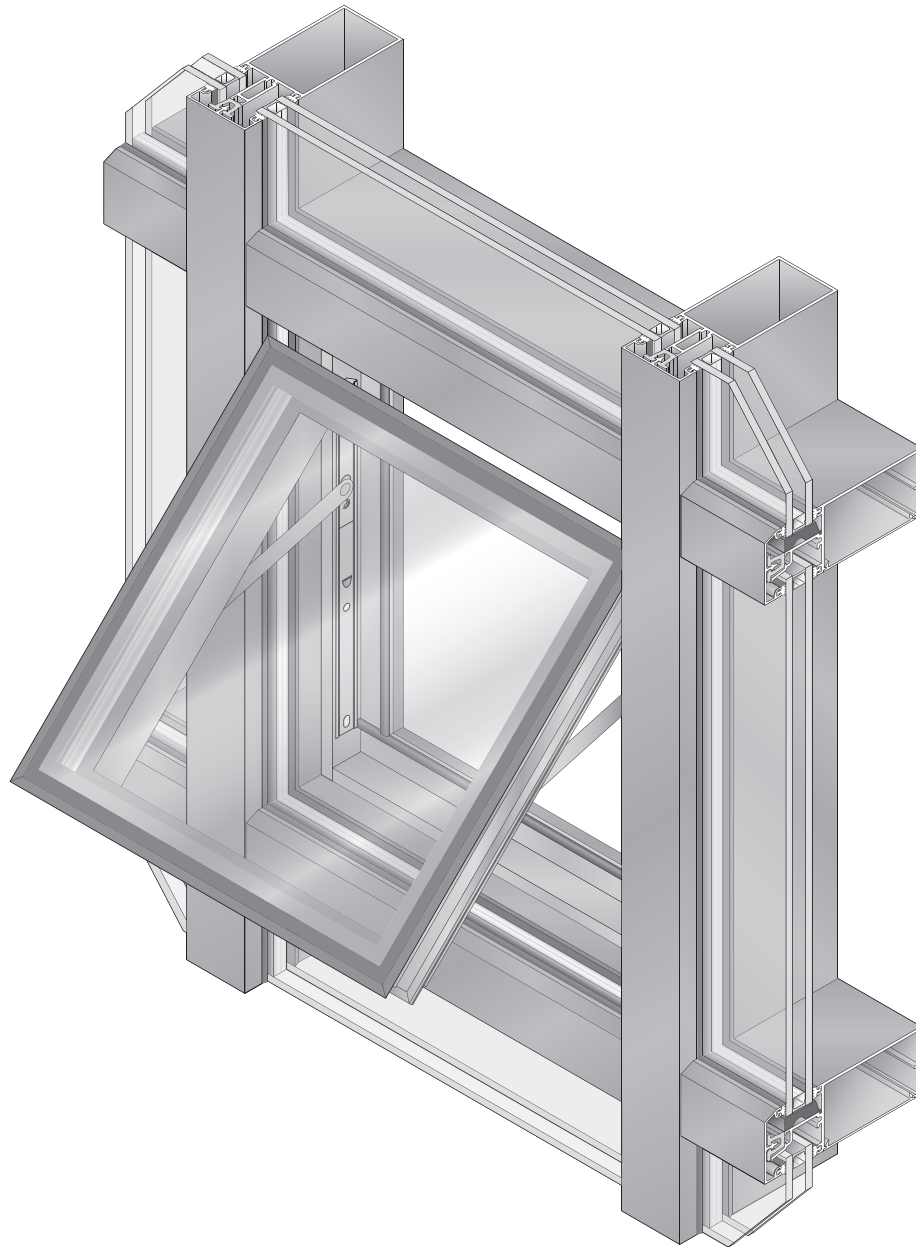


# INSTALLATION INSTRUCTIONS

## DEFENDER SERIES BW7600 BLAST RESISTANT CONCEALED VENT WINDOW



Phone: (800) 262-5151 • Fax: (866) 262-3299  
crlaurence.com • usalum.com • crl-arch.com

# 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

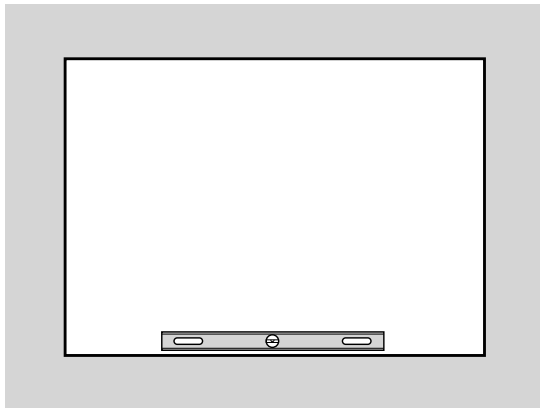
## RECOMMENDED GUIDELINES FOR ALL INSTALLATIONS:

- 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, 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 with 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. WATER HOSE TEST.** As soon as a representative amount of the wall has been glazed (500 square feet or 46.5 m<sup>2</sup>) a water hose test should be conducted in accordance with AAMA 501.2 specifications to check the installation. On all jobs the hose test should be repeated every 500 square feet (46.5 m<sup>2</sup>) 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 PAGE 10 and 11.**

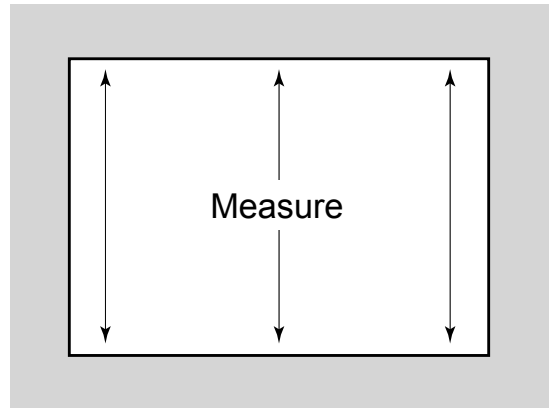
# SITE PREPARATION

## BEFORE INSTALLATION

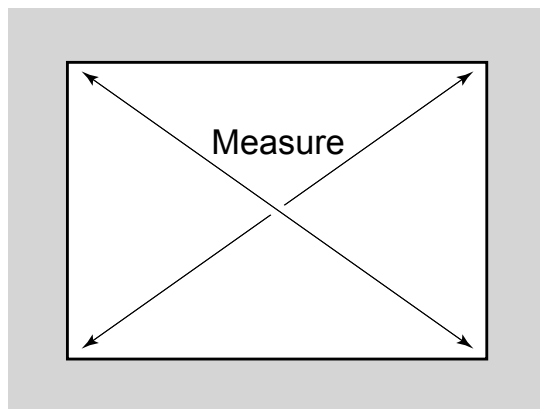
1. Review and measure the opening.
2. Verify rough window opening size 1/2" (12.7) clearance in both width and height to the window. Verify framing is plumb, straight, and true around window opening. Measure opening at each end and at center vertically and horizontally. Make corrections to openings as required. Measure opening diagonally to check squareness. Chip concrete high points to flush and rounded corners to square.



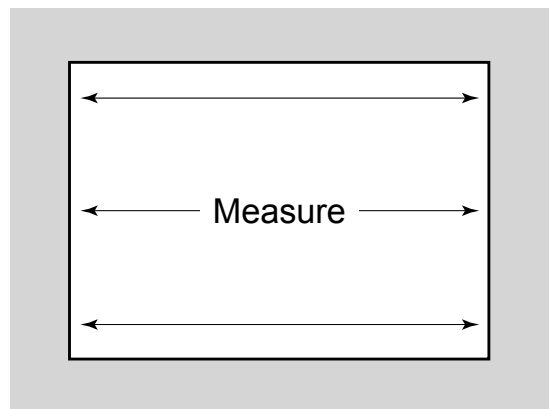
LEVEL



VERTICAL DIMENSION



SQUARE



HORIZONTAL DIMENSION

NOT TO SCALE

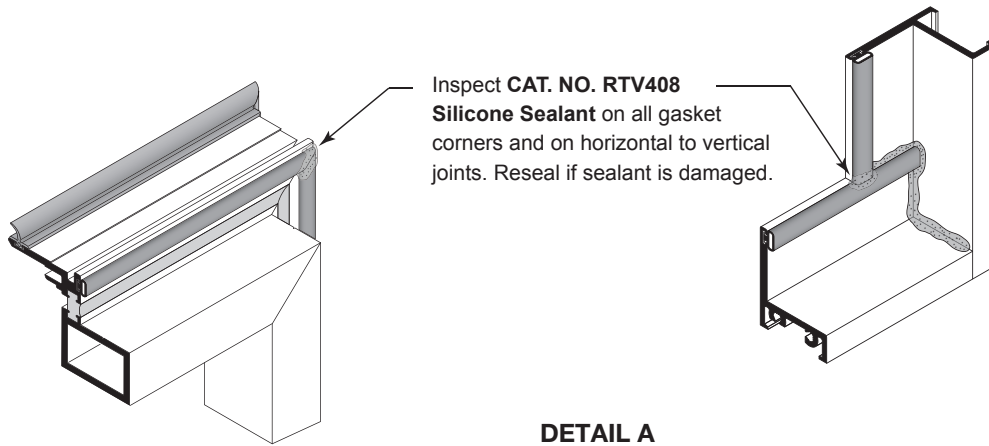
# INSTALLATION INSTRUCTIONS

These instructions cover installation and glazing of project-out awning windows into storefront, window wall and curtain wall systems. This system is designed to be used with the following window series; BR604, BR606, BT601 Storefront or BW3250 Curtain Wall. The Series BW7600 Blast Resistant Concealed Vent is a minimal sightline window offering a **DoD 1 psi Blast Resistance Capability**. Standard hardware included, reinforced with corner keys, and crimped at all corners. When closed, the vent is sealed to the frame with bulb gaskets, ensuring an airtight seal.

Net window dimensions are daylight opening minus 1/4" (6.3) vertically and horizontally. Window units are fabricated and assembled at the factory. Windows may be shop or field glazed.

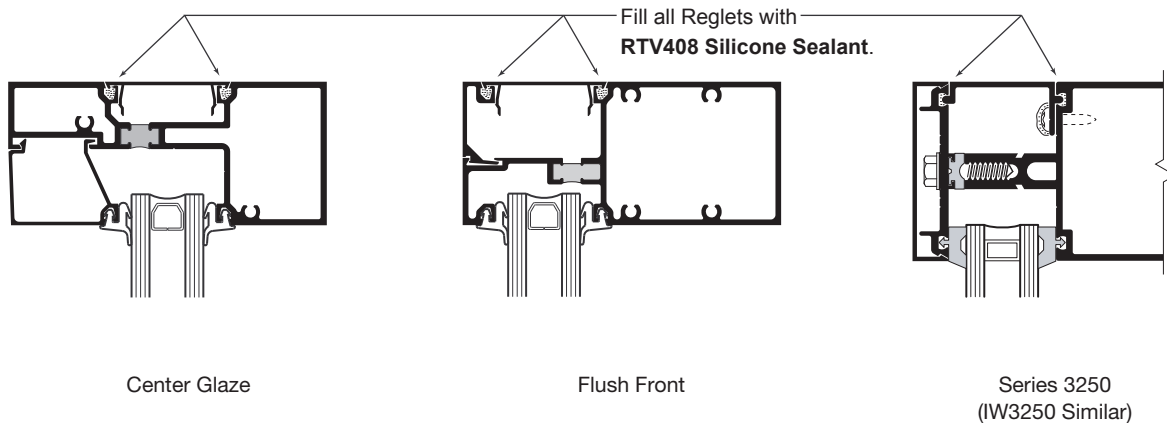
## FRAME FABRICATION

1. Visually inspect all Bulb Gasket corners to assure no damage has occurred during shipment. **See DETAIL A.** If required, apply **CAT. NO. RTV408 Silicone Sealant** to damaged areas, leaving vent open for proper drying.



2. If necessary, remove sash from frame prior to installation by removing screws attaching hinges to sash.
3. Must apply **RTV408 Silicone Sealant** to all reglets receiving pocket fillers at window locations. **See DETAIL B.**

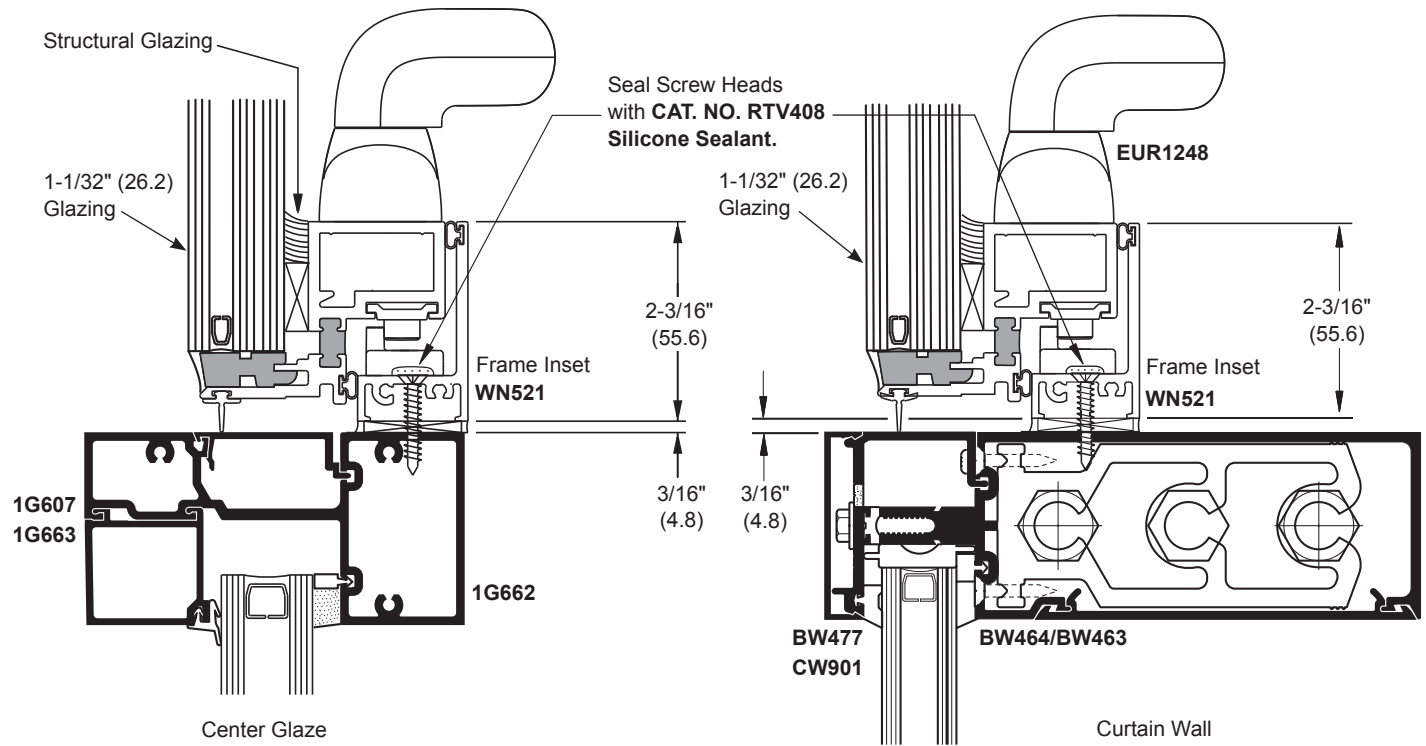
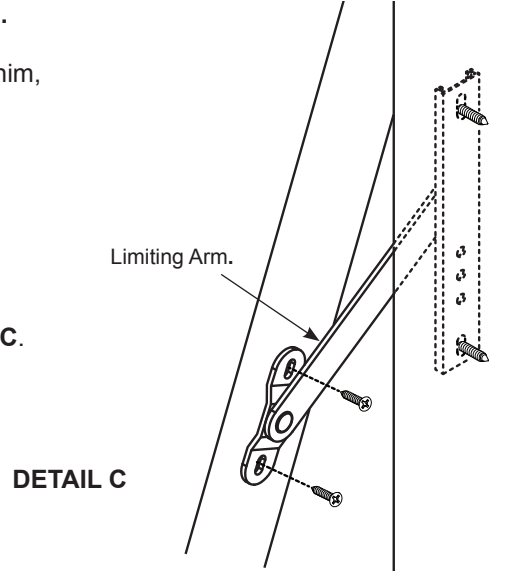
**NOTE:** Standard CW and WW profiles shown. BW series similar.



NOT TO SCALE

# SERIES BW7600 WINDOW

4. Determine proper frame inset in glazing system. **See DETAIL D.**
5. Set frame in daylight opening (D.L.O.) of glazing system then shim, plumb, and level.
6. Secure frame to perimeter with flat head screws, 3" (76) from corners and 12" (305) on center or as shown on approved shop drawings. When installing the frame into the opening, the two bottom limiting arms will have to be disengaged from the vent panel in order to move the panel out of the way to provide enough clearance at the head of the frame for installing screws. Remove the screws on the vent panel as shown in the **DETAIL C**. Reinstall the screws and limiting arms after the frame has been installed. Seal over perimeter fasteners. **See DETAIL D.**

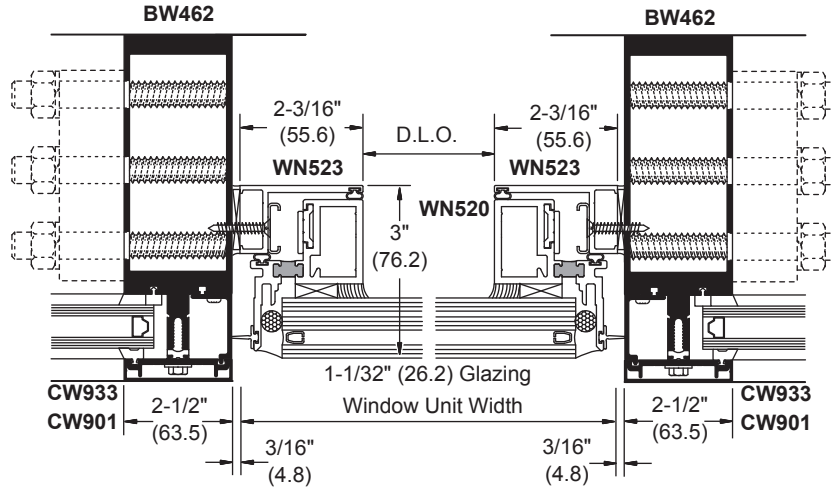


**DETAIL D**

7. Apply and tool **CAT. NO. 33S/M64/M66** perimeter sealant around framing.

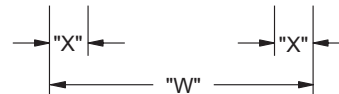
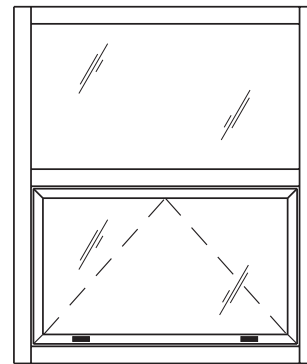
NOT TO SCALE

# GLAZING



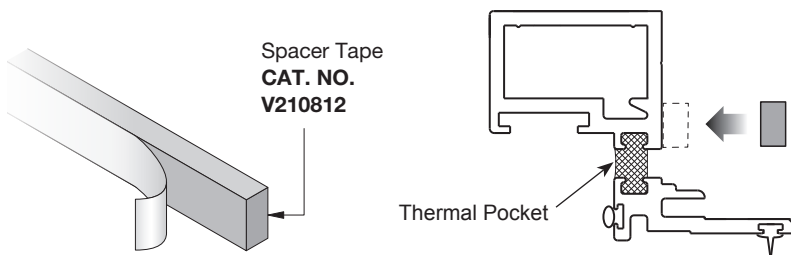
1. Clean glazing fins to remove oil residue prior to applying **CAT. NO. V210812 Spacer Tape**.
2. Place Setting Blocks at 1/4 points or as instructed by approved shop drawings **See DETAIL E**.

DETAIL E

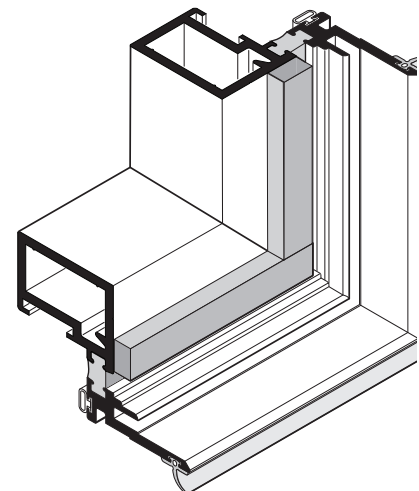


X = W/8 or 6", whichever is greater

3. Cut and peel protective backing from tape. Apply tape full length of horizontal members, along edge and above thermal pocket. Apply tape to the vertical members, abutting tightly to horizontal tape, along edge of thermal pocket. **See DETAIL F.4.**
4. Set glass into opening, pressing against spacer tape.



DETAIL F

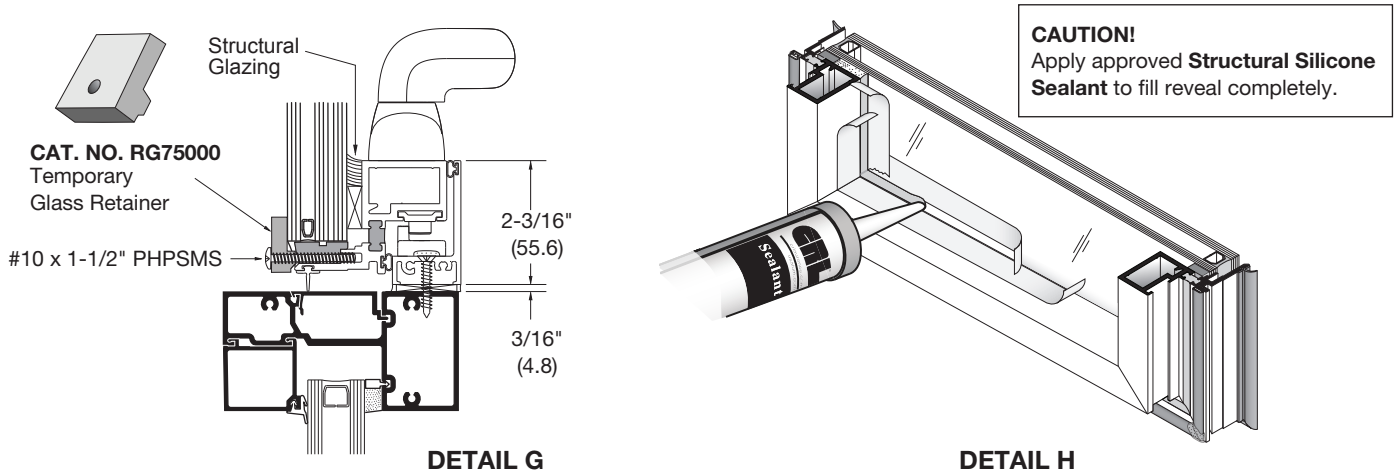


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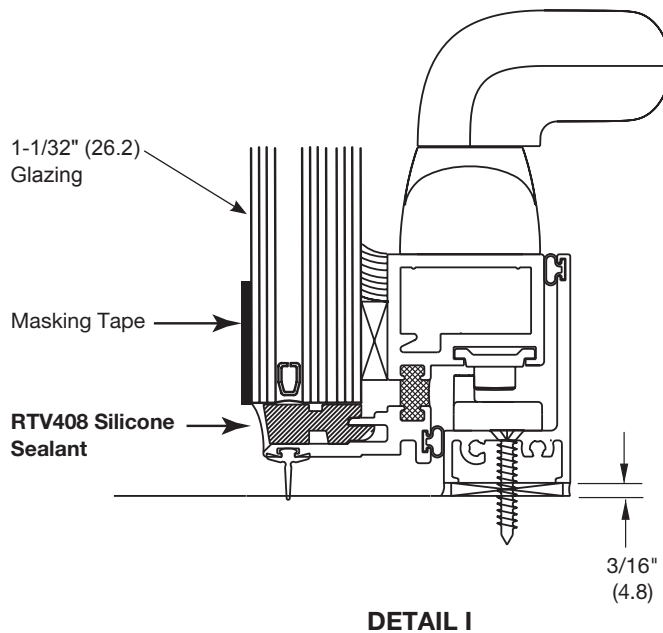
# GLAZING - CONTINUED

5. Install temporary Glass Retainer Clips using **CAT. NO. RG75000** for 1" (25) glass as shown in **DETAIL G**.
6. Mask off aluminum at edge of glass pocket and mask glass 1/8" (3.2) from the edge of aluminum as shown in **DETAIL G and H**.
7. Apply Structural Silicone, tool and remove masking tape. Use caution in removing tape to avoid marring tooled Silicone. Follow sealant manufacturers recommendations for surface preparation and cure times.

**NOTE:** Go to [crlaurence.com](http://crlaurence.com) for structural glazing sealants. Refer to #7 of the general installation notes on page 7 at the beginning of this manual.



8. Remove temporary Glass Retainer Clips and mask edges of glass.
9. Apply exterior weatherseal to glass perimeter. **See DETAIL I.** Use caution in removing tape to avoid marring tooled silicone. **Follow sealant manufacturers recommendations for surface preparation and cure times.**



NOT TO SCALE





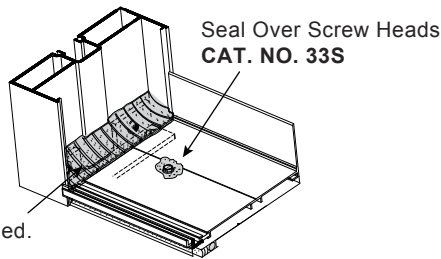
# GUIDE TO SEALANTS

**NOTE:** All sealants must be tooled to ensure proper adhesion.

## WATERPROOFING

- **33S ACETIC CURE SILICONE**

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

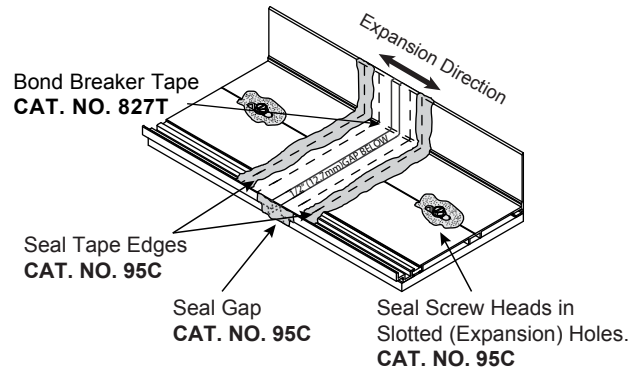


**NOTE:** Not for use near insulating glass units with butyl sealant.

## EXPANSION

- **95C SILICONE BUILDING SEALANT**

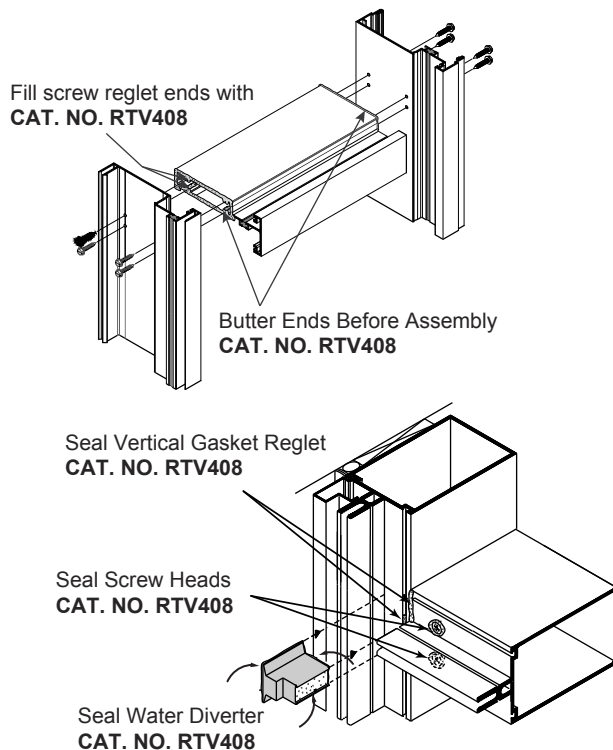
Expansion Joints.



## JOINT ADHESIVE

- **RTV408 NEUTRAL CURE SILICONE**

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

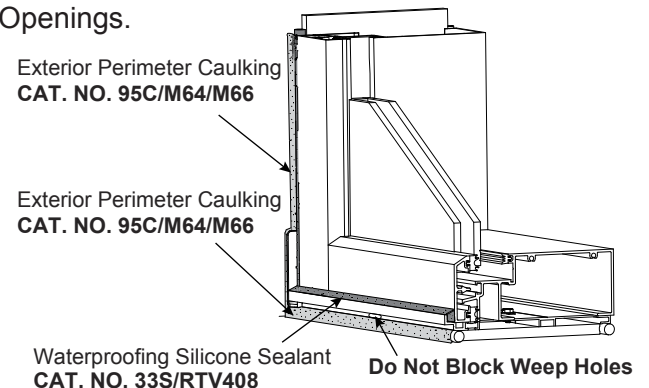


**NOTE:** I.G. butyl contact OK.

## PERIMETER

- **95C SILICONE BUILDING SEALANT (Preferred)**
- **M64 (SMOOTH) MODIFIED POLYURETHANE**
- **M66 (TEXTURED) MODIFIED POLYURETHANE**

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



## 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**



**CRL RTV408 Neutral Cure Silicone**



**CRL 33S Acetic Cure Silicone**



**CRL M64 Modified Smooth Polyurethane Construction Sealant**



**CRL M66 Modified Grainy Polyurethane Construction Sealant**



**CRL 12:1 Ratio Strap Frame Caulking Gun  
CAT. NO. GA1203**



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



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



**CRL Backer Rod Roller Tool  
CAT. NO. SBRR**



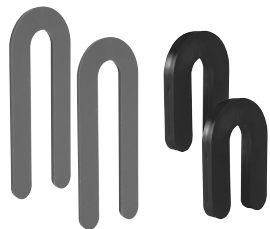
**CRL Soft-Face Power Hitter  
CAT. NO. ST57532**



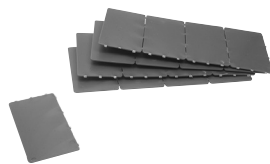
**CRL Saint-Gobain/Norton V2100 Thermalbond® Structural Glazing Spacer Tape**



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



**CRL PHS Series Plastic Horseshoe Shims**



**CRL PBS Series Plastic Bearing Shimstrips**



**CRL Gloves  
CAT. NO. KF1TL**



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

**SERIES BW7600 WINDOW**



**CRL Bond Breaker Tape**  
CAT. NO. 827T34



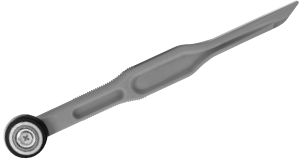
**CRL Glass Cutter**  
CAT. NO. TC17B



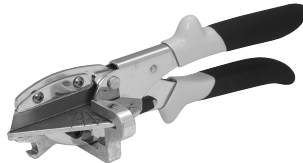
**CRL Running Pliers**  
CAT. NO. PPG1



**CRL Vacuum Cup**  
CAT. NO. S7950



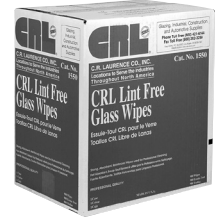
**CRL Gasket Roller**  
CAT. NO. VR10



**CRL Gasket Cutter**  
CAT. NO. MC80N



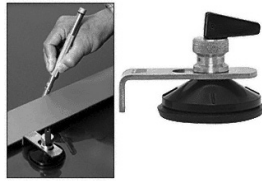
**CRL Glass Cleaner**  
CAT. NO. 1973



**CRL Glass Wipes**  
CAT. NO. 1550



**CRL 25' Tape Measure**  
CAT. NO. 54225



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



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



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



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



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



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



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



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



**CRL Portable Ladder**  
CAT. NO. 6206



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



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