

INSTALLATION INSTRUCTIONS

SERIES 7400 WINDOW SYSTEM



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HANDLING, STORAGE, AND PROTECTION OF ALUMINUM

The following precautions are recommended to protect the material against damage. Following these precautions will help ensure early acceptance of your products and workmanship.

A. HANDLE CAREFULLY.

All aluminum materials at job site must be stored in a safe place, well removed from possible damage by other trades. Cardboard wrapped or paper interleaved materials must be kept dry.

B. CHECK ARRIVING MATERIALS.

Check for quantity counts and keep records of where various materials are stored.

C. KEEP MATERIALS AWAY FROM WATER, MUD, AND SPRAY.

Prevent cement, plaster, or other materials from damaging the finish.

D. PROTECT THE MATERIALS AFTER ERECTION.

Protect erected frame with polyethylene or canvas splatter screen. Cement, plaster, terrazzo, other alkaline solutions, and acid based materials used to clean masonry are harmful to the finish. ***If any of these materials come in contact with the aluminum, immediately remove with water and mild soap.***

The rapidly changing technology within the architectural aluminum products industry demands that U.S. Aluminum reserve the right to revise, discontinue or change any product line, specification or electronic media without prior written notice.

NOTE: Dimensions in parentheses () are millimeters unless otherwise noted.

GENERAL INSTALLATION NOTES

Recommended guidelines for all installations:

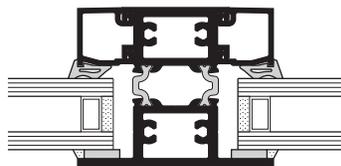
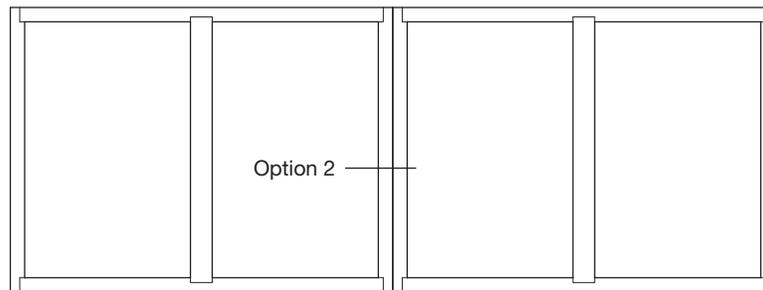
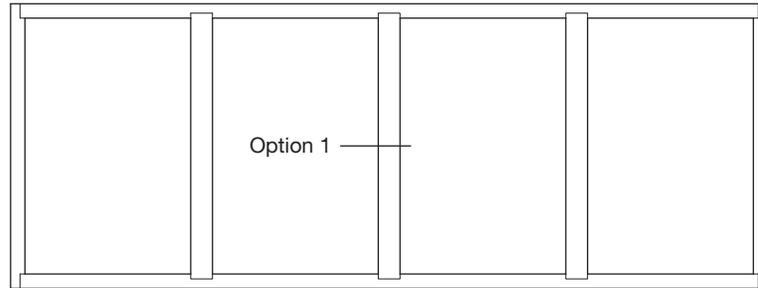
- 1. REVIEW CONTRACT DOCUMENTS.** Check shop drawings, installation instructions, architectural drawings, and shipping lists to become thoroughly familiar with the project. The shop drawings take precedence and include specific details for the project. Note any **field verified** notes on the shop drawings prior to installing. The installation instructions are of a general nature and cover most conditions.
- 2. INSTALLATION.** All materials are to be installed plumb, level, square, and true.
- 3. BENCH MARKS.** All work should start from bench marks and/or column lines as established by the architectural drawings and the general contractor with guaranteed accuracy. Working from these datum points and lines determine:
 - a) The plane of the wall in reference to offset lines provided on each floor.
 - b) The finish floor lines in reference to bench marks on the outer building columns.
 - c) Mullion spacing from both ends of masonry opening to prevent dimensional build-up of daylight opening.
- 4. FIELD WELDING.** All field welding must be adequately shielded to avoid any splatter on glass or aluminum. Results will be unsightly and/or structurally unsound. Advise general contractor and other trades accordingly. All field welds of steel anchors must receive touch-up paint (zinc chromate) to avoid rust.
- 5. SURROUNDING CONDITIONS.** 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 work.
- 6. ISOLATION OF ALUMINUM.** Aluminum to be placed in direct contact with uncured masonry or incompatible materials should be isolated with a heavy coat of zinc chromate or bituminous paint.
- 7. SEALANTS.** 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, cleaning, priming, tooling, adhesion, etc. It is the responsibility of the **Glazing Contractor** to submit a statement from the sealant manufacturer indicating that glass and glazing materials have been tested for compatibility and adhesion with glazing sealants, and interpreting test results relative to material performance, including recommendations for primers and substrate preparation required to obtain adhesion. The chemical compatibility of all glazing materials and framing sealants with each other and with like materials used in glass fabrication must be established. **This is required on every project.**
- 8. FASTENING.** Within the body of these instructions "fastening" means any method of securing one part to another or to adjacent materials. Only those fasteners used within the system are specified in these instructions. Due to the varying perimeter conditions and performance requirements, perimeter and anchor fasteners are not specified in these instructions. For perimeter and anchor fasteners refer to the shop drawings or consult the fastener supplier.
- 9. BUILDING CODES.** Due to the diversity in state/provincial, local, and federal laws and codes that govern the design and application of architectural products, it is the responsibility of the individual architect, owner, and installer to assure that products selected for use on projects comply with all the applicable building codes and laws. U.S. Aluminum exercises no control over the use or application of its products, glazing materials, and operating hardware, and assumes no responsibility thereof.
- 10. 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 the time of installation. Gaps between expansion members should be based on temperature at time of installation.
- 11. RACK TEST.** As soon as a representative amount of the wall has been glazed (500 square feet or 46.5 m²) a rack test should be conducted in accordance with AAMA 501.2 specifications to check the installation. On all jobs the rack test should be repeated every 500 square feet (46.5 m²) during the glazing operation.
- 12. COORDINATION WITH OTHER TRADES.** Coordinate with the general contractor any sequence with other trades which offset curtain wall installation (i.e. fire proofing, back-up walls, partitions, ceilings, mechanical ducts, converters, etc.).
- 13. CARE AND MAINTENANCE.** Final cleaning of exposed aluminum surfaces should be done in accordance with AAMA 609.1 for anodized aluminum and 610.1 for painted aluminum.
- 14. JOB SITE ESSENTIALS.** See pages 13 and 14.

INSTALLATION INSTRUCTIONS

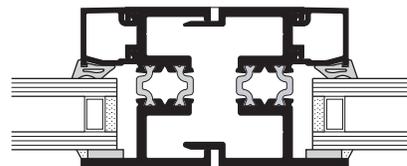
These Instructions Cover Installation and Glazing of Project-Out Awning, Project-In Awning, Casement, Fixed, and Combination Windows.

Allow a minimum clearance of 1/8" (3.2) around the perimeter. Awning, Casement, and Fixed Lite Frames are pre-fabricated, sealed, and assembled at the factory. Option 2 may require minor assembly in the field. Awning and Casement Windows may be glazed in the shop or on the jobsite. All Fixed Lites must be glazed on the jobsite after frame installation.

Due to the disparity of national and local building codes, these installation instructions do not address specific perimeter application or building envelope issues. It is the responsibility of the Glazing Contractor to assure that all applicable codes are met in the installation of this system.



1
Standard

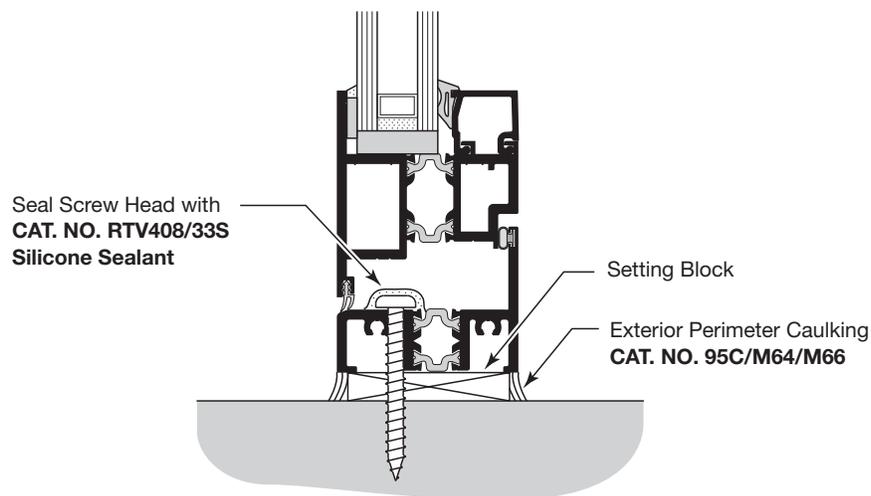
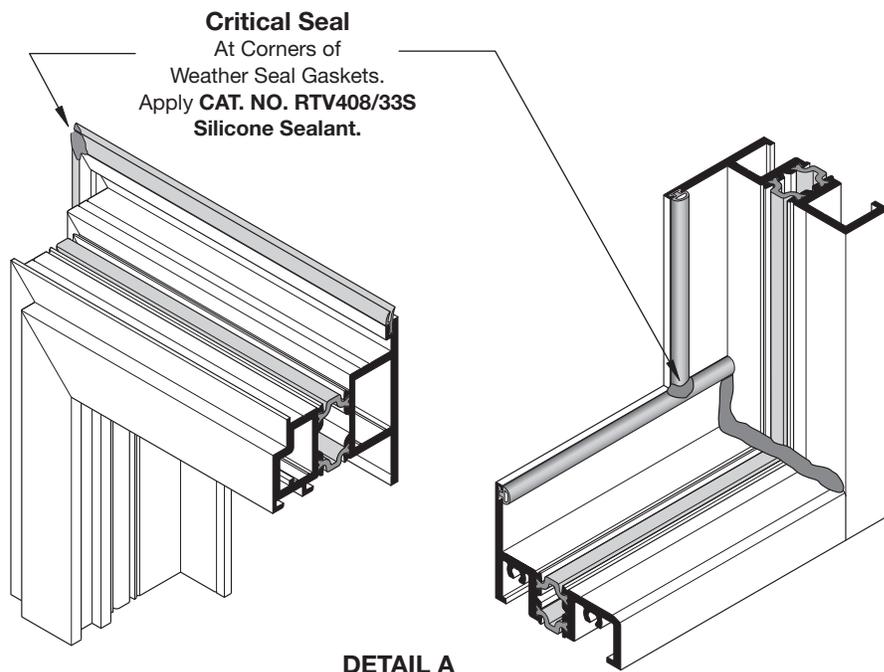


2
Optional Stacking

FIXED LITE INTERMEDIATE MULLION

FRAME INSTALLATION

1. Visually inspect all frames upon receipt to ensure that Baffles and Weep Hoods have not been jarred loose during shipment. Additionally, inspect corners of all interior Bulb Gaskets at operable vents to ensure they are thoroughly sealed. **See DETAIL A.** Re-apply **CAT. NO. RTV408/33S Silicone Sealant** as required, leaving Vent open for proper drying.
2. Shim as required around perimeter of frame. **See DETAIL B.**
3. Set frame in opening plumb and level.
4. Secure frame to perimeter 3" (76) from corners and 12" (305) on center or as instructed by shop drawings. For combination frames, place perimeter fasteners 3" (76) from intersection of horizontal and vertical members and 12" (305) on center or as instructed by shop drawings. Seal over perimeter fasteners. **See DETAIL B.**
5. Apply and tool perimeter sealant around framing.



DETAIL B

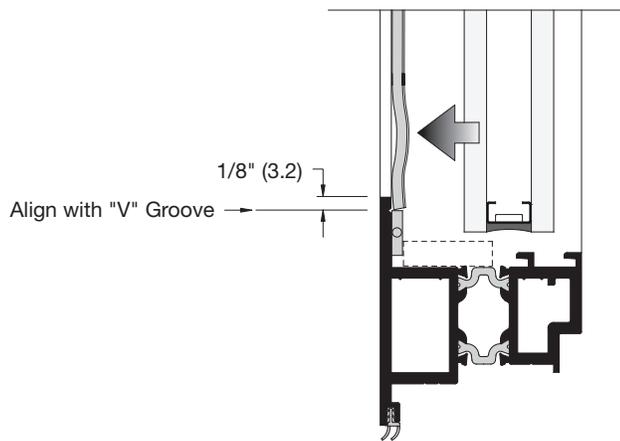
GLAZING

Glass Size Formulas Are for Single Window Configurations.

7400 FIXED WINDOWS:	7400 OPERABLE WINDOWS:	7400 MULTI-LITE WINDOWS:
Glass Height = Frame Height Minus 2-5/8" (66.7)	Glass Height = Frame Height Minus 6" (152.4)	Glass Height = D.L.O. Plus 1" (25.4)
Glass Width = Frame Width Minus 2-5/8" (66.7)	Glass Width = Frame Width Minus 6" (152.4)	Glass Width = D.L.O. Plus 1" (25.4)

NOTE: This formula does not take into account glass tolerances. Consult Glass Manufacturer before ordering glass.

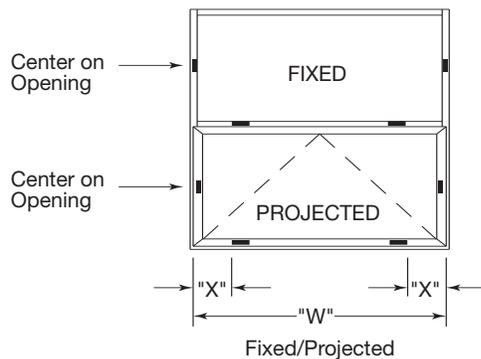
1. Cut interior Wedge Gasket (WH344) to size. Gaskets should be 1/8" (3) longer per foot of aluminum member to allow for shrinkage.
2. Place Setting Blocks at 1/4 points or as instructed by shop drawings.
3. Clean glazing fins with **CAT. NO. CRL2032** solvent prior to applying **CAT. NO. V210412** Structural Glazing Tape.
4. Apply tape full length of horizontal members, flush with the top of the fin. Apply tape to the vertical members, abutting tightly to the horizontal tape, leaving an extra amount at each end to ensure a tight joint. **See DETAIL C.**



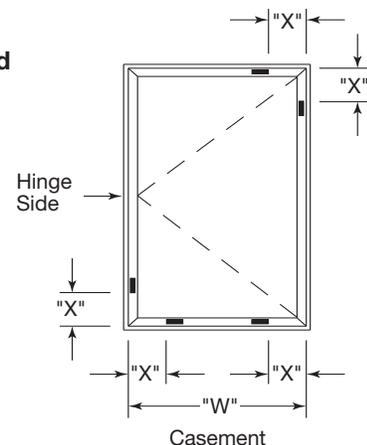
DETAIL C

NOTE:
Tape Must be Cut 1/8" (3) Long at Each End. Press the Cut Ends Against Horizontal Tape Leaving Excess Materials as Shown in **DETAIL C.** Then Press Excess Tape Into Place.

5. Position Setting Blocks and Edge Blocks in glass opening as **Shown in DETAIL E.** Use **CAT. NO. RTV408/33S Silicone Sealant** to glue Edge Blocks in place.



X = W/8 or as instructed by shop drawings.

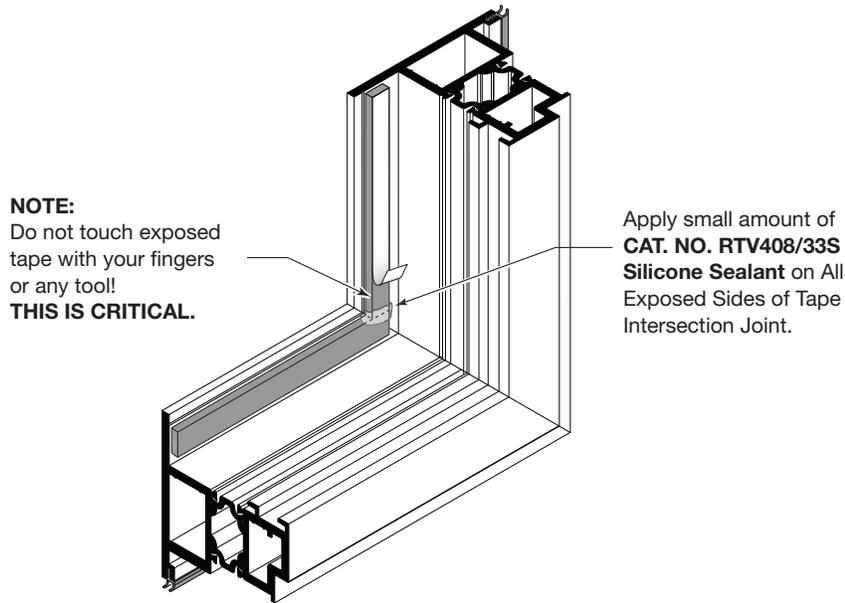


DETAIL D

GLAZING - CONTINUED

- Prior to glazing, peel protective paper from the Glazing Tape. **DO NOT TOUCH** exposed tape surfaces with fingers or any tool. Seal tape intersections with **CAT. NO. RTV408/33S Silicone Sealant**. See **DETAIL E**.

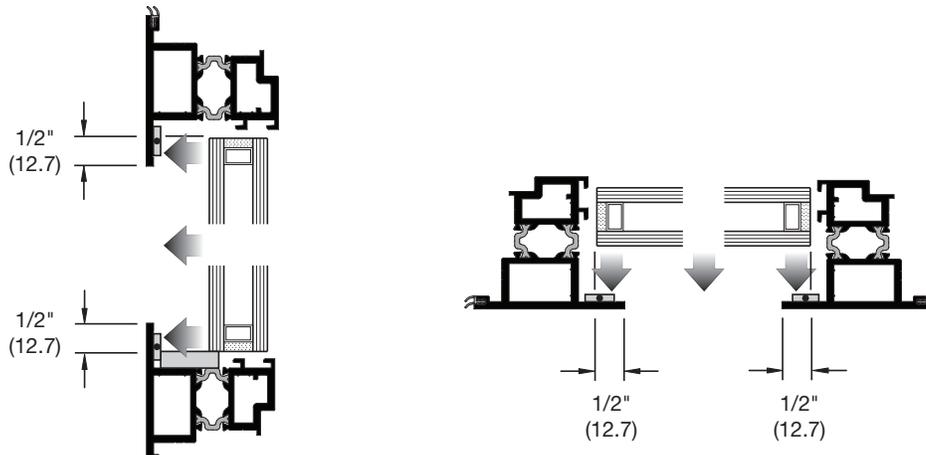
NOTE: Do not leave Glazing Tape surface unprotected, paper should only be removed when glass is ready to be set.



DETAIL E

- Before setting glass, clean all contact areas of glass with **CAT. NO. CRL2032** solvent. It is important that these cleaned areas are not touched or contaminated by foreign matter to ensure a proper seal.
- Install glass onto Setting Blocks. Before setting glass against tape, check for proper glass bite along the top and sides. Push glass firmly onto the Glazing Tape, making sure that all sides of the glass have uniform contact with the Glazing Tape. See **DETAIL F**. Apply Glazing Stops and Wedge Gaskets to complete glazing.

NOTE: Glass must **NOT** be pulled away from the tape once contact is made. If this occurs, tape must be replaced and glass must be re-cleaned.

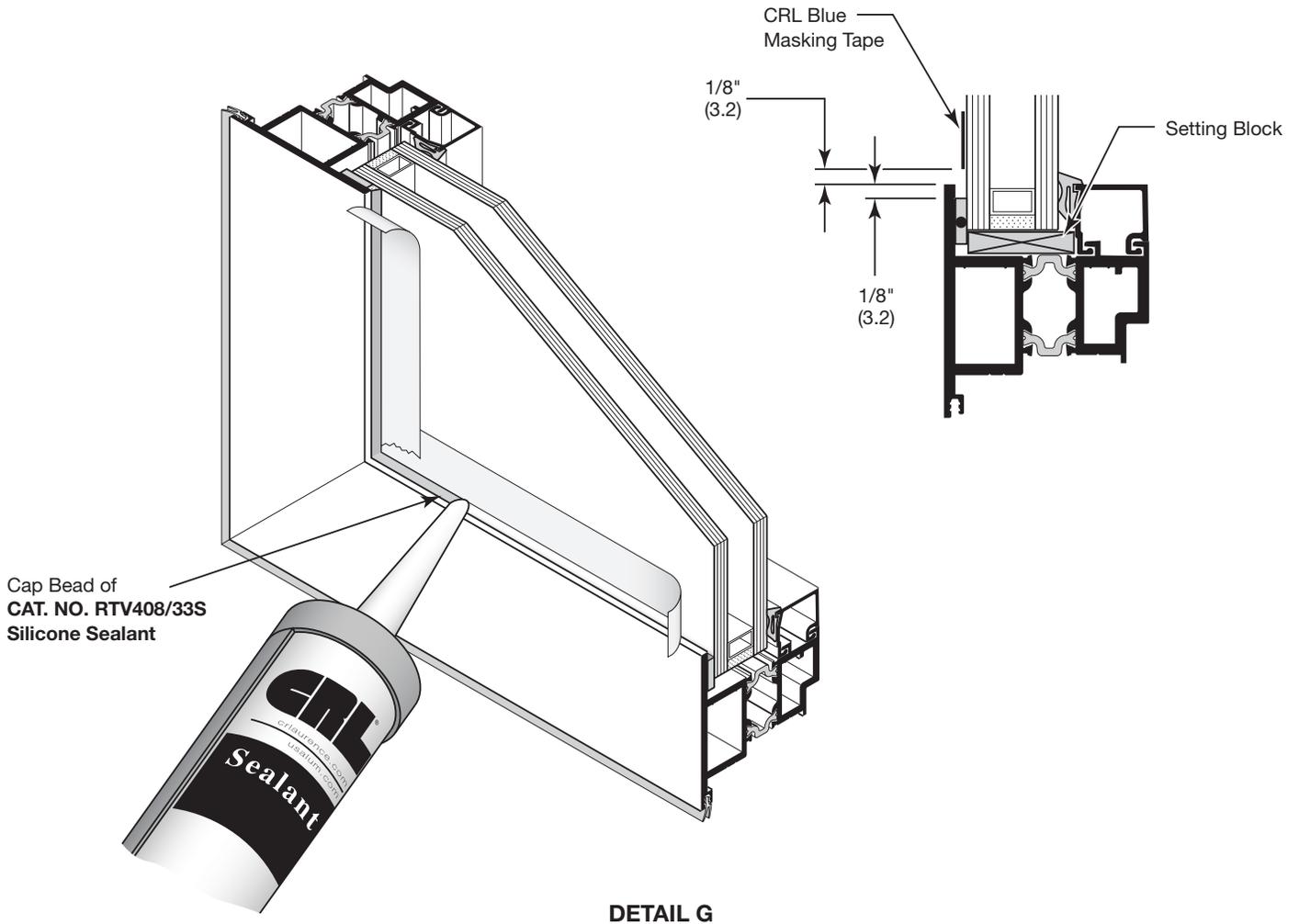


DETAIL F

NOT TO SCALE

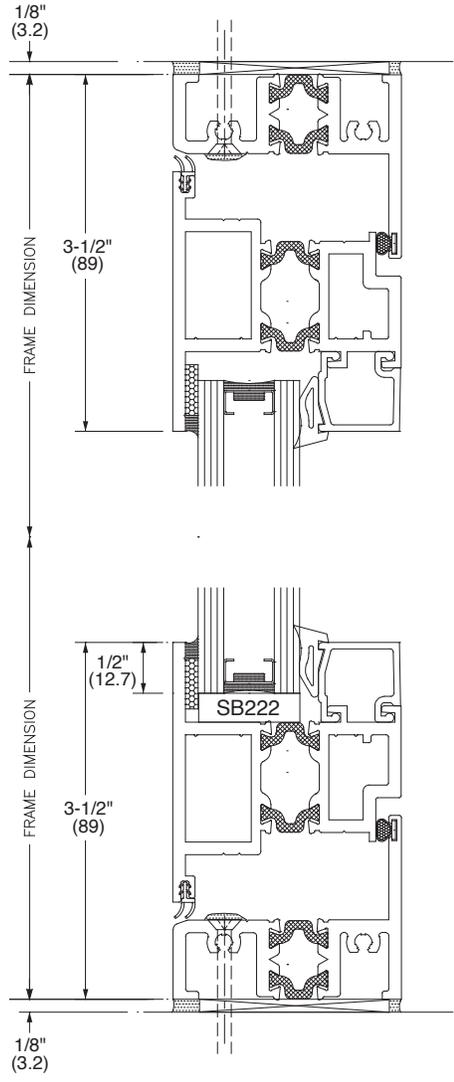
GLAZING - CONTINUED

9. Using CRL Blue Masking Tape, mask off perimeter of glass 1/8" (3.2) from aluminum fin to receive silicone cap bead.
See DETAIL G.
10. Fill the reveal with **Cat. No. RTV408/33S Silicone Sealant** and tool.
11. After tooling and while sealant is still wet, carefully remove tape.

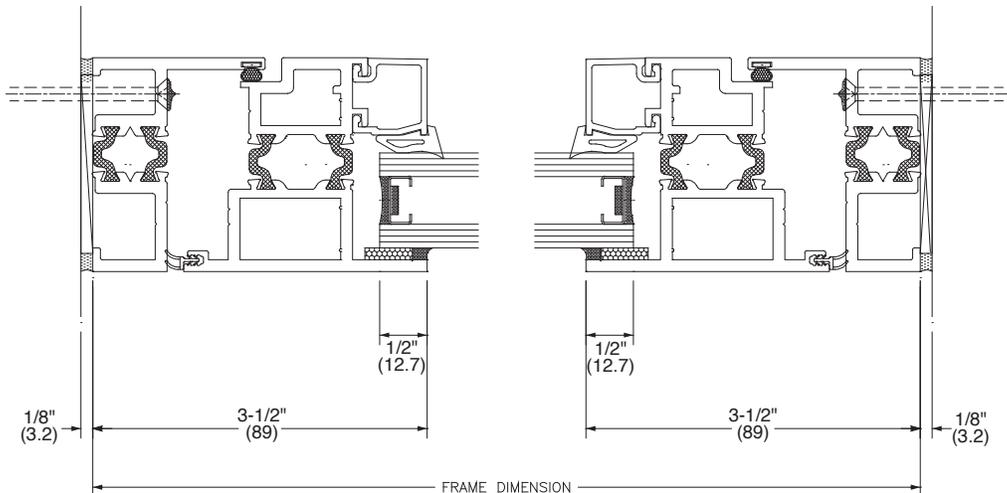


GLAZING - CONTINUED

7400 POB/CSO Glass Formula



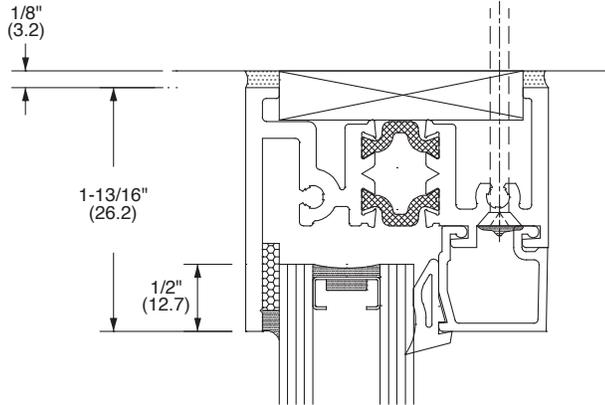
Glass Size Formula:
 Net Frame Height minus 6" = Glass Height
 Net Frame Width minus 6" = Glass Width



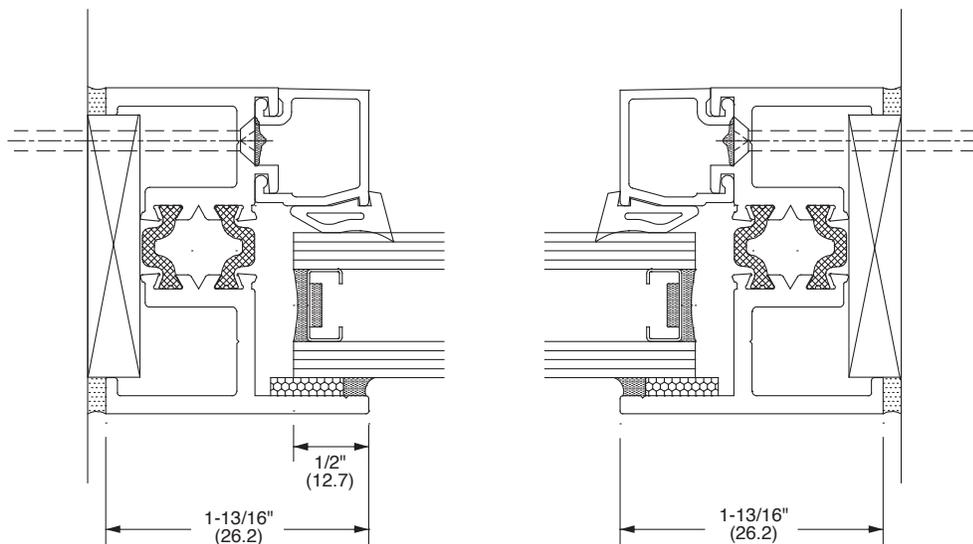
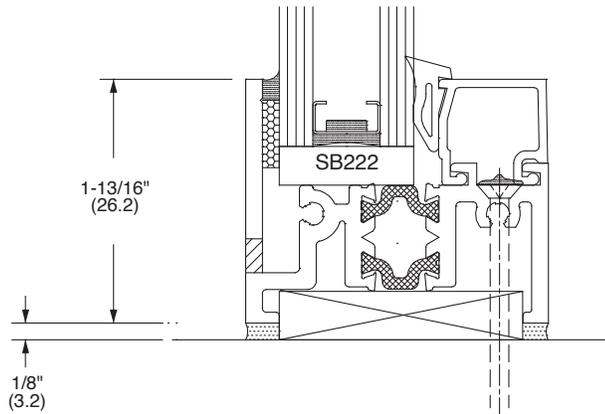
NOT TO SCALE

GLAZING - CONTINUED

7400 Fixed Glass Formula



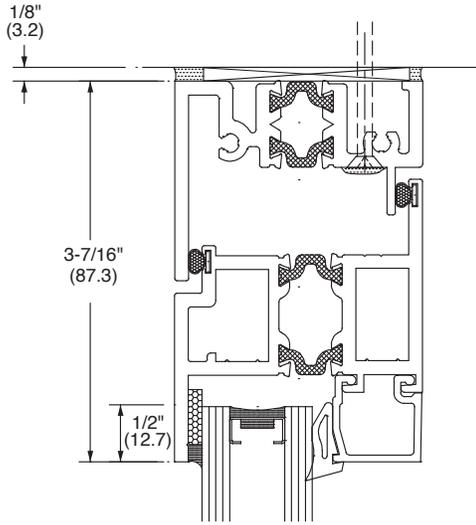
Glass Size Formula:
Net Frame Height minus 2-5/8" = Glass Height
Net Frame Width minus 2-5/8" = Glass Width



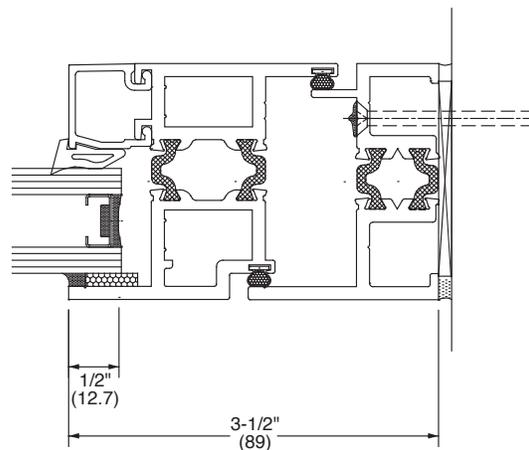
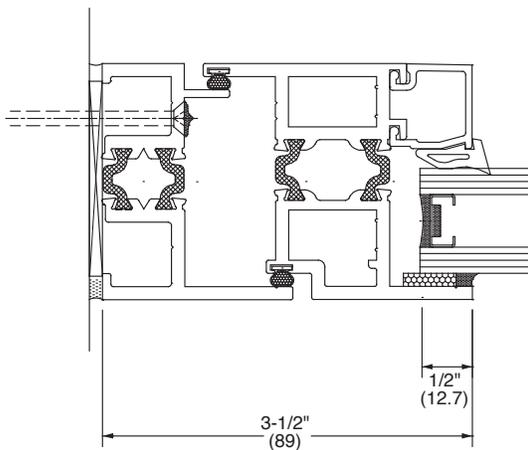
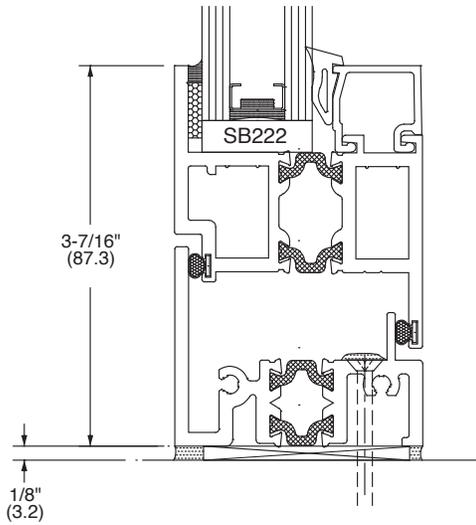
NOT TO SCALE

GLAZING - CONTINUED

7400 PIT/CSI Glass Formula



Glass Size Formula:
 Net Frame Height minus 5-7/8" = Glass Height
 Net Frame Width minus 6" = Glass Width



NOT TO SCALE



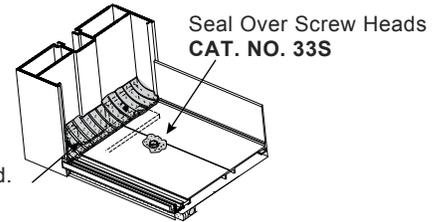
GUIDE TO SEALANTS

WATERPROOFING

- **33S ACETIC CURE SILICONE**

NOTE: Not for use near insulating glass units with butyl sealant.

Fill with Sealant to Create a Water Shed.
CAT. NO. 33S

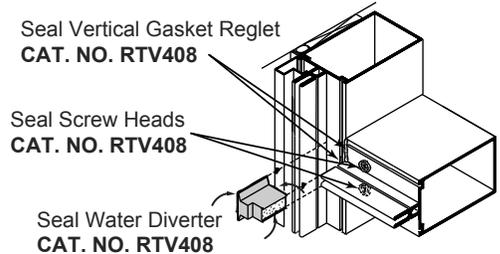
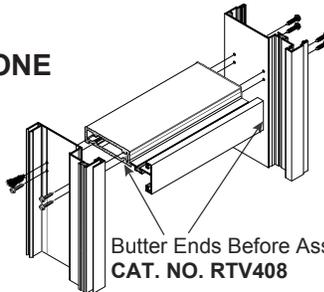


Sill to Subsill, End Dams, Screw Heads, and Threshold to Door Frame Sealing.

JOINT ADHESIVE

- **RTV408 NEUTRAL CURE SILICONE**

NOTE: I.G. butyl contact OK.



Small Joints, End Joints and Buttered Surfaces, Water Diverters and Reglet Fills.

PERIMETER

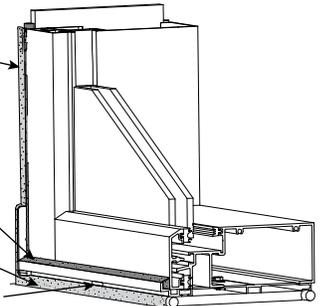
- **95C NEUTRAL CURE SILICONE**
- **M64 (SMOOTH) MODIFIED POLYURETHANE**
- **M66 (TEXTURED) MODIFIED POLYURETHANE**

Exterior Perimeter Caulking
CAT. NO. 95C/M64/M66

Waterproofing Silicone Sealant
CAT. NO. 33S/RTV408

Exterior Perimeter Caulking
CAT. NO. 95C/M64/M66

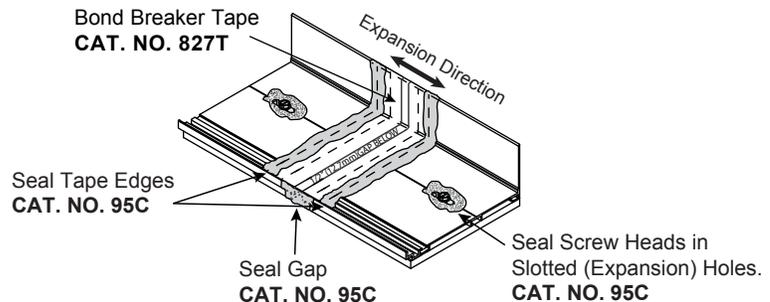
Do Not Block Weep holes



Perimeter Seals, Expansion Joints, Sill and Threshold Beds, Concrete, Wood, and Steel Openings.

EXPANSION

- **95C NEUTRAL CURE SILICONE**



Expansion Joints.

STRUCTURAL

- **ALL STRUCTURAL SEALANTS REQUIRE TESTING AND APPROVAL.**

Glass to Glass or Glass-to-Metal.



JOB SITE ESSENTIALS

Helpful Tools and Supplies for Installing CRL U.S. Aluminum Entrances, Storefronts, Windows, and Curtain Wall Systems



CRL 95C Silicone Building Sealant
CAT. NO. 95C



CRL RTV408 Neutral Cure Silicone
CAT. NO. RTV408



CRL 33S Acetic Cure Silicone Sealant
CAT. NO. 33S



CRL M64 Smooth Texture Modified Polyurethane Construction Sealant
CAT. NO. M64



CRL M66 Grainy Texture Modified Polyurethane Construction Sealant
CAT. NO. M66



CRL12:1 Ratio Strap Frame Caulking Gun
CAT. NO. GA1203



CRL Complete Set of Seven All Stainless Steel Spatulas
CAT. NO. AB958G



CRL Open Cell Backer Rod
CAT. NO. B0CBR58C



CRL Backer Rod Roller Tool
CAT. NO. SBRR



CRL Vacuum Cup
CAT. NO. S7950



CRL Saint-Gobain/Norton V2100 Thermalbond® Structural Glazing Spacer Tape



CRL Gasket Roller
CAT. NO. VR10



CRL PHS Series Plastic Horseshoe Shims



CRL Glass Cleaner
CAT. NO. 1973



CRL Glass Wipes
CAT. NO. 1550



CRL Gloves
CAT. NO. KF1TL



CRL Glass Cutter
CAT. NO. TC17B



CRL Running Pliers
CAT. NO. PPG1



CRL Gasket Cutter
CAT. NO. MC80N



CRL Tape Measure
CAT. NO. 54125

SERIES 7400 WINDOW SYSTEM



**CRL Phenolic L Square
CAT. NO. L48**



**CRL Glass Marking Pencil
CAT. NO. GM44**



**CRL Spring Clamp
CAT. NO. JC3202HT**



**CRL Belt Sander
CAT. NO. LD321**



**CRL Glass Grinding Belts
CAT. NO. CRL3X21120X**



**CRL Digital Laser
Level Tool
CAT. NO. 406065**



**CRL Utility Knife
CAT. NO. K82**



**CRL Utility Knife Blades
CAT. NO. 1992C**



**CRL 18V Cordless
Driver/Drill
CAT. NO. LD147**



**CRL Cordless Screwdriver
CAT. NO. LD823**



**CRL Portable
Miter Saw 10"
CAT. NO. LS1040**



**CRL Cougar Carbide
Saw Blade
CAT. NO. CT10X100**



**CRL General Purpose Solvent
and Adhesive Cleaner
CAT. NO. CRL2032**



**CRL Radians® Coveralls™
Safety Glasses
CAT. NO. VS0010**



**CRL Soft-Face Power Hitter
CAT. NO. ST57532**



**CRL Hard Hat
CAT. NO. ES3452**



**CRL Straight Edge
CAT. NO. SEP96**



**CRL Glazier's Rule Holder
CAT. NO. RH670**



**CRL Door Jack
CAT. NO. DJ1**



**CRL All Terrain Dolly
CAT. NO. ATD1**