

# Product Evaluation Report

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## Product Manufacturer

Eastern Architectural Systems  
10030 Bavaria Road  
Fort Myers, FL 33913

## Product Name, Model and/or Description

Series HR 1000S Horizontal Roller - LMI/HVHZ  
Series HRP 1000F Horizontal Roller - LMI/HVHZ

**Code:** Current Edition of the Florida Building Code

**Compliance Method:** 61G20-3.005(1)(d) – Product Evaluation Report by a Licensed Professional Engineer

## **Product Testing, Materials and Certification:**

- Test Reports by Element Materials Technology
  - AAMA/WDMA/CSA 101/I.S.2/A440, ASTM E1886 and ASTM E1996 testing:
    - ESP009274P EAS Series HR 1000F Equal Lite 111 X 72 Insulated LAMI Glass, signed and sealed by Ramesh C. Patel, P.E., 9/4/12.
    - ESP009274P-1 EAS Series HR 1000F Equal Lite 111 X 72 Monolithic LAMI Glass, signed and sealed by Ramesh C. Patel, P.E., 9/4/12.
    - ESP009274P-2 EAS Series HR 1000F Unequal Lite 111 X 72 Monolithic LAMI Glass, signed and sealed by Ramesh C. Patel, P.E., 9/4/12.
    - ESP009274P-3 EAS Series HR 1000S Equal Lite 74 X 72 Monolithic LAMI Glass, signed and sealed by Ramesh C. Patel, P.E., 9/4/12.
    - ESP009274P-4 EAS Series HR 1000S Equal Lite 74 X 72 Insulated LAMI Glass, signed and sealed by Ramesh C. Patel, P.E., 9/4/12.
  - TAS 201, TAS 202 and TAS 203 testing:
    - ESP009274P-5 EAS Series HR1000F Equal Lite 111 X 72 Insulated LAMI Glass, signed and sealed by Ramesh C. Patel, P.E., 8/30/12.
    - ESP009274P-6 EAS Series HR1000F Equal Lite 111 X 72 Monolithic LAMI Glass, signed and sealed by Ramesh C. Patel, P.E., 8/30/12.
    - ESP009274P-7 EAS Series HR1000F Unequal Lite 111 X 72 Monolithic LAMI Glass, signed and sealed by Ramesh C. Patel, P.E., 8/30/12.
    - ESP009274P-8 EAS Series HR 1000S 74 X 72 Monolithic LAMI Glass, signed and sealed by Ramesh C. Patel, P.E., 8/30/12.
    - ESP009274P-9 EAS Series HR 1000S 74 X 72 Insulated LAMI Glass, signed and sealed by Ramesh C. Patel, P.E., 8/30/12.
- Materials:
  - Glass meets the requirements of ASTM E1300-04e01
  - Laminated Glass Interlayer:
    - Eastman Chemical Company (MA) Saflex PVB interlayer material certification per current Miami-Dade Notice of Acceptance (NOA).

## **Performance Testing Standards:**

- High Velocity Hurricane Zone (HVHZ)
  - TAS201-94, Impact Test Procedures.
  - TAS202-94, Criteria for Testing Impact & Non-Impact Resistant Building Envelope Components Using Uniform Static Air Pressure.
  - TAS203-94, Criteria for Testing Products Subjected to Cyclic Wind Pressure Loading.
- Outside High Velocity Hurricane Zone (HVHZ) including the Wind Borne Debris Region
  - AAMA/WDMA/CSA 101/I.S.2/A440-05, Standard/Specification for windows, doors, and unit skylights.
  - ASTM E1886-05, Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.



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- ASTM E1996-06 Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes.

## Product Installation Instructions:

- EAS0001, Rev. A, dated 6/12/15, signed and sealed by Robert J. Amoruso, Eastern Architectural Systems Series HR 1000S Horizontal Roller - LMI/HVHZ, Installation Anchorage Details
- EAS0002, Rev. A, dated 6/12/15, signed and sealed by Robert J. Amoruso, Eastern Architectural Systems Series HRP 1000F Horizontal Roller - LMI/HVHZ, Installation Anchorage Details

**Engineering Analysis & Evaluation:** The following evaluations, engineering and/or rational analysis/calculations have been performed.

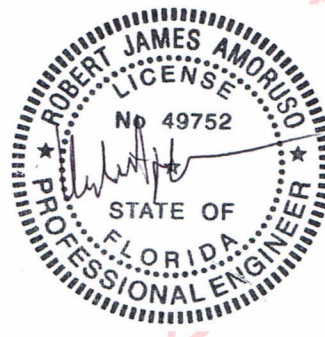
- PTC Report No. 2097, Anchorage Engineering for Eastern Architectural Systems Series HR 1000S Horizontal Roller - LMI/HVHZ and Series HRP 1000F Horizontal Roller - LMI/HVHZ, dated September 25, 2012, signed and sealed by Robert J. Amoruso, P.E.
- Equivalency Evaluation for Performance Testing Standards, PTC PDG Report No. 2098-EER, Rev. 1, dated 6/14/15, signed and sealed by Robert J. Amoruso, P.E.

## Limitations & Conditions of Use:

- This product has been evaluated for use inside the HVHZ (High Velocity Hurricane Zone).
- Refer to Product Installation Instructions noted above for:
  - Maximum allowable wind loads at related maximum allowable size(s).
  - Overall dimensions and material/grade of main product components, accessories, etc.
  - Illustrated diagrams of the attachment of the product to substrate structure.
  - Anchor type(s), size(s), substrate(s), embedment, edge distance, and spacing/locations.
- Site wind pressures shall be determined by a licensed professional engineer in accordance with the current edition of the Florida Building Code and/or ASCE 7-10 for components and cladding based on allowable stress design.
- Site conditions not covered in this product evaluation document are subject to additional engineering analysis by a licensed professional engineer or registered architect as required by the authority having jurisdiction.
- Adequacy of the existing structural substrates as a main wind force resisting system capable of withstanding and transferring applied product loads to the foundation is the responsibility of the licensed professional engineer or registered architect acting as the design professional of record for the project of installation.

## Certificate of Independence per Product Approval Rule 61G20-3.009

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Digitally signed by  
Robert J. Amoruso  
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Amoruso, o, ou=PTC  
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email=robert@ptc-  
corp.com, c=US  
Date: 2015.06.14  
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Evaluated By:  
Robert J. Amoruso, P.E.  
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