#### 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 the masonry opening to prevent dimensional buildup 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. 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. For anchor fastening, refer to the Shop Drawings or consult the fastener supplier.

- 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.

## 1600 WALL SYSTEM™2 NOTES

1600 SYSTEM™2 is available with 1" framing members which accept 1-5/16" Infills. Also, 1/4" framing members which accept 9/16" infill are available.

THESE INSTRUCTIONS ARE BASED ON LARGE MISSLE **IMPACT INSTALLATION.** For small missle impact reference page 12.

The term "captured verticals" or "captured horizontals" will be used throughout these instructions. This means framing members that accept exterior pressure plates and covers. "Structural glazed verticals" do not accept exterior metal.

Glass bite is 3/4" at captured verticals and horizontals on large missle and 1/2" on small missle. Glass bite is 1" at structural glazed verticals. Glass sizes must be calculated from approved shop drawings.

Refer to corresponding test drawings for sealant and anchor information. Test may be job specific, so please contact a Kawneer representative for correct test reports and drawings.

Unless otherwise specified, it is recommended that silicone sealant be used for all internal seals.

Sealant must be applied per the sealant manufacturer's recommendations and pass all adhesion and compatibility testing. At all joint seals, sealant must adhere to metal, caskets. thermal separator and joint plug materials. Clean all surfaces prior to application of sealant and prime where necessary to achieve proper adhesion.

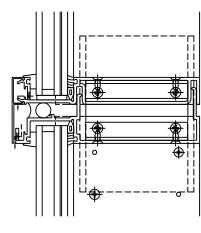
Shim all sill horizontals at setting block locations.

Hurricane impact curtain walls require labels to be applied after assembly, glazing and installation. These labels identify that the curtain walls have been assembled and glazed as tested for hurricane impact. Every floor level of each elevation of a curtain wall requires a label. As viewed from the interior, labels shall be placed on the right side bay on the right side underside surface of a low lying horizontal, or in the right upper inside vertical surface close to the corner if there are no intermediate horizontal members. Labels are to be applied by the glazing contractor.

#### **VERTICAL MULLION SPLICE -**

Vertical mullions that are structurally glazed must be spliced at a horizontal location. Location of this splice must be reviewed for structural integrity by factory engineering.

TYPICAL SPLICE CONDITION AT EXPANSION HORIZONTAL



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# STRUCTURAL SEAL NOTES

STRUCTURAL SILICONE SEAL - THE GLAZING INSTALLER IS RESPONSIBLE FOR SELECTING AND CONTACTING THE SILICONE MANUFACTURER TO DETERMINE WHICH TYPE OF SILICONE IS TO BE USED AND WHAT SAMPLES ARE REQUIRED TO BE SUBMITTED FOR ADHESION AND COMPATIBILITY TESTING.

THE SILICONE SEALANT SHALL NOT BE APPLIED TO KAWNEER PRODUCTS WITHOUT THE APPROVAL OF THE SILICONE MANUFACTURER AND UNTIL ALL REQUIRED TESTING IS COMPLETED AND DETAILED APPLICATION INSTRUCTIONS HAVE BEEN DELIVERED TO THE INSTALLER BY THE SILICONE MANUFACTURER.

IF YOU FIND THE SILICONE MANUFACTURER'S INSTALLATION INSTRUCTIONS ARE NOT IN ACCORDANCE WITH KAWNEER'S INSTALLATION INSTRUCTIONS, IT IS YOUR RESPONSIBILITY TO NOTIFY KAWNEER OF THIS CONFLICT PRIOR TO GLAZING.

YOUR GLASS SUPPLIER MUST BE MADE AWARE THAT THEIR GLASS WILL BE USED IN A SSG APPLICATION. THE APPLICATION MUST BE APPROVED BY THE GLASS SUPPLIER PRIOR TO GLAZING.

ANY STRUCTURAL SILICONE GLAZED PRODUCT APPLICATION THAT IS NOT SHOWN IN KAWNEER'S STANDARD PRODUCT LITERATURE MUST BE PRE-APPROVED BY KAWNEER.

EXTERIOR GLASS WEATHER SEAL - SEALANT TO BE A TYPE AS RECOMMENDED BY THE MANUFACTURER OF THE STRUCTURAL SEALANT BEING USED FOR THIS PROJECT.

SEALANT MUST BE APPLIED PER THE SEALANT MANUFACTURER'S RECOMMENDATIONS. WEATHER SEAL SEALANT MUST ADHERE TO EXTERIOR GASKET MATERIAL.



1600 WALL SYSTEM™2 **IMPACT INSTALLATION** Product Engineering & Development INSTRUCTIONS

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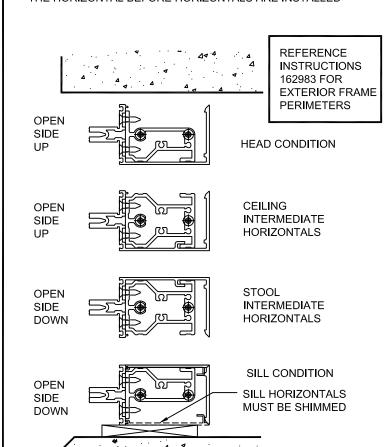
162951 SHEET 01 OF 12

## OPEN BACK HORIZONTAL NOTES

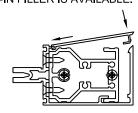
THE OPEN BACK HORIZONTAL IS TO BE TYPICALLY USED FOR ALL HEAD/SILL AND LAST BAY INTERMEDIATE HORIZONTALS.

THE OPEN BACK HORIZONTAL CAN BE USED AT OTHER CONDITIONS IF IT IS AN ADVANTAGE TO THE JOB DESIGN.

THE SHEAR BLOCK AT ALL OPEN BACK INTERMEDIATE HORIZONTALS HAS THE OPTION TO BE PRE-INSTALLED INTO THE HORIZONTAL BEFORE HORIZONTALS ARE INSTALLED



WHEN THE OPEN SIDE OF THE OPEN BACK HORIZONTAL IS EXPOSED AND AT EYE LEVEL A SNAP-IN FILLER IS AVAILABLE.



WHEN THE SNAP-IN FILLER IS NOT USED, AND DUE TO STANDARD COMMERCIAL EXTRUDING TOLERANCES, IT MAY BE REQUIRED TO USE A 4" PIECE OF THE FILLER AT EACH END OF A HORIZONTAL.

USE PART 162316 FOR THE 6" DEEP SYSTEM USE PART 162317 FOR THE 7-1/2" DEEP SYSTEM

# STEP - 1 CHECK OPENINGS

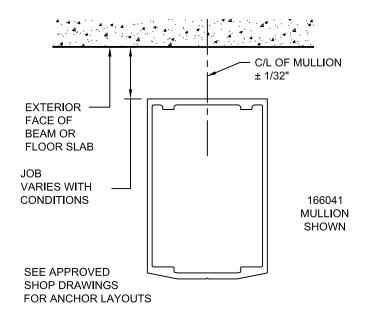
ELEVATIONS AND SLABS MUST BE WITHIN ADJUSTMENT OF ANCHORING SYSTEM. SEE APPROVED SHOP DRAWINGS FOR ALLOWABLE ADJUSTMENT.

ANCHORING SURFACES OF PERIMETER CONSTRUCTION MUST BE LEVEL AND PLUMB WITHIN THE ADJUSTMENT LIMITS OF THE HEAD, SILL AND JAMB. SEE APPROVED SHOP DRAWINGS FOR ALLOWABLE ADJUSTMENT.

# STEP - 2 LAY OUT ANCHOR AND MULLION CENTERLINES

USE WALL LINES ESTABLISHED BY THE GENERAL CONTRACTOR. ON EACH FLOOR LAY OUT A REFERENCE LINE TO ESTABLISH IN AND OUT WALL LOCATIONS.

USE COLUMN CENTER LINES ESTABLISHED BY THE GENERAL CONTRACTOR. ON EACH FLOOR LAY OUT MULLION CENTER LINES AND ANCHOR CENTER LINES.



# STEP - 3 INSTALL PRESET ANCHORS IF APPLICABLE

USING LOCATION LINES PREVIOUSLY ESTABLISHED, INSTALL PRESET ANCHORS IN PLACE PER APPROVED SHOP DRAWINGS.

# STEP - 4 FRAME ASSEMBLY

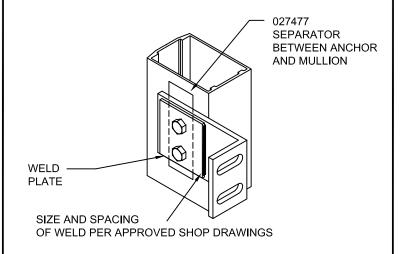
ATTACH ANCHORS TO MULLIONS WHERE APPLICABLE.

ANCHOR PREP MAY BE FABRICATED IN THE FIELD OR FACTORY. CONSULT APPROVED SHOP DRAWINGS FOR CORRECT METHOD.

STANDARD ANCHOR PREP IS THRU-BOLTED AT INTERMEDIATE VERTICALS AND TAPPING PLATES ARE USED AT JAMB VERTICALS. REFER TO APPROVED SHOP DRAWINGS FOR CORRECT METHOD.

WHEN WELDING ANCHORS, PROTECT INSTALLED GLASS AND METAL FROM WELD SPLATTER.

DETAILS SAME FOR "CAPTURED VERTICALS"



DO NOT OVER TIGHTEN ANCHOR CONNECTIONS.
TIGHTEN TO A "SNUG TIGHT" POSITION WITH PARTS
BROUGHT INTO GOOD CONTACT. BE SURE ANY
SPRING TYPE LOCK WASHERS ARE COMPRESSED.
THEN TIGHTEN APPROXIMATELY 1/2 MORE TURN.

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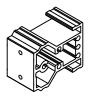
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# STEP - 4 FRAME ASSEMBLY

ATTACH SHEAR BLOCKS.
STRUCTURAL GLAZED VERTICAL

DETAILS SIMILAR FOR "CAPTURED VERTICALS"



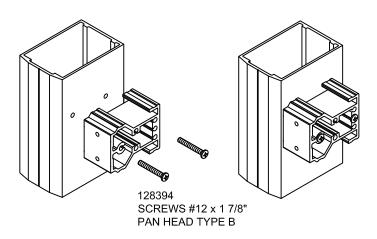
TYPICAL INTERMEDIATE SHEAR BLOCKS 162377 6" SYSTEM 162378 7-1/2" SYSTEM



HEAD AND SILL SHEAR BLOCKS 162331 6" SYSTEM 162332 7-1/2" SYSTEM

REFERENCE INSTRUCTIONS 162983 FOR EXTERIOR FRAME PERIMETERS HEAD AND SILL SHEAR BLOCKS 162384 6" SYSTEM 162385 7-1/2" SYSTEM

ATTACH SHEAR BLOCKS.



STRUCTURAL INTEGRITY OF ANCHOR AND FASTENERS MUST BE CHECKED BY FACTORY ENGINEERS.



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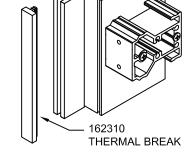
# STEP - 5 INSTALL 162310 THERMAL BREAK

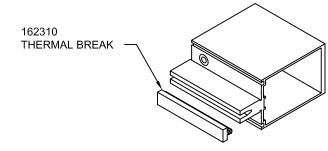


**CAPTURED** VERTICALS/ **HORIZONTALS** 

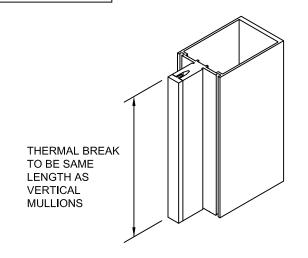
DO NOT STRETCH WHEN REMOVING FROM COIL AND CARTON

DO NOT STRETCH DURING INSTALLATION

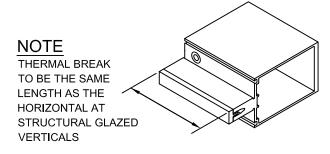


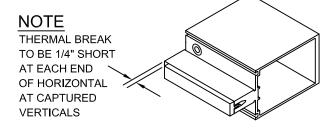


OPTION TO INSTALL THERMAL BREAK AFTER VERTICALS AND **HORIZONTALS** ARE INSTALLED



# STEP - 5 INSTALL 162310 THERMAL BREAK



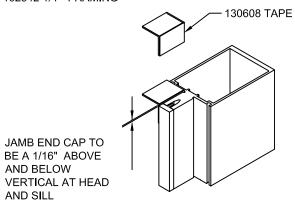


INSTALL JAMB END CAPS AT JAMB SIDE ONLY WITH 130608 DOUBLE SIDED TAPE AS SHOWN BELOW.

162541 1" FRAMING 162542 1/4" FRAMING

AND BELOW

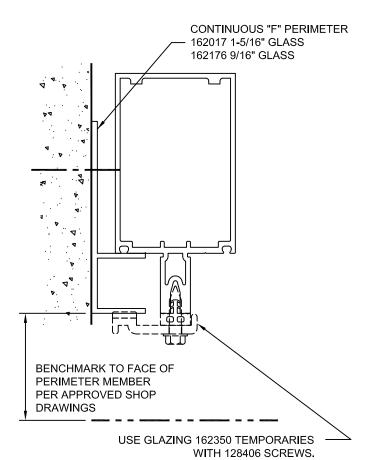
AND SILL



NOT REQUIRED AT EXTERIOR FRAME PERIMETERS SHOWN IN **INSTRUCTIONS 162983 AND AT** OPTIONAL PERIMETER FILLERS 162022 AND 162023.

# STEP - 6 PERIMETERS WHERE **APPLICABLE**

INSTALL PERIMETER MEMBERS PER APPROVED SHOP DRAWINGS. PERIMETER MEMBERS CAN OCCUR AT HEAD, SILL OR JAMB CONDITIONS.



MAXIMUM TEMPORARY SPACING IS 30". IF MORE THAN A 50 MPH (80KPH) WIND IS EXPECTED, INSTALL PRESSURE PLATES.

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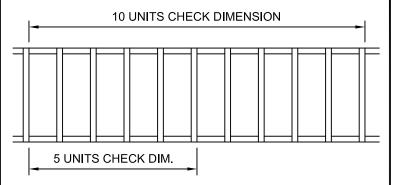
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# STEP - 7 INSTALL VERTICAL **MULLIONS**

DIMENSION BUILDUP CHECK

CHECK OVERALL FRAME DIMENSIONS ABOUT EVERY FIVE MULLIONS ON LONG RUNS. THIS IS TO AVOID DIMENSION BUILDUP.



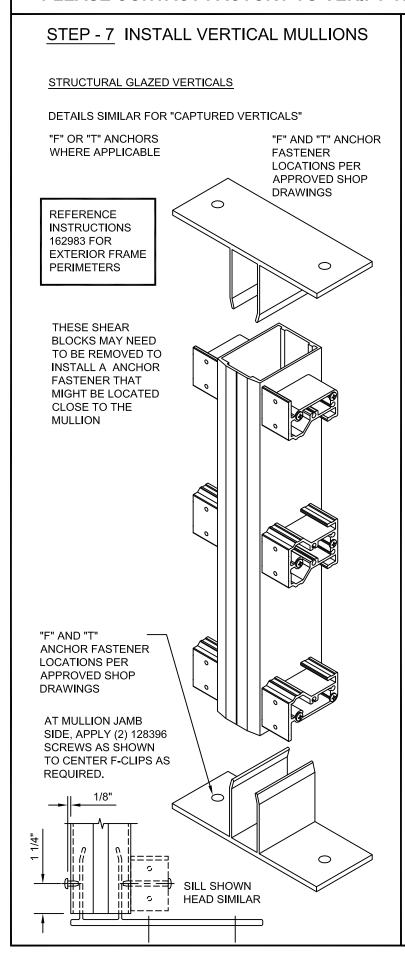


1600 WALL SYSTEM™2 **IMPACT INSTALLATION** Product Engineering & Development INSTRUCTIONS

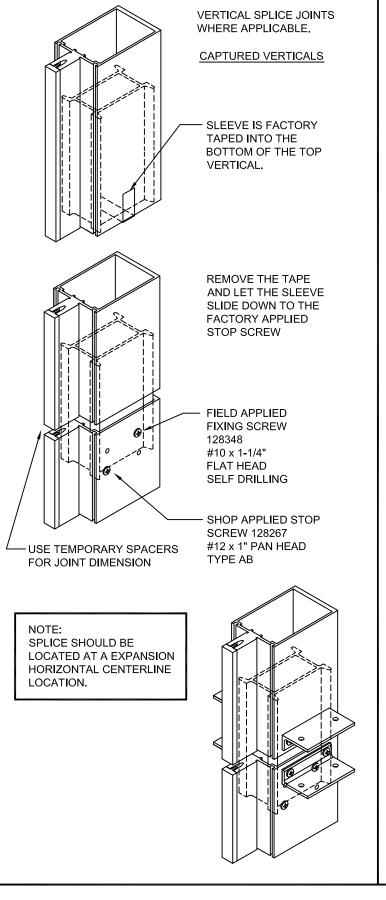
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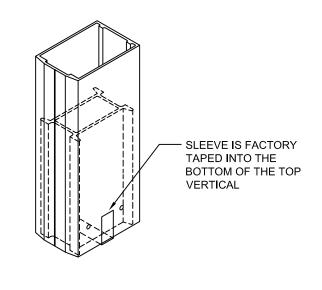
# STEP - 7 INSTALL VERTICAL MULLIONS

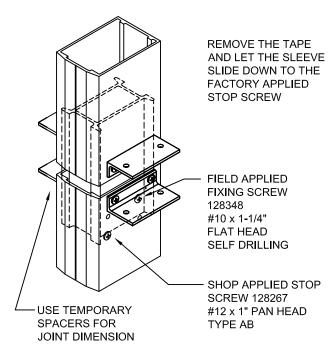


## STEP - 7 INSTALL VERTICAL MULLIONS

VERTICAL SPLICE JOINTS WHERE APPLICABLE.

## STRUCTURAL GLAZED VERTICALS





NOTE:
SPLICE SHOULD BE
LOCATED AT A EXPANSION
HORIZONTAL CENTERLINE
LOCATION

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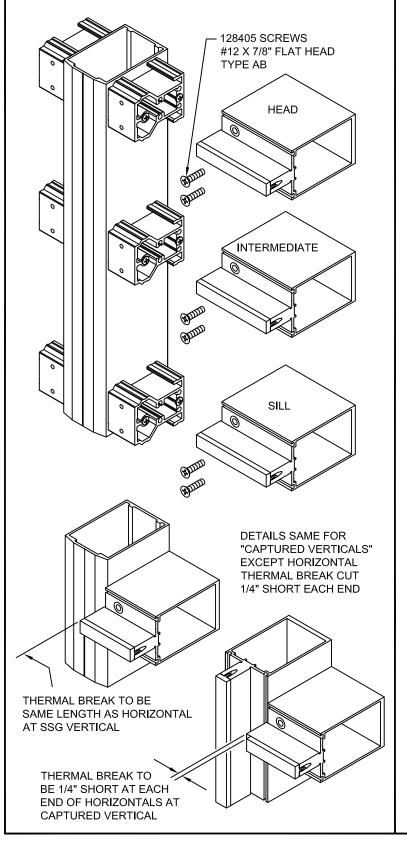
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# STEP - 8 INSTALL HEAD/SILL AND INTERMEDIATE HORIZONTALS

**TUBULAR HORIZONTALS** 

#### STRUCTURAL GLAZED VERTICALS



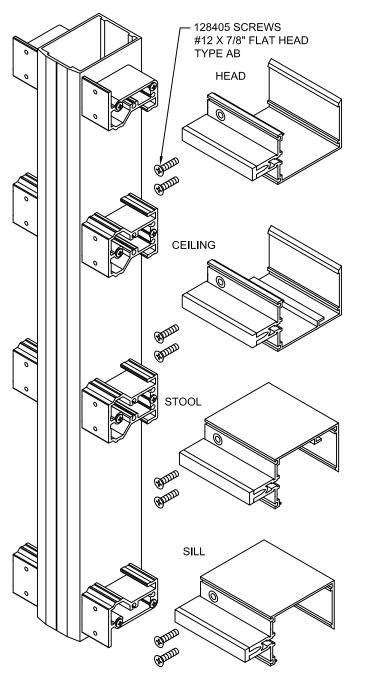
# STEP - 8 INSTALL HEAD/SILL AND INTERMEDIATE HORIZONTALS

REFERENCE INSTRUCTIONS 162983 FOR **EXTERIOR FRAME PERIMETERS** 

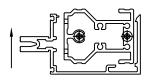
OPEN BACK HORIZONTALS AND LAST BAY HORIZONTALS. FILLER AVAILABLE WHEN OPEN BACK IS EXPOSED AND AT EYE LEVEL.

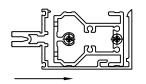
#### STRUCTURAL GLAZED VERTICALS

DETAILS SAME FOR "CAPTURED VERTICALS" EXCEPT HORIZONTAL THERMAL BREAK CUT 1/4" SHORT EACH END.

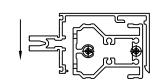


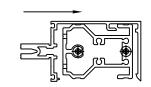
INSTALLING CEILING INTERMEDIATE OPEN BACK HORIZONTAL





INSTALLING STOOL INTERMEDIATE OPEN BACK HORIZONTAL



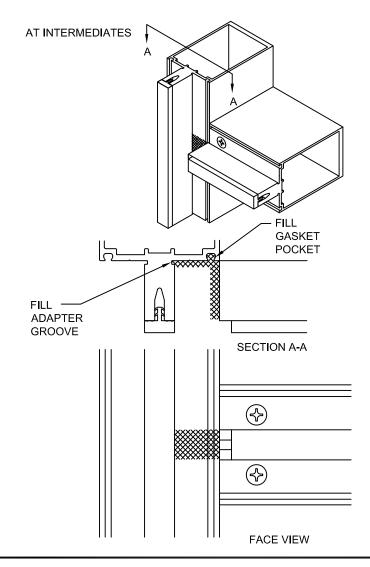


# STEP - 9 INSTALL JOINT PLUGS

## CAPTURED VERTICALS

ALL SURFACES AND GROOVES MUST BE CLEANED PER THE SEALANT MANUFACTURER'S RECOMMENDATIONS.

JUST BEFORE INSTALLING JOINT PLUGS, APPLY SEALANT AS SHOWN FILLING GASKET POCKET AND ADAPTER GROOVE.



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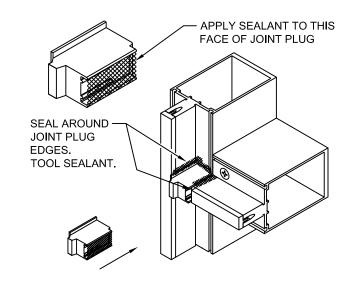
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# STEP - 9 INSTALL JOINT PLUGS

## CAPTURED VERTICALS

JOINT PLUG 162539 1-5/16" FRAMING (SHOWN) 162540 9/16" FRAME MEMBERS





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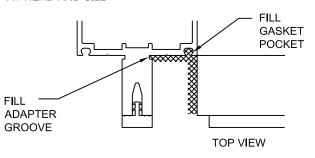
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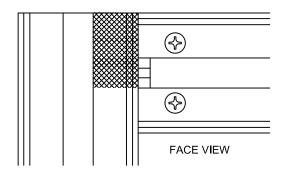
162951 SHEET 05 OF 12

# STEP - 9 INSTALL JOINT PLUGS

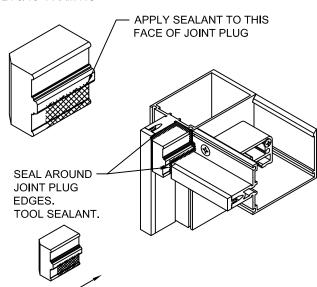
#### CAPTURED VERTICALS

AT HEAD AND SILL



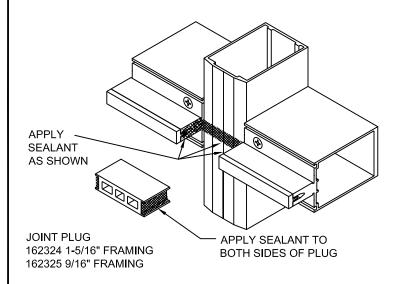


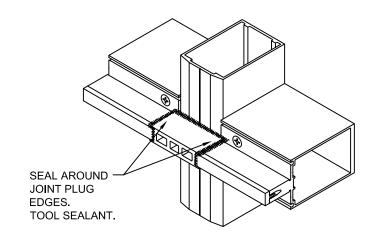
HEAD AND SILL JOINT PLUG 162529 1-5/16" FRAMING (SHOWN) 162524 9/16" FRAMING



# STEP - 9 INSTALL JOINT PLUGS

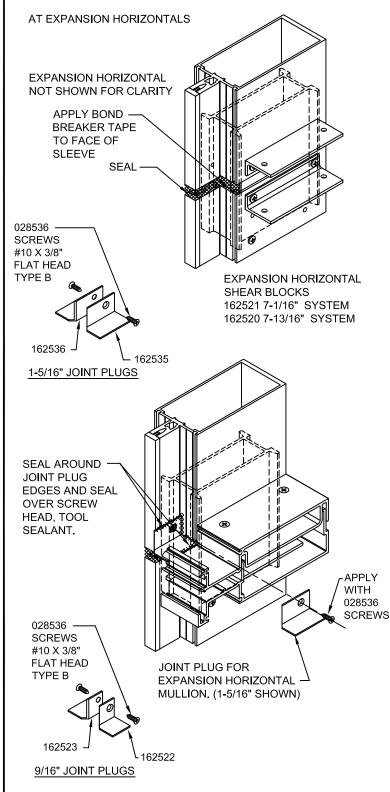
#### STRUCTURAL GLAZED VERTICALS





# STEP - 10 SEAL INTERIOR OF VERTICAL SPLICE JOINTS AND INSTALL JOINT PLUGS AT EXPANSION HORIZONTALS

#### CAPTURED VERTICALS



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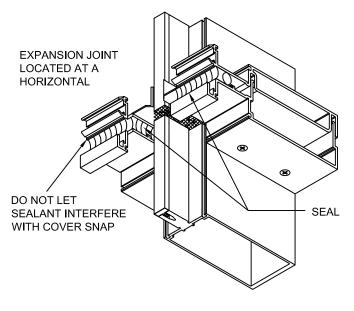
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# STEP - 10 SEAL INTERIOR OF VERTICAL SPLICE JOINTS AND INSTALL JOINT PLUGS AT EXPANSION HORIZONTALS

ALL SURFACES AND GROOVES MUST BE CLEANED PER THE SEALANT MANUFACTURER'S RECOMMENDATIONS.

APPLY BACKER ROD AND SEALANT BETWEEN EXPANSION HORIZONTALS. RETURN SEAL AT ENDS AND MARRY TO SEAL BETWEEN HORIZONTALS AND MULLION SPLICE SEAL AT FACE OF MULLION TUBE.





1600 WALL SYSTEM™2 IMPACT INSTALLATION

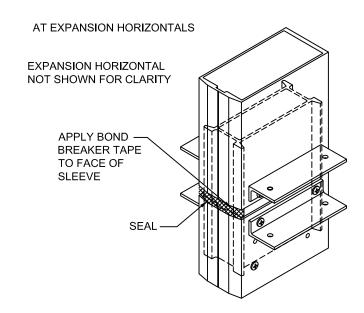
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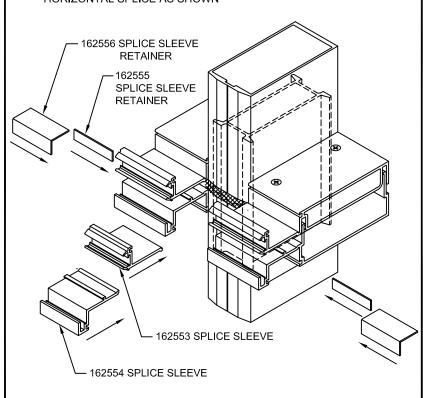
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# STEP - 10 SEAL INTERIOR OF VERTICAL SPLICE JOINTS AND INSTALL JOINT PLUGS AT EXPANSION **HORIZONTALS**

STRUCTURAL GLAZED VERTICALS



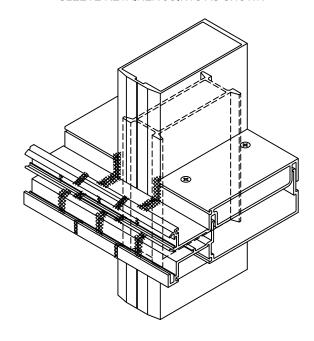
ASSEMBLE SSG EXPANSION HORIZONTAL SPLICE AS SHOWN



# STEP - 10 SEAL INTERIOR OF VERTICAL SPLICE JOINTS AND INSTALL JOINT PLUGS AT EXPANSION **HORIZONTALS**

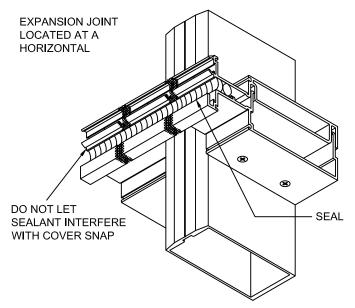
#### STRUCTURAL GLAZED VERTICALS

SEAL ALL SPLICE SLEEVE AND SPLICE SLEEVE RETAINER JOINTS AS SHOWN



ALL SURFACES AND GROOVES MUST BE CLEANED PER THE SEALANT MANUFACTURER'S RECOMMENDATIONS.

APPLY BACKER ROD AND SEALANT BETWEEN EXPANSION HORIZONTALS, SEALANT MUST RUN FULL LENGTH OF HORIZONTAL.

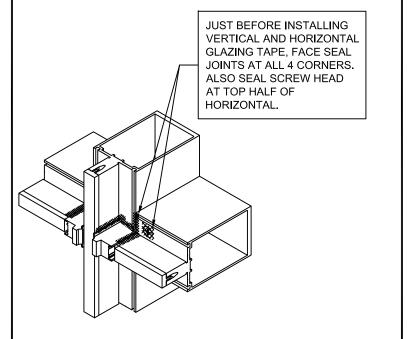


## STEP - 11 ADDITIONAL SEALS

#### CAPTURED VERTICALS

ALL SURFACES AND GROOVES MUST BE CLEANED PER THE SEALANT MANUFACTURER'S RECOMMENDATIONS.

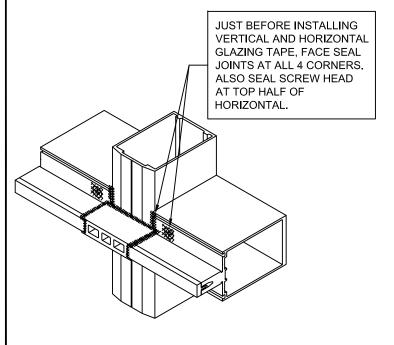
SEALS REQUIRED AT HEAD, SILL, INTERMEDIATE AND EXPANSION HORIZONTALS.



#### STRUCTURAL GLAZED VERTICALS

ALL SURFACES AND GROOVES MUST BE CLEANED PER THE SEALANT MANUFACTURER'S RECOMMENDATIONS.

SEALS REQUIRED AT HEAD, SILL, INTERMEDIATE AND **EXPANSION HORIZONTALS.** 



#### 162951 SHEET 07 OF 12

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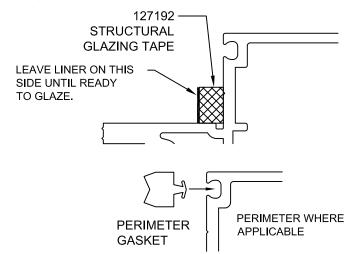
# STEP - 12 INSTALL INTERIOR **GLAZING TAPE**

REFER TO TEST DRAWINGS AND REPORTS FOR APPROVED GLAZING TAPE AND REQUIRED SILICONE JOINT WIDTH. PLEASE CONTACT THE FACTORY FOR ASSISTANCE.

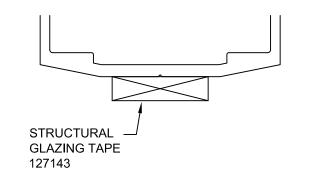
NOTE: DO NOT APPLY TAPE AT EXPANSION HORIZONTALS. REFERENCE STEP 15 ON SHEET 6 FOR GLAZING INFORMATION.

PREPARATION OF ALUMINUM SURFACES ARE TO BE EXACTLY AS OUTLINED BY THE SEALANT MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

NOTE: ACCESS IS REQUIRED FROM THE INTERIOR TO APPLY STRUCTURAL SILICONE AFTER GLASS INSTALLATION.



APPLY GLAZING TAPE ON FRONT OF MULLION AS SHOWN.





1600 WALL SYSTEM™2 **IMPACT INSTALLATION** 

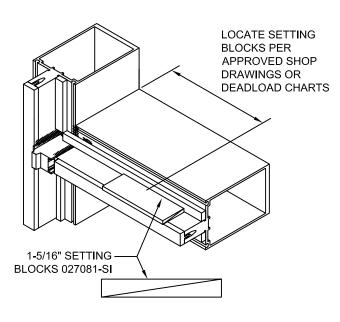
Product Engineering & Development INSTRUCTIONS

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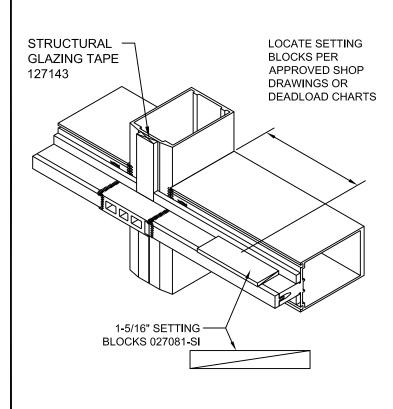
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# STEP - 13 INSTALL SETTING BLOCKS

#### CAPTURED VERTICALS



## STRUCTURAL GLAZED VERTICALS



# STEP - 14 INSTALL EXTERIOR GASKETS INTO PRESSURE PLATES

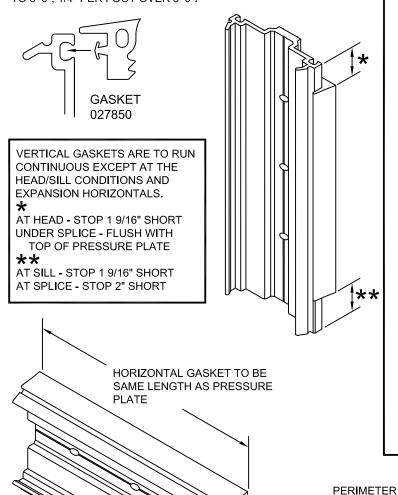
GASKETS SHOULD BE INSTALLED JUST PRIOR TO GLASS TO AVOID CONTAMINATION BY JOB SITE DEBRIS, GASKET GROOVES AND POCKETS SHOULD BE CLEAN.

IN TEMPERATURES COLDER THAN 50° F, ARRANGEMENTS SHOULD BE MADE TO WARM GASKETS BEFORE INSTALLATION. THIS WILL PREVENT EXCESSIVE GLAZING PRESSURE ON THE GLASS DUE TO COLD, STIFF RUBBER GASKETS.

GASKETS CAN BECOME DEFORMED DURING STORAGE IN CARTONS, THEY SHOULD BE REMOVED FROM CARTONS SEVERAL HOURS PRIOR TO GLAZING AND LAID FLAT OR HUNG TO ALLOW RECOVERY OF CORRECT SHAPE. TEMPERATURES SHOULD BE AT LEAST 50° F TO ALLOW THIS.

GASKET INSTALLED LENGTH TO BE DAYLITE OPENING. GASKETS TO BE CUT LONG FOR SOME "CROWD-IN". GASKETS SHOULD NEVER BE " STRETCHED TO FIT".

"CROWD-IN" TO BE 1/8" PER FOOT UP TO 5"-0". 3/16" PER FOOT UP TO 8'-0", 1/4" PER FOOT OVER 8'-0".



## STEP - 15 GLAZING GLASS

#### **CAPTURED VERTICALS**

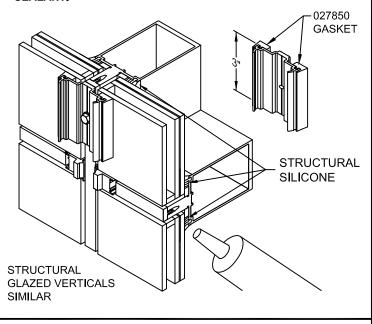
- CLEAN GLASS AND FRAMING AT STRUCTURAL SILICONE CONTACT SURFACES PER SEALANT MANUFACTURER'S RECOMMENDATIONS.
- PRIME FRAMING AS REQUIRED.
- REMOVE TAPE LINER.
- POSITION GLASS ON SETTING BLOCKS MAINTAINING PROPER GLASS BITE PER APPROVED SHOP DRAWINGS, PRESS GLASS INTO TAPE. INSURE A 1/4" SPACE BETWEEN THE GLASS AND FACE OF MULLION WHEN SETTING GLASS AND APPLYING TORQUE TO PRESSURE PLATE SCREWS, SHIM AS NEEDED.
- ATTACH 3" LONG TEMPORARY PRESSURE PLATES WITH 128406 (1/4-14 X 1" HEX WASHER HEAD TYPE AB) SCREWS. MAXIMUM TEMPORARY SPACING IS 30". IF WINDS GREATER THAN 50 MPH (80 KPH) ARE EXPECTED, ADDITIONAL TEMPORARIES MAY BE REQUIRED. CONSULT YOUR SEALANT AND/OR INFILL SUPPLIER FOR SPACING RECOMMENDATION.
- INSTALL PRESSURES PLATES WHERE POSSIBLE. IF NECESSARY, APPLY MASKING TAPE AT GLASS AND FRAMING TO AVOID ADDITIONAL CLEAN-UP AFTER APPLICATION OF STRUCTURAL SILICONE.

#### AT HORIZONTALS AND VERTICALS

PRESSURE PLATE

162528 SHOWN

APPLY STRUCTURAL SILICONE SEALANT (PER APPROVED SHOP DRAWINGS) COMPLETELY FILLING JOINTS. TOOL SEALANT.



PERIMETER :

**GASKET AT** 

ONE SIDE. DO NOT CUT

1/2" SHORT.

OFFSET

PRESSURE PLATE

(WHERE APPLICABLE)

# **KAWNEER**

1600 WALL SYSTEM™2 **IMPACT** INSTALLATION

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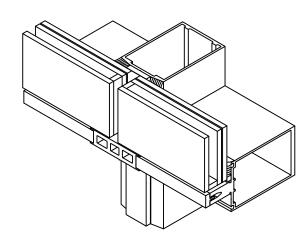
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# STEP - 15 GLAZING GLASS

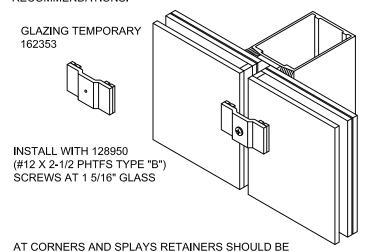
## STRUCTURAL GLAZED VERTICALS



TEMPORARY RETAINERS FOR STRUCTURAL GLAZED VERTICALS.

THE LOCATION OF TEMPORARY EXTERIOR INFILL RETAINERS SHOULD BE AT A MAXIMUM SPACING OF 30" ON CENTER.

IF WINDS GREATER THAN 50 MPH (80KPH) ARE EXPECTED, ADDITIONAL TEMPORARIES MAY BE REQUIRED. CONSULT YOUR SEALANT AND/OR INFILL SUPPLIER FOR SPACING RECOMMENDATIONS.



RETAINERS ARE NOT SUPPLIED BY KAWNEER.

MADE FROM A GOOD QUALITY HARDWOOD. THESE

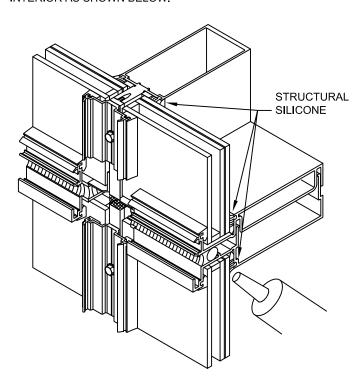
Product Engineering & Development INSTRUCTIONS

# STEP - 15 GLAZING GLASS

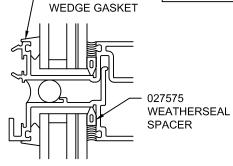
#### AT EXPANSION HORIZONTALS

CAPTURED VERTICAL SHOWN STRUCTURAL GLAZED VERTICAL SIMILAR

INSTALL 027851 WEDGE GASKET AT THE EXTERIOR OF THE EXPANSION HORIZONTALS AND THE 027575 SPACER AT THE INTERIOR AS SHOWN BELOW.



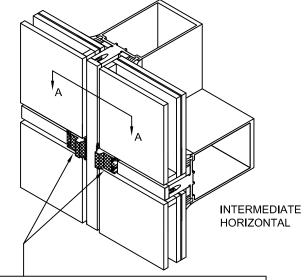
APPLY STRUCTURAL SILICONE SEALANT (PER APPROVED SHOP DRAWINGS) COMPLETELY FILLING JOINTS, TOOL SEALANT.



027851

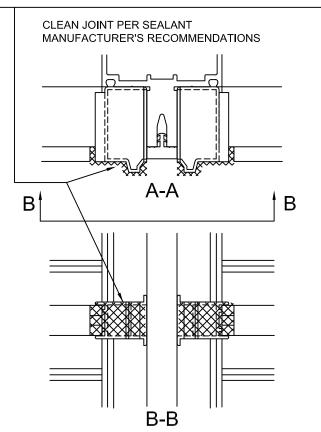
# STEP - 16 INSTALL EXTERIOR PRESSURE PLATES

## CAPTURED VERTICALS



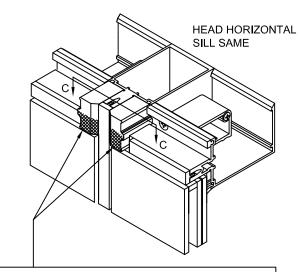
JUST BEFORE INSTALLING VERTICAL PRESSURE PLATES APPLY A GENEROUS AMOUNT OF SEALANT TO THE JOINT PLUG FACE FILLING JOINTS AS SHOWN.

JUST BEFORE INSTALLING VERTICAL PRESSURE PLATES APPLY A GENEROUS AMOUNT OF SEALANT TO THE JOINT PLUG FACE FILLING JOINTS AS SHOWN.



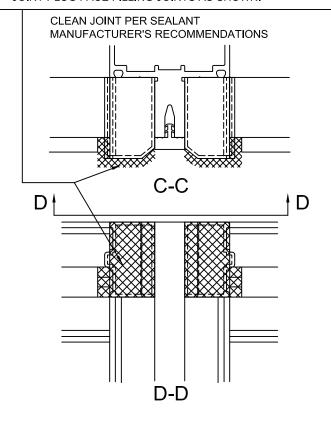
# STEP - 16 INSTALL EXTERIOR PRESSURE PLATES

#### CAPTURED VERTICALS



JUST BEFORE INSTALLING VERTICAL PRESSURE PLATES APPLY A GENEROUS AMOUNT OF SEALANT TO THE JOINT PLUG FACE FILLING JOINTS AS SHOWN.

JUST BEFORE INSTALLING VERTICAL PRESSURE PLATES APPLY A GENEROUS AMOUNT OF SEALANT TO THE JOINT PLUG FACE FILLING JOINTS AS SHOWN.



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# STEP - 16 INSTALL EXTERIOR PRESSURE PLATES

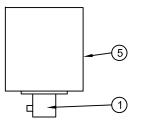


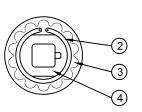
RECOMMEND USING TORQUE LIMIT TOOL 162399 SEE NOTE.

NOTE - THE TORQUE LIMIT TOOL WAS DESIGNED TO BE USED WITH A HAND DRIVEN DEVICE.THE TOOL CAN BE ADAPTED TO A DRILL MOTOR IF USED AT A MAXIMUM SPEED OF APPROX. 300 RPM. HIGHER SPEEDS CAN CAUSE OVERHEATING AND AFFECT THE ACCURACY. AFTER APPROX. 1 HOUR OF TOOL USAGE CHECK TORQUE SETTINGS WITH A TORQUE WRENCH.

#### HOW TO SET TORQUE LIMIT

- 1. ATTACH ANY CALIBRATED TORQUE INDICATOR TO OUTPUT STUB (1) AND DETERMINE PRESENT TORQUE SETTING WHILE HOLDING THE BODY (5), OR VICE-VERSA.
- 2. REMOVE SNAP RING (2) AND LOCKING PLATE (3).
- 3. ADJUST NUT (4) WITH OPEN-END WRENCH: CLOCKWISE TO INCREASE TORQUE, COUNTER- CLOCKWISE TO DECREASE TORQUE.





- 4. OBTAIN NEW TORQUE READING WITH THE CALIBRATED TORQUE INDICATOR. REPEAT PRECEDING STEP IF MORE ADJUSTMENT IS NECESSARY TO REACH DESIRED LIMIT.
- 5. REPLACE LOCKING PLATE INTO NOTCHES AND INSTALL SNAP RING. IF LOCKING PLATE DOES NOT "SEAT", MOVE THE ADJUSTING NUT SLIGHTLY UNTIL IT DROPS IN PLACE. THE DIRECTION IS BEST DETERMINED BY WHETHER A MINIMUM TORQUE APPLICATION OR A MAXIMUM ONE IS DESIRED.



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# STEP - 16 INSTALL EXTERIOR PRESSURE PLATES

CAPTURED VERTICALS

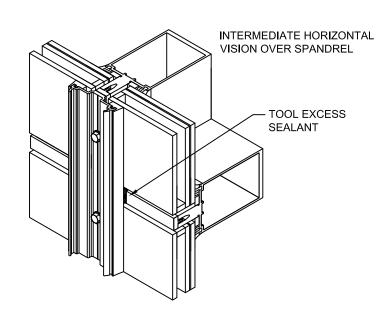
INSTALL PRESSURE PLATES USING 128406 (1/4-14 X 1" HEX WASHER HEAD TYPE AB) SCREWS

SCREWS ARE TO BE LOCATED 9" ON CENTER FOR DESIGN LOADS UP TO 65 PSF. FOR DESIGN LOADS 66 PSF AND HIGHER. SCREWS ARE TO BE LOCATED 3" ON CENTER.

ALWAYS LOCATE A SCREW AS CLOSE AS POSSIBLE TO A HORIZONTAL JOINT. THIS WILL PROVIDE MAXIMUM PRESSURE FOR THE CRITICAL JOINT SEALS.

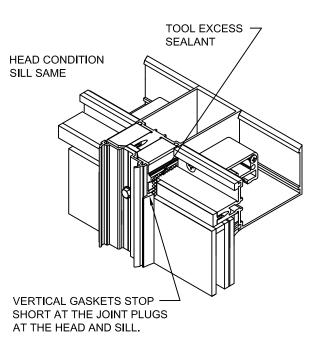
AT EACH HORIZONTAL AND VERTICAL PRESSURE PLATE INSTALL TWO SCREWS PART WAY, THEN INSTALL THE THIRD SCREW ALL THE WAY, AND THEN TIGHTEN THE FIRST TWO SCREWS. THIS ELIMINATES LATERAL WALKING OF THE PRESSURE PLATE POSITION.

TORQUE ALL SCREWS TO 95 TO 100 INCH POUNDS. DURING COLD WEATHER TORQUE SCREWS TO 50 INCH POUNDS UNTIL ALL 4 SIDES HAVE BEEN CLAMPED. THEN TORQUE SCREWS TO 95 TO 100 INCH POUNDS.

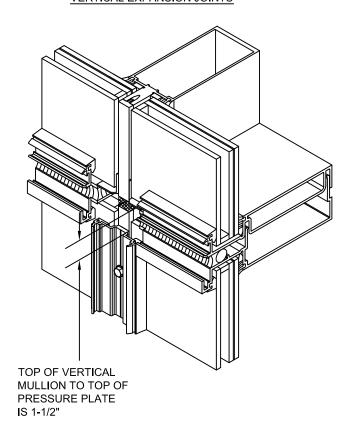


# STEP - 16 INSTALL EXTERIOR PRESSURE PLATES

CAPTURED VERTICALS

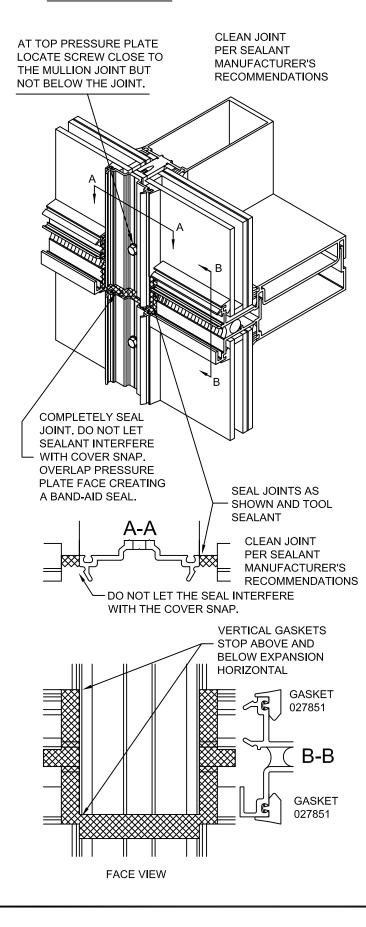


## VERTICAL EXPANSION JOINTS



# STEP - 16 INSTALL EXTERIOR PRESSURE PLATES

#### CAPTURED VERTICALS



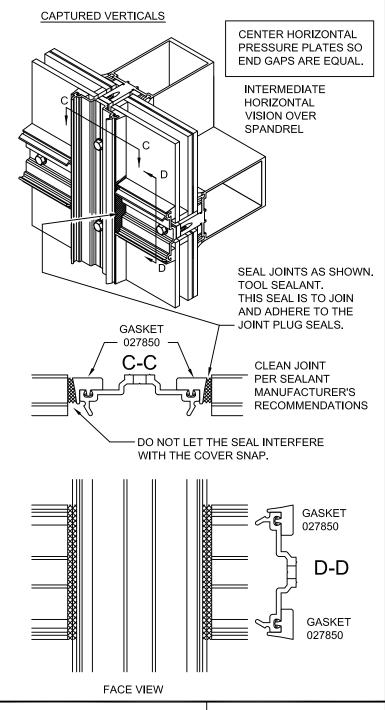
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# STEP - 16 INSTALL EXTERIOR PRESSURE PLATES



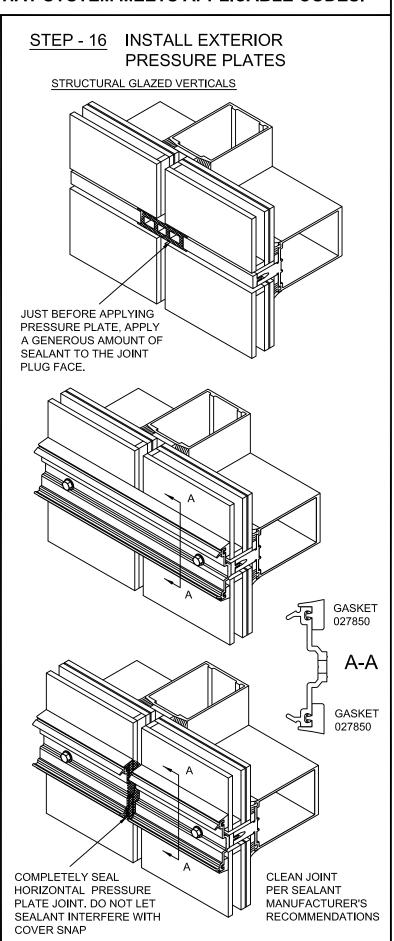


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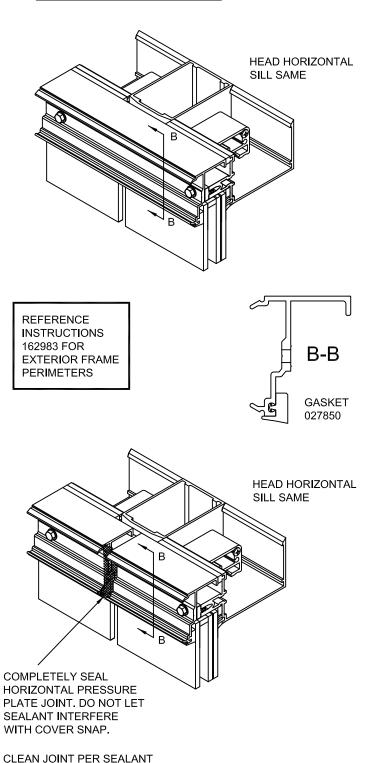
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# STEP - 16 INSTALL EXTERIOR PRESSURE PLATES CAPTURED VERTICALS HEAD HORIZONTAL SILL SAME SEAL PRESSURE PLATE AND **HEAD/SILL JOINT PLUGS AS** SHOWN. SEAL JOINTS AS SHOWN, TOOL SEALANT. THIS SEAL IS TO JOIN AND ADHERE TO TYPICAL INTERMEDIATE THE JOINT PLUG SEALS. · CLEAN JOINT PER SEALANT MANUFACTURER'S RECOMMENDATIONS VERTICAL GASKET DO NOT LET THE SEAL INTERFERE STOPS AT JOINT WITH THE COVER SNAP. **PLUGS** 9/16 G-G **GASKET** 027850 **FACE VIEW** DO NOT LET THE SEALANT INTERFERE WITH THE COVER SNAP 027850 GASKET



# STEP - 16 INSTALL EXTERIOR PRESSURE PLATES

STRUCTURAL GLAZED VERTICALS



MANUFACTURER'S RECOMMENDATIONS.

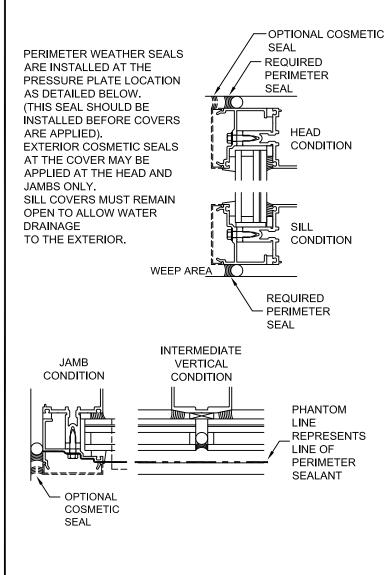
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# STEP - 17 INSTALL PERIMETER SEALS





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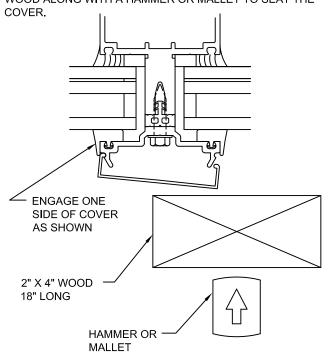
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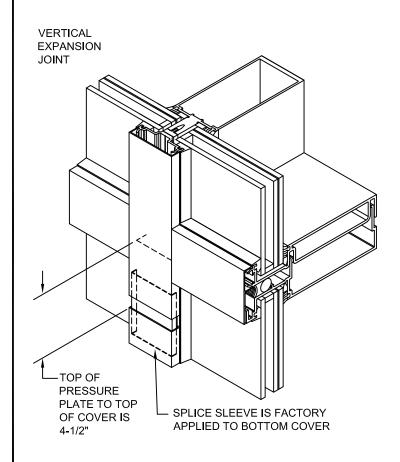
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# STEP - 18 INSTALL EXTERIOR COVERS

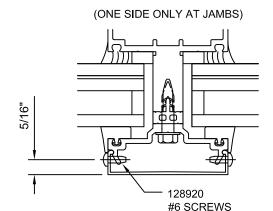
CARE MUST BE TAKEN TO AVOID DAMAGE TO COVERS DURING INSTALLATION. USE A 18" LONG PIECE OF 2" X 4" WOOD ALONG WITH A HAMMER OR MALLET TO SEAT THE COVER.





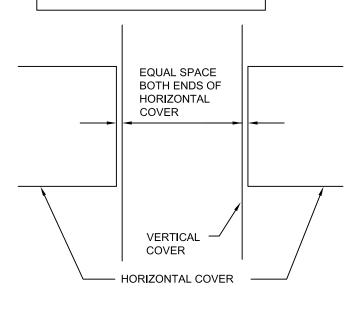
# STEP - 18 INSTALL EXTERIOR COVERS

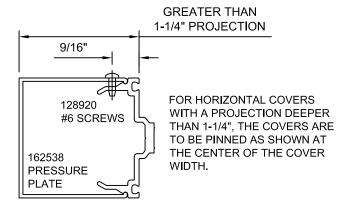
PINNING OF ALL VERTICAL COVERS IS REQUIRED FOR BOTH SIDES. DRILL A .106 DIA. HOLE (#36 DRILL) AND INSTALL 128920 SCREWS #6 X 3/8" PAN HEAD TYPE B LOCATE PINNING AT A HORIZONTAL CLOSEST TO THE COVER HEIGHT CENTER.



INSTALL HORIZONTAL COVERS WITH

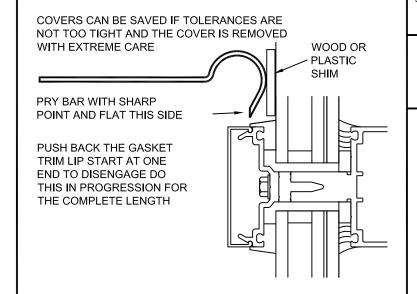
THE WEEP HOLES DOWN





## STEP - 18 INSTALL EXTERIOR COVERS

## **REMOVING COVERS**



# STEP - 19 INSTALL WEATHER SEALS

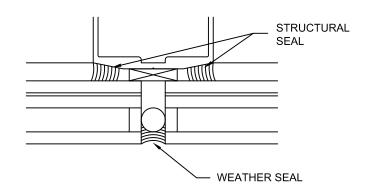
## STRUCTURAL GLAZED VERTICALS

KAWNEER DOES NOT SUPPLY SEALANT.
SEALANT TO BE SILICONE PER APPROVED SHOP DRAWINGS.
INFILL AND METAL TO BE CLEANED PER THE SEALANT
MANUFACTURER'S RECOMMENDATIONS. SEALANT BACKUP
ROD TO BE PER THE SEALANT MANUFACTURER'S
RECOMMENDATIONS.

ONCE STRUCTURAL SEAL HAS CURED PER SEALANT MANUFACTURER'S RECOMMENDATIONS, REMOVE VERTICAL GLAZING TEMPORARIES AND SEAL ALL FASTENER HOLES.

FILL SPACE BETWEEN INSULATED UNITS WITH RECOMMENDED BACKUP ROD. APPLY WEATHER SEAL AS SHOWN.

ALLOW STRUCTURAL SEAL TO CURE PER SEALANT MANUFACTURER'S RECOMMENDATIONS.



#### 162951 SHEET 12 OF 12

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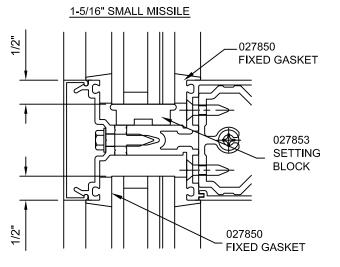
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## STEP - 20 INSTALL MIAMI DADE LABELS

REFERENCE SHEET 1 FOR ADDITIONAL INFORMATION

# **SMALL MISSILE IMPACT**



## INFILL SIZE FORMULA FOR SMALL MISSILE IS DLO + 1"

FOR INSTALLATION OF SMALL MISSILE IMPACT SYSTEM, USE IMPACT STOCK LENGTH INSTRUCTIONS IN CONJUNCTION WITH INSTALLATION INSTRUCTIONS 162961 & 162971. PRESSURE PLATE FASTENERS ARE LOCATED 3" ON CENTER - REFER TO STEP 17 OF THESE INSTRUCTIONS FOR PRESSURE PLATE INSTALLATION.

AS WITH LARGE MISSILE IMPACT, REFER TO TEST DRAWINGS AND REPORTS FOR APPROVED SEALANT AND ANCHORING. THIS MAY VARY PER TEST. PLEASE CONTACT THE FACTORY FOR ASSISTANCE.



1600 WALL SYSTEM™2 IMPACT INSTALLATION INSTRUCTIONS

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