SECTION 08 51 13

ALUMINUM WINDOWS AND DOORS WITH THERMAL BREAKS

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\*\* NOTE TO SPECIFIER \*\* AluminTechno JLLC; architectural aluminum systems.  
This section is based on the products of AluminTechno JLLC, which is located at:  
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Atlanta, GA 30340  
Tel: 646-789-1827  
US Rep.  
Email: [request info (avramenko@alutech-group.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=AluminTechno+JLLC&coid=50809&rep=&fax=&message=RE:%20Spec%20Question%20(08520alt):%20%20&mf=)  
Web: <http://alumintechno.com>   
 [ [Click Here](https://www.arcat.com/arcatcos/cos50/arc50809.html) ] for additional information.  
AluminTechno JLLC is an aluminum extrusions manufacturing enterprise with powder coating and anodizing lines and is a part of ALUTECH Group of Companies.  
Our high-performance modern enterprise is equipped with machinery produced by the leading manufacturers from the USA, Germany and Italy. Production process and manufacturing equipment have no analogs among European countries. The complete production cycle is being performed at AluminTechno JLLC plant: from primary aluminum casting works to production of aluminum profiles and further coating. The main manufacturing components are modern foundry complexes, high-performance extrusion lines, advanced coating and anodizing manufacturing shops.  
Currently AluminTechno JLLC produces a wide range of aluminum extrusions (more than 1.000 different configurations) used in construction, motor production, furniture and consumer goods, automotive industries, electric-power industry. Enterprise's annual output is 45.000 tons. AluminTechno JLLC has certified its quality control management system in accordance with the requirements of International Standard ISO 9001:2009 in TUV CERT system.  
Finish quality of aluminum extrusion produced by AluminTechno JLLC is proved by three international certificates: QUALICOAT, SEASIDE and QUALANOD, AluminTechno JLLC is the only aluminum architectural system manufacturer on the territory of Eastern Europe holding all three certificates.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Aluminum windows with thermal break. (ALT W72 Windows)
    2. Aluminum casement windows. (ALT W72 CW)
    3. Aluminum doors with thermal break (ALT W72 Doors)
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 07 91 23 - Backer Rods.
    2. Section 08 41 13 - Aluminum-Framed Entrances and Storefronts.
    3. Section 08 44 16 - Glazed Bronze Curtain Walls.
    4. Section 08 70 00 - Hardware.
    5. Section 08 83 13 - Mirrored Glass Glazing.
  1. REFERENCES
     1. American Architectural Manufacturers Association (AAMA):
        1. AAMA/WDMA/CSA 101/I.S.2/A440-17 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights
        2. AAMA 910-10 - Voluntary "Life Cycle" Specification and Test Methods for AW Class WRITERS NOTE: This article is usually deleted. Be sure it is really necessary.
     2. ASTM International (ASTM):
        1. ASTM E283 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
        2. ASTM E330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
        3. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
        4. ASTM E547 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference.
        5. ASTM F588 - Standard Test Methods for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact.
     3. City of New York Department of Health Falls Prevention Program
        1. Chapter 12-11.
     4. National Fenestration Rating council (NFRC):
        1. NFRC 102 - Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems.
  2. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data:
        1. Manufacturer's data sheets on each product to be used.
        2. Preparation instructions and recommendations.
        3. Storage and handling requirements and recommendations.
        4. Typical installation methods.

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Two representative units of each type, size, pattern and color.
    2. Shop Drawings: Include details of materials, construction and finish. Include relationship with adjacent construction.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum five years documented experience.
     2. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.
     3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

\*\* NOTE TO SPECIFIER \*\* Include mock-up if the project size or quality warrant the expense. The following is one example of how a mock-up on might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
       1. Intent of mock-up is to demonstrate quality of workmanship and visual appearance.
       2. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
       3. Retain mock-up during construction as a standard for comparison with completed work.
       4. Do not alter or remove mock-up until work is completed or removal is authorized.
  1. PRE-INSTALLATION CONFERENCE
     1. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
     2. Protect from damage due to weather, excessive temperature, and construction operations.
  3. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
  4. WARRANTY
     1. Manufacturer's standard limited warranty unless indicated otherwise.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: AluminTechno JLLC, which is located at: 2255 Button Gwinnett Dr. Suite 130; Atlanta, GA 30340; Tel: 646-789-1827; US Rep.; Email: [request info (avramenko@alutech-group.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=AluminTechno+JLLC&coid=50809&rep=&fax=&message=RE:%20Spec%20Question%20(08520alt):%20%20&mf=); Web: <http://alumintechno.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

\*\* NOTE TO SPECIFIER \*\* The ALT W72 system is a modern technological solution for windows application in administrative, commercial, manufacturing and residential facilities corresponding to high energy efficiency requirements. The fabricated window profiles improve functionality and safety of the building, and provide a high level of comfort, as well as protection of the premises from the heat loss and noise penetration. Secure and durable operation of windows is provided by the high quality of the used profiles, hardware and accessories. The windows are well combined with ALUTECH facade and door systems. Delete article if not required.

* 1. ALUMINUM WINDOWS; THERMALLY BROKEN
     1. Reference Standard Compliance:
        1. Meets or exceeds performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage.
           1. Intertek Test Report Number: I1280.01-525-44 R1
           2. Rating: AW-PG80-DAW
        2. Meets or exceeds performance requirements of the City of New York Department of Health Falls Prevention Program, Chapter 12-11.
           1. Intertek Test Report Number: I2284.01-525-44 R1
        3. Thermal Performance, Standardized U-Factor per NFRC 102: 0.19 Btu/hr ft2 F; CTS Method.
           1. Intertek Test Report Number: H0034.01-116-46 R0

\*\* NOTE TO SPECIFIER \*\* Delete basis of design option if not required.

* + 1. Basis of Design: ALT W72 Windows as manufactured by AluminTechno

\*\* NOTE TO SPECIFIER \*\* Delete the window type options not required.

* + - 1. Window Type: French.
      2. Window Type: Casement.
      3. Window Type: Integrated system.
      4. Window Type: Tilt-and-Turn.
      5. Window Type: Parallel sliding.
      6. Window Type: Hopper.

\*\* NOTE TO SPECIFIER \*\* Delete shapes options not required.

* + - 1. Shapes: Rectangle. Dimensions as detailed on the Drawings.
      2. Shapes: Shaped. Dimensions as detailed on the Drawings.
      3. Shapes: Angled Frames. Dimensions as detailed on the Drawings.
      4. Shapes: Arched, Round. Dimensions as detailed on the Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete sash variations and profile options not required.

* + - 1. Sash Window Variations:
         1. Single opening sash with fixed pane.
         2. Double opening sashes with fixed mullion.
         3. Double opening sashes with floating mullion.

No dividing profiles in open position giving better visibility.

French windows and terrace door options -ideal for modern building.

* + - 1. Profile Sash Types: Straight design.
      2. Profile Sash Types: Rounded design.

\*\* NOTE TO SPECIFIER \*\* Delete drainage, hinges, and handles options not required.

* + - 1. Drainage: Visible.
      2. Drainage: Concealed.
      3. Hinges: Visible.
      4. Hinges: Concealed.
      5. Handles: Visible mounted to gear box.
      6. Handles: Concealed fixed gear box.
      7. Hardware: Wide choice of hardware options.

\*\* NOTE TO SPECIFIER \*\* OptionaDelete if not required.

* + - 1. Automatic Opening:
         1. Simple easy operation even for large heavy windows.
         2. Adjustable opening vent position.
         3. Operation of windows located in higher areas.
         4. Smooth soft opening and closing.
         5. No need for opening stop.
         6. Aesthetic Appearance of Windows: No visible elements.
      2. Finish:

\*\* NOTE TO SPECIFIER \*\* Delete finish options not required. Qualicoat powder coat is standard.

* + - * 1. Powder Coated: Any color according to Qualicoat. Color as determined by the architect.
        2. Powder Coated: Non-standard. Futura
        3. Powder Coated: Non-standard. Brilliance
        4. Powder Coated: Non-standard. Anodic lines.
        5. Powder Coated Surface Types: Gloss
        6. Powder Coated Surface Types: Matt.
        7. Powder Coated Surface Types: Textured.
        8. Power Coat Color: \_\_\_\_\_\_\_\_.
        9. Power Coat Color: As indicated drawings:
        10. Power Coat Color: To be determined by the Architect.
        11. Anodized: Qualanod standard.

\*\* NOTE TO SPECIFIER \*\* Nine standard colors. See manufacturer's website for more information.

Color: \_\_\_\_\_\_\_\_.

Color: As indicated drawings:

Color: To be determined by the Architect.

Surface treatment: Chemical Etching.

Surface Treatment: Bead blasting.

Surface treatment: Brushing.

* + 1. Technical Characteristics: High intensity for operating usage. Durable window life without hardware adjustment.
       1. Corrosion Resistance: 50 plus years.
       2. Max Glazing Thickness: 2.28 inches (58 mm).
       3. Max Sash Weight: Up to 331 lbs (150 kg).
       4. Max Sash Height: Up to 98.43 inches (2500 mm).
       5. Max Sash Width: Up to 63 inches (1600 mm).
       6. Acoustic Performance: up to 48 dB
          1. Additional gasket line.
          2. Special foamed inserts.

\*\* NOTE TO SPECIFIER \*\* Delete options not required.

* + - 1. Thermal insulation, U-Value: 96 W/ m2 C. Uf: 1.59 W / m2 n
         1. Foamed thermal insulator sections in profile chambers.
         2. Foamed thermal support insulators in glazing chambers.
         3. Polyamide Thermal Break Chamber: 1.34 inches (34 mm) wide.
         4. Middle EPDM seal chamber reducing thermal convection though the sections.
         5. EPDM infill gasket next to glass minimizing thermal conduction.
         6. Glazing Chamber: Accommodates energy efficient glazing up to 2.28 inches (58 mm) in depth.
      2. Air Tightness: Class: A. Water Tightness: Class A 0.16 psi (1100 Pa).
         1. No water leakage, no air draughts, and exclusion of mold and fungi.
         2. No dust, gases and other harmful compounds from the outdoors.
         3. Efficient condensation removal system.
         4. Ice build-up prevention.
         5. Corner Connections and Sealing: Polyamide piece with access to seal corner section.
         6. T-Connections and Sealing: Polyamide piece with access to seal corner section. Special support made of foamed PE material.

\*\* NOTE TO SPECIFIER \*\* Optional. Delete if not required.

* + - * 1. Corner Plug: Polyamide. Can be installed after profile is assembled.
        2. Multiline Gasket System:

Closed contour of central, exterior, and ledge gaskets. EPDM corner gasket. Formed part of gasket ensures tight sash closing creating a sealed chamber in profiles connection zones.

Closed contour of passive sash gasket in double casement windows.

Four lines of gasket and EPDM corners.

* + - 1. Drainage, Condensate Removal, and Ventilation:
         1. Drainage plug with internal barrier, aesthetically designed.
         2. Special drainage system in sash profiles prevents water penetration.
         3. Invisible drainage.
         4. Concealed drainage in frame and transom bar.
         5. Concealed drainage in transom bar. Additional option for concealed drainage preserving window exterior contour.
      2. Safety and Security:
         1. Added personal and property protection.
         2. Safety of Use: A child cannot open the window independently if locked.
         3. Better aesthetic appearance, instead of using alternatives such as metallic grilles or bars over windows.
         4. Convenient and easy operation of window with enhanced burglar resistant elements.
         5. Burglar Resistant Hardware:

Hardware resistant to extreme loads and forces.

Additional hardware elements improve security classification.

Simple and convenient system for switching between sash opening modes.

* + - * 1. Burglar Resistant Glazing Beads:

High security glazing beads which will not snap off under impact and ban't be removed once glazed.

* + - * 1. Hardware:

Handle Sequence for Sash Operation:

Position One: Sash closed.

Position Two: Sash tilted.

Position Three: Sash opened.

You can lock windows in tilt position without need for additional hardware and locks.

No need to install additional locking elements.

* + - 1. Durability:
         1. Offers high intensity of operating usage
         2. Durable window life without hardware adjustment
         3. Excellent corrosion resistance (more than 50 years)
         4. Resistance to various weather factors and conditions
    1. Basis of Design: ALT W72 CW Windows as manufactured by AluminTechno. An outward opening casement window based on W72 frame and transom profile. In event of strong wind pressure the window sash is compressed against the frame. The system is internally beaded for security. The handle, lock, and lock counterparts are on the interior side of building. The hinges; stays or scissors, are located on the external side of building.
       1. Reference Standard Compliance:
          1. Achieve optimal thermal insulation characteristics: Uf greater than 1.9 W/m2 K.
          2. Tightness Characteristics per EN-BS6372:

Air Permeabilty: Class 4.

Water Tightness: Class E1500.

Wind Resistance: Class CE2400.

* + - * 1. Windows correspond to PAS 24 burglar resistance requirements that is confirmed by the test certificates from WinTech certification laboratory.
      1. Minimization of profile and accessories list; application of existing frame and transom bar profiles as well as accessories from ALT W72 system for corner and transom junctions.
      2. Use of Renovation slope and cover strip profiles, suitable for European market.

\*\* NOTE TO SPECIFIER \*\* Delete configuration options not required.

* + - 1. Configurations: Single sash.
      2. Configurations: Two sashes.
      3. Configurations: Two sashes with mitre-joint corner junctions of frame and transom bar profiles;
      4. Configurations: Two sashes with frame and transom bar profile junction at an angle of 90 degrees/
      5. Configurations: Top hung windows.
      6. Configurations: Side hung windows.
      7. Overall Dimensions: As detailed on the Drawings.
      8. Technical Characteristics:
         1. Top Hung Sash Dimensions:

Minimum (WxH): 12.60 x 15.75 inches (320 x 400 mm).

Maximum (WxH): 39.37 x 74.81 inches (1000 x 1900 mm).

* + - * 1. Side Hung Sash Dimensions:

Minimum (WxH): 12.60 x 9.84 inches (320 x 250 mm).

Maximum (WxH): 74.81 x 86.61 inches (1900 x 2200 mm).

* + - * 1. Glazing Thickness: 1.02 x 1.97 inches (26 to 50 mm).
      1. Performance Requirements:
         1. Air Permeability per BS EN 1026: 0.087 psi (600 Pa) Class 4.
         2. Water Tightness per BS EN 1027 and BS EN 12208: 0.218 psi (1500 Pa) Class E1500.
         3. Wind Resistance per BS EN 12211 and BS EN 12210: 0.348 psi (2400 Pa) Class CE2400.
         4. Thermal insulation: Uf, W/m2 K per EN ISO 12567-1: 1.9
         5. Operating forces per BS EN 12046-1 and BS EN 13115: Class 1.
         6. Mechanical Strength per BS EN 13115: Class 3.
         7. Racking per BS EN 14608 and BS EN 13115: 135 lbf (600 N).
         8. Static Torsion per BS EN 14609 and BS EN 13115: 67.44 lbf (300 N).
         9. Load-Bearing Capacity of Safety Devices per BS EN 14351+A1: 78.68 lbf (350 N)
         10. Basic Security Test per PAS 24: Pass
         11. Manipulation Test (a) per PAS 24: Pass
         12. Infill Manual Test per PAS 24: Pass
         13. Manual check test per PAS 24: Pass
         14. Infill mechanical testPAS 24: Pass
         15. Mechanical loading test per PAS 24: Pass
         16. Overall Classification in accordance with PAS 24: W

\*\* NOTE TO SPECIFIER \*\* The ALT W72 profile system allows to fabricate the doors for industrial buildings as well as residential apartments. The doors help architects and designers implement reliable and aesthetic project solutions. ALT W72 doors are durable, convenient to operate, have increased thermal insulation characteristics, provide high level of tightness, and prevent noise penetration.

* + - * 1. ALT W72 doors can be perfectly integrated into ALUTECH facades and combined with window systems. Delete article if not required.
  1. ALUMINUM DOORS; THERMALLY BROKEN
     1. Reference Standard Compliance:
        1. Meets or exceed performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage.
           1. Intertek Test Report Number: I1280.01-525-44 R1
           2. Rating: AW-PG80-DAW
        2. Meet or exceed performance requirements of the City of New York Department of Health Falls Prevention Program, Chapter 12-11.
           1. Intertek Test Report Number: I2284.01-525-44 R1
        3. Thermal Performance, Standardized U-Factor per NFRC 102: 0.19 Btu/hr ft2 F; CTS Method.
           1. Intertek Test Report Number: H0034.01-116-46 R0
     2. Basis of Design: ALT W72 Doors as manufactured by AluminTechno

\*\* NOTE TO SPECIFIER \*\* Delete door set options not required.

* + - 1. Door Set: Individual door.
      2. Door Set: Combined within a structural opening.
         1. Achieved by utilizing one single profile from the manufacturer's offered range. No need for additional frame section.
         2. Narrow frame for integrating the door into the facade.
         3. Compliance with modrn architectural trends; reducing the visible part of the aluminum profile while inscreasing the glazing area.
         4. Better illumination of the premises with same door dimensions.
      3. Door Set: Integrated doors within curtain walling / facades.
         1. Tight corners
         2. Secure fixation of frame and hinges
         3. Same design gaskets along mullion and transom. No additional profiles.
         4. Continuous glazing line between the door and facade.

\*\* NOTE TO SPECIFIER \*\* Delete door variants, opening orientation, and threshold type options not required.

* + - 1. Door Variants: Can be realized without using additional profiles and accessories.
         1. Single leaf door
         2. Double leaf door
      2. Door Leaf Opening Orientation: Direction of opening is realized by using one universal threshold for both types.
         1. Opening outward.
         2. Opening inwards.
      3. Threshold Type: Fixed.
      4. Threshold Type: Automatic drop-down
         1. Barrier-free access to premises
         2. High internal insulation, air/water tightness and acoustic performance
         3. Fire safety.
         4. Durability.
         5. Flexibility.
         6. Easy assembly and use.
         7. Does not require a completely flat floor surface.
      5. Possibility to choose doors of different shapes, sizes and colors
      6. Hardware: Wide choice of hardware options

\*\* NOTE TO SPECIFIER \*\* Delete hinges, handles, and closers options not required.

* + - 1. Hinges: 3-part face fixed.
      2. Hinges: Barrel.
      3. Hinges: Concealed.
      4. Handles: Lever.
      5. Handles: Lever handle with lock.
      6. Handles: C-Pull handle.
      7. Handles: Office handle.
      8. Closers: Visible.
      9. Closers: Concealed.
      10. Variations for any architectural requirements.
      11. Aesthetic design.
      12. Bottom Rails: Single bottom rail section.
          1. Bottom rail Additions. Any height of bottom rail can be realized depending on design and functionality required.
      13. Door Locks: Lock variant depends on door operating conditions and requirements.

\*\* NOTE TO SPECIFIER \*\* Delete door lock options not required.

* + - * 1. Lever lock.
        2. Roller lock.
        3. Single-point locking.
        4. Multipoint locking.

Tight and secure leaf connection

Allows assembly of high dimensional doors and still maintain security.

* + - 1. Finish:

\*\* NOTE TO SPECIFIER \*\* Delete finish options not required. Qualicoat powder coat is standard.

* + - * 1. Powder Coated: Standard. Any color according to Qualicoat.
        2. Powder Coated: Non-standard. Futura
        3. Powder Coated: Non-standard. Brilliance
        4. Powder Coated: Non-standard. Anodic lines.
        5. Powder Coated Surface Types: Gloss
        6. Powder Coated Surface Types: Matt.
        7. Powder Coated Surface Types: Textured.
        8. Power Coat Color: \_\_\_\_\_\_\_\_.
        9. Power Coat Color: As indicated drawings:
        10. Power Coat Color: To be determined by the Architect.
        11. Anodized: Qualanod standard.

\*\* NOTE TO SPECIFIER \*\* Nine standard colors. See manufacturer's website for more information.

Color: \_\_\_\_\_\_\_\_.

Color: As indicated drawings:

Color: To be determined by the Architect.

Surface treatment: Chemical Etching.

Surface Treatment: Bead blasting.

Surface treatment: Brushing.

* + 1. Technical Characteristics:
       1. Acoustic Performance: Up to 34 dB.
          1. Improved sound insulation for better working conditions in the office environment.
          2. Greater soundproofing for comfortable resting in residential houses.
          3. Special PE foamed inserts.
          4. Soundproof fillings.
          5. Increased Glazing Thickness: Up to 2-1/8 inch (54 mm).
       2. Thermal insulation,
          1. Uw IGU: 44 mm, 6-14 Ar-4-14 Ar-6: 1.51 m2 O n / W.
          2. Uf : 2.06 W / m2 O n.
          3. Profiles with Anti-Bi-Metal Thermal Bridges:

Compensate for changes that occur with temperature differentials.

* + - * 1. Foamed inserts in profile chambers.
        2. Foamed thermal support insulator in glazing chamber.
        3. Multi-chambered Polyamide thermal break: 1.1 inches (28 mm).
        4. EPDM foam gasket for glazing units.
        5. Glazing chamber able to accommodate energy-efficient glazing up to 2-1/8 inch (54 mm).
        6. Two contours for enclosed leaf sealing gaskets.
        7. Exception of the frost penetration into the premises.
        8. Absence of condensation on the inside of the door.
      1. Air Tightness: Class A. Water Tightness; Outward Opening: Class A 0.174 psi (1200 Pa). Wind Load Resistance: Class A.
         1. Comfortable indoor climate without humidity and temperature drops.
         2. No leakage or draughts
         3. Absence of mold, fungi, etc.
         4. Exclusion of dust, gases and other harmful compounds from the outdoors
         5. Corner Connections and Sealing: Polyamide piece with access to seal corner section.

Two-component polyurethane adhesive for corner connectors.

Anti-Corrosion Silicone Sealant: UV-resistant sealant is used to connect corner elements without altering the geometry of the angle and minimize visual changes in bonding when joining the profiles.

* + - * 1. Sealing of Transom Junctions:

Polyamide corner connection piece with access to seal corner section

Special support made of foamed PE material.

Polyamide corner piece which is possible to install after the profile has been assembled.

* + - * 1. Sealing Double Doors:

End cap in the area where the leaf and threshold abut.

Prevents ingress of water.

Reduces draught.

* + - * 1. Enclosed Gasket System:

Two contours of enclosed sealing gaskets run along full perimeter of leaves.

External leaf gasket.

Internal frame and threshold gasket.

* + - 1. Drainage and Ventilation:
         1. Visible drainage for condensation.

Drainage cap with valve. Aesthetic design; increases air and water resistance.

Concealed drainage for condensation in door leaf and transom.

Additional invisible option for water removal.

Absence of visual drainage elements on the surface of the door give a better aesthetic performance.

Increased air resistance performance.

* + - 1. Max Glazing Thickness: 2-1/8 inch (54 mm).
      2. Sash Dimensions (WxH): 51-3/16 x 98-7/16 inch (1300 x 2500 mm) maximum.
      3. Max sash weight: Up to 551.16 lbs (250 kg).
      4. Safety and Security:
         1. Additional Burglar Resistant Elements:

Multipoint locking.

Concealed barrel hinges. Prevent possibility of loosening hinges and removing door leaf.

Burglar Resistant Glazing Beads: Configuration and fixation of beads prevents detachment under impact load, as well as possibility to remove glazing unit from sash.

* + - * 1. Panic Hardware: For emergency door exits.

Provision to install different types of panic hardware to the leaves.

Meets requirements for fire and emergency exits in public buildings.

Reduces time required to evacuate from premises in case of emergency.

* + 1. Durability:
       1. High intensity of door operation.
       2. Door hinges and drop-down thresholds. Designed for 1,000,000 open-close cycles.
       3. Locks: ensure smooth operation in any conditions.
       4. Cast Aluminum corner Connectors: ensure consistent sash geometry during door operation.
       5. Excellent corrosion resistance; over 50 years.
       6. Long-lasting durability without the need of hardware adjustment.
       7. Resistance of coating to various weather conditions.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until substrates have been properly constructed and prepared.
      2. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.
   2. PREPARATION
      1. Clean surfaces thoroughly prior to installation.
      2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
   3. INSTALLATION
      1. Install in accordance with manufacturer's instructions approved submittals and in proper relationship with adjacent construction.
         1. Add other items such as tolerances if applicable; do not include step-by-step installation instructions
   4. FIELD QUALITY CONTROL
      1. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

\*\* NOTE TO SPECIFIER \*\* Include if manufacturer provides field quality control with onsite personnel for instruction or supervision of product installation, application, erection or construction. Delete if not required.

* + 1. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.
  1. CLEANING AND PROTECTION
     1. Clean products in accordance with the manufacturers recommendations.
     2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION