

DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER) BOARD AND CODE ADMINISTRATION DIVISION NOTICE OF ACCEPTANCE (NOA)

Novum Structures, LLC. W126 N8585 Westbrook Crossing Menomonee Falls, WI 53051

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER -Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami-Dade County) and/ or the AHJ (in areas other than Miami-Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Series "HG02 Point Supported Glass (PSG)" Steel Skylight System – L.M.I.

APPROVAL DOCUMENT: Drawing No. 15-1005S, titled "Novum's Point Supported Glass System HG02 Skylight Wall System", sheets 1 through 17 of 17, dated 10/22/15, 09/28/16 and 04/10/17, with revision #3 dated 11/08/23, prepared by Computerized Structural Design, Inc., signed and sealed by Mahmoud Maamouri, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/ or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA No. 21-1228.10 and consists of this page 1 and evidence pages E-1, E-2 and E-3, as well as approval document mentioned above.

The submitted documentation was reviewed by Manuel Perez, P.E.



3/14/24

NOA No. 24-0228.03 **Expiration Date: June 01, 2027** Approval Date: March 21, 2024 Page 1

MIAMI-DADE COUNTY PRODUCT CONTROL SECTION 11805 SW 26 Street, Room 208 Miami, Florida 33175-2474 T (786) 315-2590 F (786) 315-2599 www.miamidade.gov/building

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's

A. DRAWINGS

- 1. Manufacturer's die drawings and sections. *(Submitted under NOA No. 17-0227.14)*
- Drawing No. 15-1005S, titled "Novum's Point Supported Glass System: HG02 Skylight Wall System", sheets 1 thru 17 of 17, dated 10/22/15, 09/28/16 and 4/10/17, with revision #2 dated 10/21/20, prepared by Computerized Structural Design, Inc., signed and sealed by Mahmoud Maamouri, P.E. (Submitted under NOA No. 20-1116.08)

B. TESTS

- 1. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
 - 2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
 - 3) Water Resistance Test, per FBC, TAS 202-94
 - 4) Large Missile Impact Test per FBC, TAS 201-94
 - 5) Cyclic Wind Pressure Loading per FBC, TAS 203-94

along with marked-up drawings and installation diagram of a point supported system, prepared by Intertek/Architectural Testing, Inc., Test Report No.

ATI-F2797.04-450-18, dated 12/14/16, signed and sealed by Charles L. Anderson, P.E. (Submitted under NOA No. 17-0227.14)

C. CALCULATIONS

- Anchor calculations and structural analysis, complying with FBC 7th Edition (2020), dated 02/14/17, with revision 01 dated 10/22/20, prepared by Computerized Structural Design, Inc., signed, sealed by Mahmoud Maamouri, P.E. (Submitted under NOA No. 20-1116.08)
- 2. Glazing complies with ASTM E1300-04

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER).

E. MATERIAL CERTIFICATIONS

1. Notice of Acceptance No. 20-0915.19 issued to Kuraray America, Inc. for their "SentryGlas® (Clear and White) Glass Interlayers" dated 11/19/20, expiring on 07/04/23.

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Manuel Perez, P.E. Product Control Examiner NOA No. 24-0228.03 Expiration Date: June 01, 2027 Approval Date: March 21, 2024

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's (CONTINUED)

F. STATEMENTS

1. Statement letter of conformance, complying with **FBC** 7th **Edition (2020)**, dated November 3, 2020, issued by Computerized Structural Design, Inc. signed and sealed by Mahmoud Maamouri, P.E.

(Submitted under NOA No. 20-1116.08)

2. Notification of Successor Engineer for manufacturer's NOA document per Section 61G15-27.001 of the Florida Administrative Code, notifying original engineer that the successor engineer is assuming full professional and legal responsibility for all engineering documents pertaining to this NOA, dated November 3, 2020, signed and sealed by Mahmoud Maamouri, P.E

(Submitted under NOA No. 20-1116.08)

3. Laboratory compliance letter for Test Report No. ATI-F2797.04-450-18, dated 01/20/17, issued by Intertek/Architectural Testing, Inc., signed and sealed by Charles L. Anderson, P.E.

(Submitted under NOA No. 17-0227.14)

- Proposal No. 15-2234 issued to Novum Structures, LLC by the Product Control Section, dated January 11, 2016, signed by Manuel Perez, P.E. (Submitted under NOA No. 17-0227.14)
- G. OTHERS
 - 1. Notice of Acceptance No. **20-1116.08**, issued to Novum Structures, LLC for their Series "HG02 Point Supported Glass (PSG)" Steel Skylight System L.M.I., approved on 03/11/21 and expiring on 06/01/22.

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Manuel Perez, P.E. Product Control Examiner NOA No. 24-0228.03 Expiration Date: June 01, 2027 Approval Date: March 21, 2024

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. **15-1005S**, titled "Novum's Point Supported Glass System: HG02 Skylight Wall System", sheets 1 thru 17 of 17, dated 10/22/15, 09/28/16 and 4/10/17, with revision #3 dated 11/08/23, prepared by Computerized Structural Design, Inc., signed and sealed by Mahmoud Maamouri, P.E.

B. TESTS

1. None.

C. CALCULATIONS

- 1. Anchor calculations and structural analysis, complying with FBC 8th Edition (2023), dated 02/14/17, with revision 03 dated 11/08/23, prepared by Computerized Structural Design, Inc., signed, sealed by Mahmoud Maamouri, P.E.
- 2. Glazing complies with ASTM E1300-12a

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER)

E. MATERIAL CERTIFICATIONS

1. Notice of Acceptance No. 23-0717.30 issued to Kuraray America, Inc. for their "SentryGlas® (Clear and White) Glass Interlayers" dated 08/31/23, expiring on 07/04/28.

F. STATEMENTS

1. Statement letter of conformance, complying with **FBC 8th Edition (2023)** and of no financial interest, dated December 21, 2023, issued by Computerized Structural Design, Inc. signed and sealed by Mahmoud Maamouri, P.E.

G. OTHERS

1. Notice of Acceptance No. 21-1228.10, issued to Novum Structures, LLC for their Series "HG02 Point Supported Glass (PSG)" Steel Skylight System – L.M.I., approved on 02/10/22 and expiring on 06/01/27.

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Manuel Perez, P.E. Product Control Examiner NOA No. 24-0228.03 Expiration Date: June 01, 2027 Approval Date: March 21, 2024

NOVUM'S POINT SUPPORTED GLASS SYSTEM: HG02 SKYLIGHT WALL SYSTEM(> 15° FROM VERTICAL)

SYSTEM DESCRIPTION

The Novum PSG Skylight System, HG02, (HG = Hurricane Glass) that was tested for Miami-Dade NOA consists simply of insulating glass, rotules, and silicone joints. A perimeter channel is also a tested part of the system. In some instances the channel is required for both support and weather seal. In other cases it acts only as a weather seal.

The glass is fully tempered, laminated, and insulated with an air space of 0.71" [18mm] in between the inner and outer laminated lites of the unit. The [2] outer pieces of glass are 0.25" (6mm) thick. The laminate is 0.090" (2.28mm) thick Kuraray SentryGlas The [2] inner pieces of glass are 0.375" (10mm) thick. Therefore the overall thickness is 2.15" (54.5mm). Refer to page 2 of 17 for description of glass edge seals.

The RB62-16 rotules are stainless steel fixtures that consist of a rotating head and 16mm diameter threaded rod that allow it to be mounted through a hole in the glass and, in turn, fastened to a support structure using the threaded rod. The silicone joints consist of an extruded silicone profile pushed into the 1.0" (25 mm) wide space between adjoining glass panels, and acts as a backer. This profile fills about 60% of the depth of the joint. The outer 40% of the space is filled with Dow Corning 795 silicone sealant which produces the weather tight seal.

The steel glazing arms and support HSS framework used in the test is not part of the "system". On future projects using HG02, the glazing arms and steel support framework is not governed by this NOA except as follows:

Minimum thickness of support system to be 3/16" minimum and other dimensions to be determined via appropriate stress checks according to AISC Steel Construction Manual and/or other applicable codes, designed by a licensed professional and submitted for review and inspection by the Authority Having Jurisdiction (AHJ).

Deflection of support framing not to exceed L/180.

This NOA system pertains to the glass, rotule, glazing channel & sealant joints only.



INDEX OF DRAWINGS

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17 OF 17	FABRICATION DRAWING: ROTULE COMPONENTS

SYMBOLS

SHEET NUMBER WHERE REFERENCED

(C600.X)

DESIGN PARAMETERS

FLORIDA BUILDING CODE 2023 A

TEST REPORT: F2797.04-450-18, ISSUED BY INTERTEK/ARCHITECTURAL TESTING, INC.

Design Pressure Rating	Impact Rating	
+100 PSF, -100 PSF	Large and Small Missile Impact	

TAS-201 - IMPACT TEST PROCEDURES TAS-202 - AIR LEAKAGE, WATER PENETRATION & STRUCTURAL PERFORMANCE TEST PROCEDURES TAS-203 - CYCLING TEST PROCEDURES

ASTM STANDARDS E283 - AIR INFILTRATION TEST PROCEDURE E330 - STRUCTURAL PERFORMANCE TEST PROCEDURES E331 - WATER PENETRATION; STATIC & DYNAMIC, TEST PROCEDURES E1886 - MISSILE IMPACT & CYCLIC PRESSURE TESTING - LEVEL A & LEVEL D, TEST PROCEDURE E1996 - HURRICANE DEBRIS IMPACT TESTING PROCEDURES ABBREVIATIONS NS = NEAR SIDE

FS = FAR SIDE MK. = MARK NUMBER TYP. = TYPICAL SIM. = SIMILAR OPP. = OPPOSITE HAND

> I:\PSG\2101 CALCS & TESTS\FLORIDA APPROVALS\HG02 - NOA WITH INSULATED GLASS\HG02_2023 FBC _ RENEWAL & REVISION\15-1005S, SKYLIGHT\1 OF 17.DWG



GLASS MAKE-UP:

2.15" (54.5mm) INSULATING GLASS CONSISTING OF: 1/4" (6mm) FULLY TEMPERED CLEAR 0.090" (2.28mm) SG CLEAR Kuraray SentryGlas® Interlayer 1/4" (6mm) FULLY TEMPERED CLEAR 0.71" (18mm) AIR SPACE 3/8" (10mm) FULLY TEMPERED CLEAR 0.090" (2.28mm) SG CLEAR Kuraray SentryGlas[®] Interlayer 3/8" (10mm) FULLY TEMPERED CLEAR



Limitations For Use

1) Maximum imposed design load of 100 psf when system is used as a sloped glass skylight (>15° from vertical). This is based on a factor of safety of 2 against breakage at 200 psf. Dead load of glass is not considered part of an imposed load (i.e.; glass can allowably handle 100 psf normal to its surface plus the weight of the glass).

2) Glass sizes for test



3) Maximum rectangular panel side length as defined in diagrams below:

- a) Panel type "A" is a panel with 4-rotule support: 6'-5" maximum width x 7'-11" maximum length
- b) Panel type "B" is a panel with 2-rotules and linear support along 1 glass edge: 5'-5" maximum width x 5'-5" maximum length
- c) Panel type "C" is a panel with 1-rotule and linear support along 2 glass edges: 5'-5" maximum width x 5'-5" maximum length
- 4) Maximum span between supports (i.e., distance between adjacent rotule centers or between rotule center and channel supported glass edge).
- a) For Panel type "A", the maximum span: is 5'-6" in short direction, and 6'-0" in long direction.
- b) For Panel type "B", the maximum span: is 4'-5.5" in short direction, and 4'-6" in long direction c) For Panel type "C", the maximum span: is 4'-5.5" in short direction, and 4'-11.5" in long direction
- 5) The maximum distance from center of rotule to edge of glass measured perpendicular to the glass edge, is as follows: At the closest glass edge, the maximum distance (X) can be, is 5.5". At the second closest glass edge, the distance (Y) can be is 11.5".

possibilities are not shown.



- testing or approval.
- section 1616.3.1 (6). A
- Category IV below 30'-0".

6) All polygonal shapes (including triangles, squares rhombuse trapezoids, and parallelograms) meeting the above limitations and having an overall size that fits entirely within the foot print of the rectangular test panel dimensions, are acceptable. All interior angles of non-triangular polygons must must be 60° or greater. Triangles have no angular limitations. Below are examples of panel geometric possibilities. Many other

7) Large missile testing was done and therefore the system may be used for enclosures and there is no restriction as to what elevation from the ground.

8) The Novum Hurricane PSG system that pertaining to this NOA consists simply of the insulating glass, rotules, and silicone ioints. A perimeter channel is also a tested part of the system. The steel support arms and any support framework is not part of the "system". On future projects using HG02, the support arms and steel support framework will be designed using conventional analysis methods and appropriate material design and building codes. It will not be subject to NOA

9) Support framing must not deflect more than L/180 per FBC

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10) This system can only be used for Risk Category I, II and III plus Category IV above 30'-0". It cannot be used for Risk

11) The design of this system shall consider tornado loads when applicable per Florida Building Code, Section 1609.5

PRODUCT REVISED As complying with the Florida Building Code					
NOA-No.	24-0228.03				
Expiration Da	te: 06/01/2027				
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Miami-Dade Product Control

I:\PSG\2101 CALCS & TESTS\FLORIDA APPROVALS\HG02 - NOA WITH INSULATED PSG\HG02 2023 FBC REVISION\DRAWINGS\15-10055, SKYLIGHT DWGS\2 OF 17.DWG











I:\PS6\2101 CALCS & TESTS\FLORIDA APPROVALS\H602 - NOA WITH INSULATED GLASS\H602_2023 FBC_RENEWAL & REVISION\15-1005S, SKYLIGHT\4 OF 17.DWG /2023 8:32 AM

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RENEWAL & REVISION\15-1005S, SKYLIGHT\5 OF 17.DWG NOA WITH INSULATED GLASS\HG02 CS & TESTS/FI



EDGE PANELS.

















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The support system (dashed lines) is not governed by this NOA except as follows:

Minimum thickness of support system to be 3/16" minimum and other dimensions to be determined via appropriate stress checks according to AISC Steel Construction Manual and/or other applicable codes, designed by a licensed professional and submitted for review and inspection by the Authority Having Jurisdiction (AHJ).

Deflection of support framing not to exceed L/180.

This NOA system pertains to the glass, rotule, glazing channel & sealant joints only. (solid lines)



	COMPUTERIZED STRUCTURAL DESIGN, INC. 3989 North Port Washington Road Milwaukee, WI 53217 (414) 351-5588 EE-boo1982 WAHMOUD MAAMOURI PE, # 77169 REWISION COMMENTS REVISION CO
	DRAWING DESCRIPTION: PERIMETER GASKET DETAIL
As complying with the Florida Building Code NOA-No. <u>24-0228.03</u> Expiration Date: <u>06/01/2027</u> By: <u>Mamule Mas</u> Miami-Dade Product Control	RAWN BY. DTC DTC 10APR17 HECKED BY. SWK SWK Guile: 6 = 12 TK 15-10055 HEET NUMBER:
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SG2534 EXTRUDED SILICONE GASKET

SCALE = 3X





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SGC10 EXTRUDED SILICONE ARROW SHIM

SCALE = 3X

No. 77169 STATE OF	COMPUTERIZED STRUCTURAL DESIGN, INC. 8989 North Port WaShIngton Road Milwauke, WI 53217 (414) 351-568 EP-001982 MAHMOUD MAAMOURI PE. # 77169 REVISION COMMENTS REV.NO. DATE DWG.BY CHK.BY Novum Structures LLC W126 N8585 Westbrook Crossing Menomonee Falls, WI 53051 USA T 262.255.5561 WWW.novumstructures.com info@novumstructures.com info@novumstructures.com info@novumstructures.com info@novumstructures.com info@novumstructures.com SYSTEM: HG02 SKYLIGHT
2-15-2024	
NOA-No. <u>24-0228.03</u> Expiration Date: <u>06/01/2027</u> Bui Manuel Perm	DRAWNO DESCRIPTION: FABRICATION DRAWING: ARROW SHIM DRAWN EV: DTC DTC 10APR17 10APR17 10APR17 APPROVED BY: SWK SCALE: AS NOTED TK PROJECT MUNIBER: 15-10055
14	sheet NUMBER: 13 OF 17



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	COMPUTERIZED STRUCTURAL DESION, INC. 8989 North Port Washington Road Milwaukee, WI 53217 (141) 351-5688 EB-0001982 MAHMOUD MAAMOURI PE. # 77169 PE. # 77169 VIDED CHAINEL THICKNESS & MATERIAL TO MARCH TEST. REV.NO. DATE DATE DWG.BY CHKBY Novum Structures LLC W126 N8585 Westbrook Crossing Menomone Falls, WI 53051 USA T 262.255.5561 Www.novumstructures.com Info@novumstructures.com NOVUM'S PSG GLASS SYSTEM: H002 SKYLIGHT
PRODUCT REVISED As complying with the Florida Building Code NOA-No. 24-0228.03 Expiration Date: 06/01/2027 By: Manue Manue Miami-Dade Product Control	DRAWNO DESCRIPTION: FABRICATION DRAWING: GLAZING CHANNEL AND SETTING CHAIR ORAWN BY: DTC 10APR17 OFFICIED BY: SWK SWK SOLE: APPROVED BY: SWK SOLE: APPROVED BY: 15-1005S SHEET NUMBER: 14 OF 17





	DADTALANE	DUT/O CC	DCD (0 AL	DOWNER	DDD4/0D	DUD44 00					
	PART NAME	RHT60-SS	RSB48-AL	RGW-NP	RRB16SR	RHB16-SS	RTR-SS	RTR16-SS	M16LJN-A4	RW16-SS	RW1
OVERVIEW REQUIRED	DRAWING-No.	17 OF 17	16 OF 17	16 OF 17	16 OF 17	16 OF 17	16 OF 17	17 OF 17	-	17 OF 17	17 0
SINGLE PARTS					PRE-INS	STALLED PA	RTS BY FA	BRICATOR		ENCLOSED P	ARTS BY FABR
	VIEW										

REQUIRED PART LIST

DWG-No.	PART	QTY.	DESCRIPTION	MATERIAL REFERENCE (see comp. dwg)
17 OF 17	RHT60-SS	1	ROTULE HEAD TOP	31655
16 OF 17	RSB48-AL	1	BUTTONHEAD ROTULE SLEEVE	AA6061-T6 ACC. TO ASTM B210
16 OF 17	RHB16-SS	1	M16 ROTULE HEAD BASE	31655
16 OF 17	RRB16-SR	1	ROTULE ROD BUSHING	SILICONE OR EPDM RUBBER
17 OF 17	RTR16-SS	1	20MMØ BALL JOINT HEAD w/ M16x75 THREADED ROD	316SS
16 OF 17	RGW-NP	2	GLASS CONTACT WASHER	NYLON, BLACK
16 OF 17	RTR-SS	1	TIGHTENING RING	31655
17 OF 17	RW16-TP	2	TEFLON M16 WASHER	PTFE TEFLON - WHITE
17 OF 17	RW16-SS	2	STAINLESS STEEL M16 WASHER	31655
-	M16LJN-A4	4	M16 LOW HEXAGON JAM NUT	DIN934 / ISO 4035-A4



