

The logo for Novatech, featuring the word "Novatech" in a white, sans-serif font with a registered trademark symbol (®) to the upper right. The text is centered within a dark maroon rectangular background. Below the maroon box is a thin, horizontal white line.

2900 SERIES SLIDING GLASS DOOR
NOVATECH PATIO DOORS ONTARIO INC.
08 32 13 Sliding Aluminum-Framed Glass Doors

PART 1 – GENERAL

1.01 DISCLAIMER

NOVATECH PATIO DOORS ONTARIO INC. reserves the right to change any and all designs without notice. Due to periodic re-certification requirements, results shown may vary slightly.

1.02 PERFORMANCE CLASS:

The Aluminum 2900 sliding door (SD) system was tested to LC and CW performance class requirements of AAMA/WDMA/CSA 101/I.S.2/A440-17 (NAFS-17) and CSA A440S1-19.

1.03 TESTING PERFORMANCE STANDARDS:

Except as otherwise indicated, requirements for Aluminum doors, terminology and standards of performance and fabrication workmanship are those specified and recommended in AAMA/WDMA/CSA 101/I.S.2/A440-17 (NAFS-17) and CSA A440S1-19.

A. 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". Air infiltration testing was performed using a test pressure of 75 Pa (1.57 psf). The air leakage rate was calculated and compared to the allowable air leakage.

B. 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". The test was performed using the specified pressure differential and a water spray rate of at least 204 L/m² per hour (5.0 US gal/ft² per hour). 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.

C. 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. After a 10 second preload (50% 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. The test was performed in both the positive and negative directions. 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.

1.04 PHYSICAL PERFORMANCE

Configuration		Performance Grade and Class	Air Infiltration @ 75 Pa (1.57 psf)	Water Penetration Resistance	Design Pressure	Door Details
OX or XO	For door size measuring up to 96" x 96"	LC-PG40	A3 0.3 L/s·m ² (0.06 cfm/ft ²)	510 Pa (10.5 psf)	±1920 Pa (±40 psf)	Standard interlock stiles
OX or XO	For door size measuring up to 96" x 96"	LC-PG45	A3 0.3 L/s·m ² (0.06 cfm/ft ²)	510 Pa (10.5 psf)	±1920 Pa (±45 psf)	Internally-reinforced interlock stiles Lock stile is reinforced with ergonomic stiffener bar
OX or XO	For door size measuring up to 96" x 96"	CW-PG35	A3 0.3 L/s·m ² (0.06 cfm/ft ²)	510 Pa (10.5 psf)	±1680 Pa (±35 psf)	
OX or XO	For door size measuring up to 96" x 96"	LC-PG50 / CW-PG50	A3 0.3 L/s·m ² (0.06 cfm/ft ²)	510 Pa (10.5 psf)	±2400 Pa (±50 psf)	Externally-reinforced interlock. Lock stile is reinforced with ergonomic stiffener bar

1.05 ENERGY PERFORMANCE

Glass Package	U-value* (Btu/h·ft. ² ·°F)	SHGC*
LowE ² 272 (S#2)	1.99 W/m ² K 0.35 Btu/h·ft. ² ·°F	0.32 w/o grids 0.28 w/ grids
LowE ³ 366 (S#2)	1.93 W/m ² K 0.34 Btu/h·ft. ² ·°F	0.21 w/o grids 0.19 w/ grids
LowE ³ 366 (S#2) LowE i89 (S#4)	1.70 W/m ² K 0.30 Btu/h·ft. ² ·°F	0.21 w/o grids 0.19 w/ grids
Triple (1-3/8") LowE ² 272 (S#2,4)	1.42 W/m ² K 0.25 Btu/h·ft. ² ·°F	0.25 w/o grids 0.22 w/ grids
Triple (1-3/8") LowE ³ 366 (S#2,4) LowE i89 (S#6)	1.31 W/m ² K 0.23 Btu/h·ft. ² ·°F	0.16 w/o grids 0.14 w/ grids

* 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.

1.06 WARRANTY

Standard Product Warranty: Refer to the applicable Novatech Patio Doors Warranty.

1.07 DOOR FEATURES

A. Available Configurations

- OX, XO, OXO, OZO, XOO, OOX, OXXO, (as viewed from exterior)
- Coordinated transoms & sidelites are available

B. Framing System

- Mechanically fastened thermally-broken aluminum main frame (sill, jambs and header)
- Double polyamide strut thermal break system
- 5-5/8" jamb depth
- Two-colour system allows for different colour scheme on interior and exterior
- Heavy-duty tubular meeting rails

C. Panel System

- Mechanically fastened panel members
- Thermal breaks consists of mechanically-crimped polyamide struts and pour-and-debridge technology
- Positive interlocks
- Optional reinforcements available depending on design pressure requirements

D. Frame/Panel Material Properties

- Architectural alloy, good surface finish, high corrosion resistance
- Most commonly available as T6 temper with good formability
- Door finishes available include:
 - o Anodic coating (meets AAMA 611)
 - o Duracron® (meets AAMA 2603)
 - o AcrynarFX (meets AAMA 2604)
 - o Duranar® (meets AAMA 2605)
 - o Powder coat painted profiles (meets AAMA 2604/2605)
- All colours are available in a wide range of UV stable colors)

E. 4.) Type of hardware

- Standard precision rollers (Heavy-duty tandem wheel, adjustable roller system)
- Standard single-point lock (with interior thumb-turn)
- Optional multi-point lock
- Optional keyed lock
- Standard Handle (Roto Fasco 9900) available in White and/or Black
- Optional Handle colour (Satin Nickel)

F. Glazing

- 1" channel-glazed IGU (dual)
- Optional 1^{3/8}" triple glazing
- Argon filled, Dual or Triple-glazed
- Various glazing, tinting and thickness options available (Contact Novatech Patio Doors Office)

G. Muntin choices

- Internal or simulated divided lites

H. Screen choices

- Aluminum screen mesh (standard)
- Fiberglass screen mesh (optional)
- Pet-friendly screen mesh (optional)

PART 2 – PRODUCTS

2.01 MANUFACTURER

Novatech Patio Doors Ontario Inc.
500 Zenway Blvd
Woodbridge, Ontario L4H 0S7
905-851-1006

2.02 MATERIAL

- A. Aluminum Extrusions:** All extruded sections shall be of Aluminum with polyamide thermal breaks.
- B. Hardware:** Hardware having component parts which are exposed shall be of aluminum, stainless steel, or other non-corrosive materials compatible with aluminum.
- C. Weather-stripping:** Double weather-stripping using multi-finned pile with polypropylene fin center.
- D. Glass:** All glazing shall be glazed at the factory as follows:
- a) Units are constructed to an overall minimum thickness of 1" (dual glazed) or 1-3/8" (triple glazed) with two or three lites of tempered glass (4mm (5/32"), 5mm (3/16") or 6mm (1/4")) as size and loading requires.
 - b) **Glazing Options:** Optional glazing such as triple-glazing, tinted, laminated, reflective, low-E, argon-filled and others are available upon request.
- E. Screens:** Screens frames are manufactured from extruded aluminum.

2.03 FABRICATION

- A. Sliding Glass Door Members:** All sash sections are constructed from aluminum extrusions
- a) All aluminum main frame and panel extrusions have a nominal wall thickness of 0.070"
 - b) Depth of frame and panel shall not be less than 5 7/8".
- B. Sash Construction:** The operating panels are constructed from aluminum extrusions. The vertical interlock stiles may be additionally reinforced with extruded aluminum stiffeners on the interior of both stiles and/or an externally placed aluminum stiffener on the moving panel. 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.
- C. Assembly:** The aluminum 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.
- D. Glazing:** IG Units are channel-glazed.
- A. Rollers and Roller Assembly:** Moveable panels shall be fitted with precision 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.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Comply with manufacturer's specifications and recommendations for installation of sliding door units.
- B. 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.
- C. 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.
- D. Set sill members and other members in bed of compound to provide weathertight construction. Seal units following installation and as required to provide a weathertight system.
- E. Fasteners: 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.

3.02 OPERATION AND MAINTENANCE

- A. 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.
- B. 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.
- C. For frame and panel cleaning, use a common window cleaner or mild detergent solution with a regular cloth. Gently brush the area, dampen the cloth and wipe the entire area to remove any cleaner and dirt. After cleaning, be sure to thoroughly rinse all surfaces with clean water to remove any detergent residue.
- D. Clean glass promptly after installation of sliding door. Remove glazing and sealant compound, dirt and other substances.
 - a) Use a common glass cleaner with a lint-free cloth or chamois.
 - b) Do Not Use:
 - Caustic or abrasive cleaner or any silicon-based solvents on the frame or panel surfaces, as they may damage or discolor the finish
 - Petroleum-based lubricants as they may discolor the finish
 - Insecticides (bug spray) on or near window surface. Contact of insecticides with the finish could damage or discolor the door surface.
- E. Initiate all protection and other precautions required to ensure that door units will be without damage or deterioration at time of acceptance.

For additional information, please contact: _____

2900 Series Aluminum Sliding Door Cross-section Drawings

