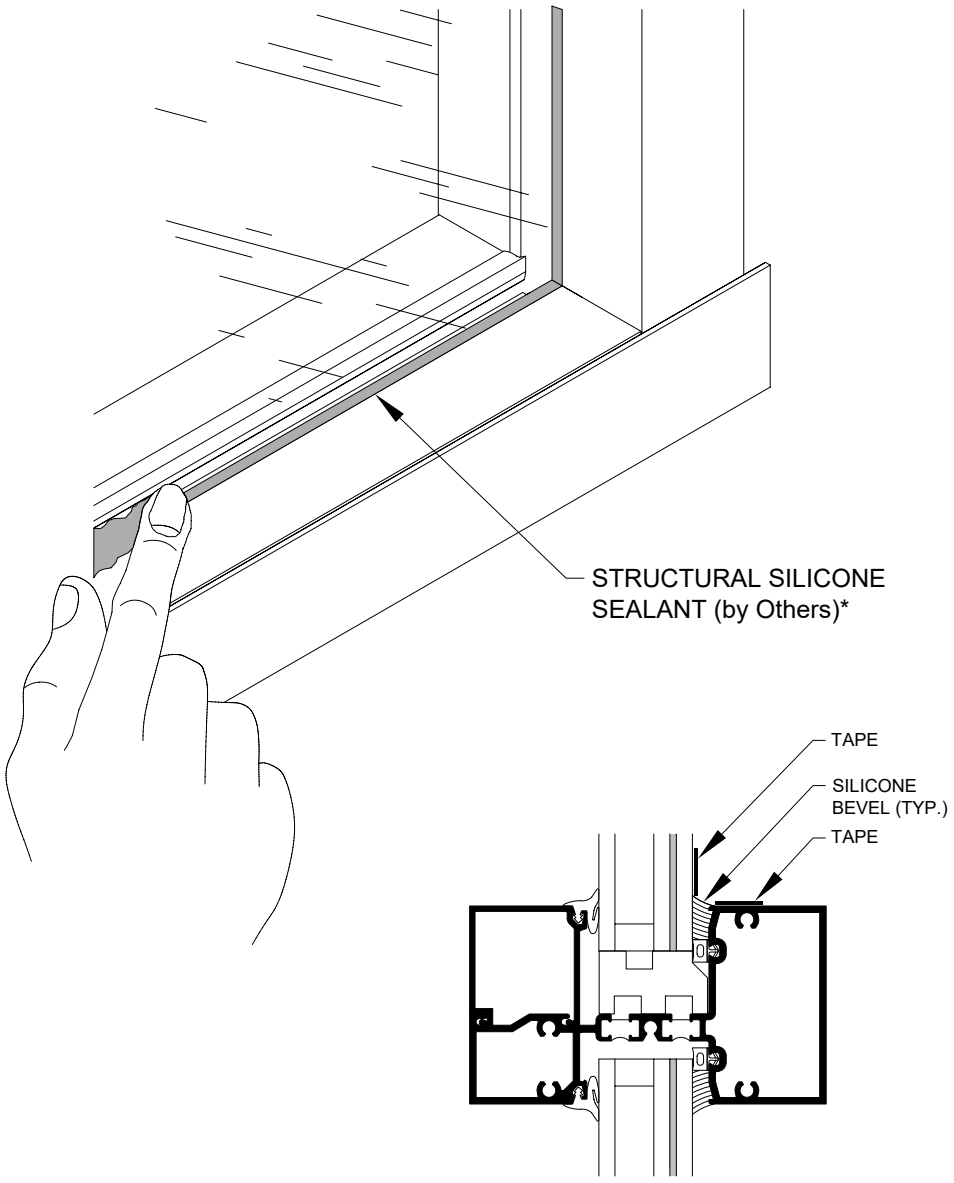
Square cut the exterior push-in gasket to an approximate length of DLO + 1/4" per foot of DLO.
Start the installation of the gaskets at the ends and work toward the center. The horizontal gaskets run through.





Apply masking tape to the metal and glass.

Apply structural silicone sealant (by Others*) on the interior side of the glass pocket around all four sides of the glass. Make sure the silicone fills the entire cavity between the glass, frame and silicone spacer. Tool the silicone as necessary. Bevel the silicone at an approximate angle of 30 degrees so that you cannot see the exterior gasket from the inside.
Remove the masking tape.

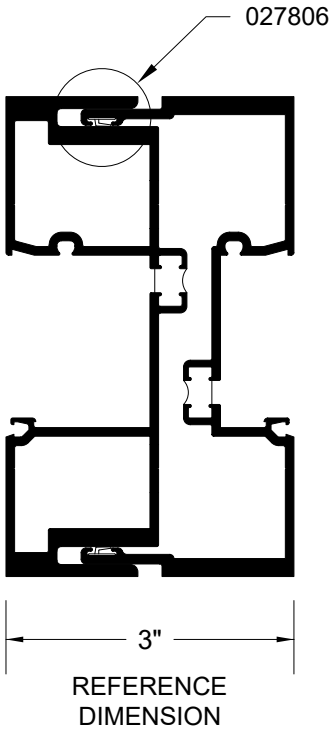


IR 501UT SHOWN
IR 501T SIMILAR

* Installer Note: Installer is responsible for all required compatibility review and approvals with the Structural Silicone Manufacturer and the Insulating Glass Unit Manufacturer.

An expansion mullion should be used every 20' in large openings. 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 3" as a reference dimension. (For example, the sightline will be reduced slightly when installed in hot weather and increased slightly when installed in cold weather).

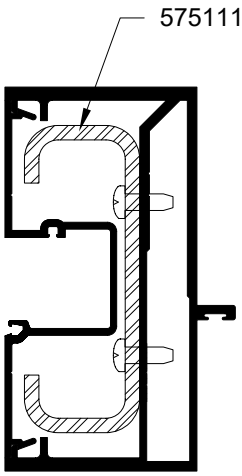
IR 501UT SHOWN
IR 501T SIMILAR



SECTION VII - STEEL REINFORCEMENT

575111 steel reinforcement should be used in the door jambs. Steel reinforcement should run the full length of the mullion and be fastened into place as shown below. NOTE THAT THE STEEL MUST BE ATTACHED TO THE MULLIONS AFTER ASSEMBLY OF THE UNIT.

The cut ends of the steel reinforcement must be coated with a corrosion-inhibiting primer before installation.



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