SECTION 08 32 13

SLIDING ALUMINUM - FRAMED GLASS DOORS

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\*\* NOTE TO SPECIFIER \*\* Novatech Group; Patio Doors, Entry Doors and Insulated Glass.
This section is based on the products of Novatech Group, which is located at:160 MuranoSainte-Julie, QC, Canada J3E 0C6Tel: 450-922-6106Fax: 450-922-9633Email: [request info (marketing@groupenovatech.com)](https://arcat.com/rfi?action=email&company=Novatech%252BGroup&message=RE%253A%2520Spec%2520Question%2520(08162sun)%253A%2520&coid=51586&spec=08162sun&rep=&fax=450-922-9633)
Web: <https://www.groupenovatech.com>
 [ [Click Here](https://arcat.com/company/novatech-group-51586) ] for additional information.
The Novatech Group designs and manufactures architectural products for residential, commercial, and institutional markets. We are Canadian leaders in entry doors, door glass, patio doors, as well as glass products. Our development aims for excellence, automation, and innovation at all levels.

1. GENERAL
	1. SECTION INCLUDES

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

* + 1. Sliding aluminum - framed glass doors.:
	1. RELATED SECTIONS

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

* + 1. Section 06 10 00 - Rough Carpentry.
		2. Section 08 15 73 - Sliding Plastic Doors.
		3. Section 08 35 13.13 - Accordion Folding Doors.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. AAMA/WDMA/CSA 101/I.S.2/A440 - NAFS - North American Fenestration Standard/Specification for windows, doors, and skylights.
		2. CSA A440S1 - Canadian Supplement to AAMA/WDMA/CSA 101/I.S.2/A440-17, North American Fenestration Standard/Specification for windows, doors, and skylights.
		3. U.S. Department of Energy - Energy Star Windows Program.
		4. National Resources Canada - Energy Star Windows Program.
	1. 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 selection samples if colors have already been selected.

* + 1. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
		2. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.
		3. Shop Drawings: Include elevations of each opening and 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. Delete if not required.

* + 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. SEQUENCING
		1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
	5. WARRANTY
		1. Manufacturer's Warranty: Provide manufacturer's standard limited warranty.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Novatech Group, which is located at:160 MuranoSainte-Julie, QC, Canada J3E 0C6Tel: 450-922-6106Fax: 450-922-9633Email: [request info (marketing@groupenovatech.com)](https://arcat.com/rfi?action=email&company=Novatech%252BGroup&message=RE%253A%2520Spec%2520Question%2520(08162sun)%253A%2520&coid=51586&spec=08162sun&rep=&fax=450-922-9633);Web: <https://www.groupenovatech.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.
	1. PERFORMANCE AND DESIGN REQUIREMENTS
		1. Testing Performance Standards: Except as otherwise indicated, requirements for thermally-broken aluminum doors, terminology and standards of performance and fabrication workmanship are those specified and recommended in AAMA/WDMA/CSA101/I.S.2/ A440-17 (NAFS-17) and CSA A440S1-19
			1. Air Infiltration Test: With the door closed and latched, the Air Leakage Resistance test was performed in accordance with Clause 9.3.2 in conjunction with ASTM E283-04, "Standard Test Method for Determining Rate of Air Leakage through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences across the Specimen".
				1. Air infiltration testing was performed using a test pressure of 1.57 psf (75 Pa) and/or 6.24 psf (300 Pa).
				2. The air leakage rate was calculated and compared to the allowable air leakage.
			2. Water Resistance Penetration Test: With the door closed and latched, a four-cycle Water Penetration Resistance test was performed in accordance with Clause 9.3.3 in conjunction with ASTM E547-00 "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference".
				1. The test was performed using the specified pressure differential and a water spray rate of at least 5.0 gal / sq ft / hour (204 L / sq m / hour).
				2. Each cycle consisted of five minutes with the pressure applied and one minute with the pressure released, during which the water spray was continuously applied.
			3. Uniform Load Structural Test: Per A Uniform Load Structural test was conducted in accordance with Clause 9.3.4.3 and ASTM E330-02 "Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference," Procedure A.
				1. After a 10 second preload (50 percent of test load), followed by 1 minute with the pressure released, the sample was subjected to a Uniform Load Structural test using a specified test pressure for a time of 10 seconds.
				2. The test was performed in the positive and negative directions.
				3. After the test loads were released, the permanent deflections were recorded as well as the sliding door was inspected for failure or permanent deformation of any part of the sliding door system that would cause any operational malfunction.
		2. Configuration: OX or XO. Door Size: Up to 95 x 94 inches (2413 x 2388 mm)
			1. Door Details: Standard Interlock with standard 2-5/8 inch (67 mm) sill.
				1. Performance Grade and Class: LG-PG40

Air Leakage: 0.06 cfm/sq ft (0.3 L/s.m^2).

Pass at 6.24 psf (300 Pa).

Water Penetration Resistance: 10.5 psf (510 Pa)

Design Pressure: +/- 40 psf (+/-1920 Pa)

* + - 1. Door Details: Internally-reinforced interlock stiles. Reinforced with ergonomic stiffener bar. Sill Height: 2-5/8 inch (67 mm).
				1. Performance Grade and Class: LG-PG50

Air Leakage: 0.06 cfm/sq ft (0.3 L/s.m^2).

Pass at 6.24 psf (300 Pa).

Water Penetration Resistance: 10.5 psf (510 Pa).

Design Pressure: +/-50 psf (+/-2400 Pa).

* + - 1. Door Details: Externally-reinforced interlock stiles. Reinforced with ergonomic stiffener bar. Sill Height: 2-5/8 inch (67 mm).
				1. Performance Grade and Class: LG-PG60 and CW-PG60

Air Leakage: 0.06 cfm/sq ft (0.3 L/s.m^2).

Pass at 6.24 psf (300 Pa).

Water Penetration Resistance: 10.5 psf (510 Pa).

Design Pressure: +/-60 psf (+/-2880 Pa).

* + 1. Configuration: OX or XO. Door Size: Up to 122 x 96 inches (3099 x 2438 mm)
			1. Door Details: Externally-reinforced interlock stiles. Reinforced with ergonomic stiffener bar. Sill Height: 2-5/8 inch (67 mm).
				1. Performance Grade and Class: AW-PG40

Air Leakage: 0.25 cfm/sq ft (1.4 L/s.m^2).

Pass at 6.24 psf (300 Pa).

Water Penetration Resistance: 10 psf (480 Pa).

Design Pressure: +/-40 psf (+/-1920 Pa).

\*\* NOTE TO SPECIFIER \*\* U-factor of the sliding door system was determined using the simulation procedure specified in NFRC 100 and the SHGC was determined using simulation procedures specified in NFRC 200. The simulation was conducted to NFRC 100 and NFRC 200 using specialized computer simulation software that was developed by the Lawrence Berkeley National Laboratory and is consistent with the ISO 15099 standard.

* + 1. Energy Performance
			1. Glass Package: Low-E 272 (4 mm) (S No. 2)
				1. Condensation Resistance (Temperature Index): 43.
				2. U-Value: 0.37 Btu/h x sq ft x degree F (2.10 W/ sq m x degree K)
				3. SHGC: With Grids: 0.29. Without Grids: 0.33
			2. Glass Package: Low-E 272 (6 mm) (S No. 2)
				1. Condensation Resistance (Temperature Index): 43.
				2. U-Value: 0.36 Btu/h x sq ft x degree F (2.04 W/ sq m x degree K)
				3. SHGC: With Grids: 0.29. Without Grids: 0.32
			3. Glass Package: Low-E 366 (6 mm) (S No. 2)
				1. Condensation Resistance (Temperature Index): 43.
				2. U-Value: 0.35 Btu/h x sq ft x degree F (1.99 W/ sq m x degree K)
				3. SHGC: With Grids: 0.20. Without Grids: 0.22
			4. Glass Package: Low-E 366 (6 mm) (S No. 2)
				1. Condensation Resistance (Temperature Index): 43.
				2. U-Value: 0.31 Btu/h x sq ft x degree F (1.76 W/ sq m x degree K)
				3. SHGC: With Grids: 0.19. Without Grids: 0.22
			5. Glass Package: Low-E i89 (6 mm) (S No. 4)
				1. Condensation Resistance (Temperature Index): 43.
				2. U-Value: 0.31 Btu/h x sq ft x degree F (1.76 W/ sq m x degree K)
				3. SHGC: With Grids: 0.19. Without Grids: 0.22
		2. Acoustical Performance:
			1. 4 mm Tempered - 4 mm Tempered: STC: 30
			2. 6 mm Tempered - 6 mm Tempered: STC: 32
			3. 6 mm Tempered - 5 mm Tempered: STC: 34
			4. 6 mm Laminated - 5 mm Tempered: STC: 35
			5. 6 mm Laminated - 6 mm Laminated: STC: 39
		3. Door Features:
			1. Configurations:
				1. Standard: OX, XO; as viewed from exterior.
				2. Available: OXO, OZO, OXXO, OOX, XOO, OOXO, OOZO, OXOO, and OZOO
				3. Coordinated transoms and sidelites.
			2. Framing System
				1. Mechanically fastened thermally-broken aluminum main frame; sill, jambs and header.
				2. Thermal Break: Consists of pour-and-debridge technology.
				3. Two-Color System: Allows for different color scheme on interior and exterior.
				4. Jamb Depth: 4-9/16 inch (116 mm).
				5. Nailing fin.
			3. Panel System
				1. Mechanically-fastened, thermally-broken aluminum panel members.
				2. Thermal Break: Consists of pour-and-debridge technology.
				3. Positive interlocks.
				4. Reinforcements available depending on design pressure requirements.
			4. Frame/Panel Material Properties:
				1. Door Finishes Available:

Anodic coating; meets AAMA 611.

Duracron; meets AAMA 2603.

AcrynarFX; meets AAMA 2604.

Duranar; meets AAMA 2605.

Powder coat painted profiles (meets AAMA 2604/2605)

* + - * 1. Colors: Available in a wide range of UV stable colors)
			1. Available Hardware:
				1. Heavy-duty tandem wheel, adjustable roller system.
				2. Single-point lock with interior thumb-turn.
				3. Elite Handle: Roto Fasco 9300.
				4. Hardware Color: White.
				5. Hardware Color: Black.

\*\* NOTE TO SPECIFIER \*\* The remaining items are optional

* + - * 1. Multi-point lock.
				2. Keyed lock.
				3. Upgrade to Contemporary Handle: Roto Fasco 9900.
				4. Hardware Color: Satin Nickel.

\*\* NOTE TO SPECIFIER \*\* Various glazing, tinting and thickness options. Contact the manufacturer for more information.

* + - 1. Glazing:
				1. Channel-Glazed IGU: 1 inch
				2. Low-E with argon gas.
				3. Glazing: \_\_\_\_\_\_\_\_.
				4. Tinting: \_\_\_\_\_\_\_\_.
				5. Thickness: \_\_\_\_\_\_\_\_.
			2. Muntins: Internal.
			3. Muntins: Simulated divided lites.
			4. Screens: Fiberglass screen mesh.
			5. Screens: Aluminum screen mesh.
			6. Screens: Pet-friendly screen mesh.
	1. MATERIAL
		1. Aluminum Extrusions: All extruded sections shall be of 6065-T5 aluminum alloy.
		2. Hardware: Hardware having component parts which are exposed shall be of aluminum, stainless steel, or other non-corrosive materials compatible with aluminum.
		3. Weather-Stripping: Double weather-stripping using woven pile with polypropylene fin center.
		4. Glass: All glazing shall be glazed at the factory as follows:
			1. All units are constructed to an overall minimum thickness of 1" with two lites of tempered glass (4, 5, or 6 mm) as size and loading requires.
			2. Glazing Options: Optional glazing such as triple-glazing, tinted, laminated, reflective, low-E, argon-filled and others are available upon request.
		5. Screens: Screens frames are manufactured from extruded aluminum.
	2. FABRICATION
		1. Sliding Glass Door Members: All sash sections are constructed from extruded aluminum extrusions
			1. All aluminum main frame and panel extrusions have a nominal wall thickness between 0.060 and 0.070 inches (1.52 and 1.78 mm).
			2. Depth of frame and panel not less than 4-9/16 inches (116 mm).
		2. Sash Construction: The operating panels are constructed from thermally-broken, extruded aluminum. The vertical interlock stiles may be additionally reinforced with 10 Ga galvanized steel stiffeners and/or aluminum stiffeners. The lock stile may also be additionally reinforced with an ergonomic aluminum stiffener. The meeting stiles consist of two interlocks containing finned pile and bulb seal weather-stripping as an integral part of both stiles.
		3. Assembly: The vinyl sliding glass door is assembled in a secure and workmanlike manner to perform as hereinafter specified. All corners of the main frame and panel are mechanically fastened.
		4. Glazing: IG Units are channel-glazed.
		5. Rollers and Roller Assembly: Moveable panels shall be fitted with rollers and roller assemblies. Rollers and roller assemblies shall be designed to provide easy movement and to adequately support the panel during extended usage without deforming or developing flat spots.
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. Comply with manufacturer's specifications and recommendations for installation of sliding door units.
		2. Set units plumb, level and true to line, without warp or rack of frames or panels. Anchor securely in place. Doors must be securely blocked and fastened.
		3. Low-expanding window/door spray foam insulation between frames of new sliding door and construction to remain, or between frames and new blocking as applicable.
		4. Set sill members and other members in bed of compound, or with joint filler or gaskets, to provide weathertight construction. Seal units following installation and as required to provide a weathertight system.
		5. Fasteners: PVC, Aluminum, stainless steel, or other materials warranted by manufacturer to be non- corrosive and compatible with sliding door members, hardware and other components of the sliding door.
	4. CLEANING AND PROTECTION
		1. Clean products in accordance with the manufacturer's recommendations.
		2. Protect installed products until completion of project.
		3. Touch-up, repair or replace damaged products before Substantial Completion.
	5. OPERATION AND MAINTENANCE
		1. Adjust operating panel and hardware to provide tight fit at contact points and at weather-stripping. Adjust also for smooth operation and a weathertight closure.
		2. Clean aluminum surfaces promptly after installation of sliding door, exercising care to avoid damage to the finish. Remove excess sealant compound, dirt, and other substances.
		3. For frame and panel cleaning, use a common window cleaner or mild detergent solution with a regular cloth. After cleaning, be sure to thoroughly rinse all surfaces with clean water to remove any detergent residue.
		4. Clean glass promptly after installation of sliding door. Remove glazing and sealant compound, dirt, and other substances.
			1. Use a common glass cleaner with a lint-free cloth or chamois.
			2. Do Not Use:
				1. Caustic or abrasive cleaner or any silicon-based solvents on the frame or panel surfaces, as they may damage or discolor the finish
				2. Petroleum-based lubricants as they may discolor the finish
				3. Insecticides (bug spray) on or near window surface. Contact of insecticides with the finish could damage or discolor the door surface.
		5. Initiate all protection and other precautions required to ensure that door units will be without damage or deterioration at time of acceptance.

END OF SECTION