Scott A. Brown, Professional Engineer

Evaluation reports are the opinion of the evaluation entity, based on the findings, and in no way constitute or imply approval by a local building authority. I, Scott A. Brown P.E. have reviewed the data submitted by Raynor Garage Doors and in my opinion, the product, material, system, or method of construction specifically identified in this report conforms to the requirements of the 8th Edition (2023) of the Florida Building Code, subject to the limitations in this report.

Report No.: 41-B

Submitted: 06/09/23
Revised: 09/22/23

Category: Exterior Doors

Submitted By:
Raynor Garage Doors
1101 East River Road
Dixon, IL 61021

Evaluation Entity:
Scott Brown P.E.
809 E. 2nd Street
Dixon, IL 61021

Evaluation Test Standards:
ANSI/DASMA 108-2017

1. Product Trade Name

1.1 Sandwich Doors

1.1.1 ThermaSeal TM200
1.1.2 Raynor EnergyCore (EC200)
1.1.3 Raynor EnergyCore (EC224)
1.1.4 SteelForm S24
1.1.5 SteelForm S20

2. Scope of Evaluation

2.1 Structural: Transverse wind loads.

3. Uses

3.1 Raynor garage doors are used as garage doors with specified allowable transverse wind pressures.

4. Models

4.1 ThermaSeal TM200: Sections shall be sandwich-style, 2” thick insulated door panels with .013-inch-thick galvanized steel roll-formed exterior skin and .013 thick interior skins. Both skins have a stucco texture with .04” deep x .12” wide horizontal grooves. The doors are insulated with a foamed in place polyurethane foam that is chemically bonded to the interior and exterior steel skins. Available with 24” x 8 windows. Maximum door height is 10’-0”.

4.2 Raynor EnergyCore EC200: Sections shall be sandwich-style, 2” inch thick insulated door panels with tongue-and-groove section joint made from minimum 0.015-inch-thick galvanized steel roll-formed exterior skins and .015-inch-thick interior skins with a texture. The doors are insulated with expanded polystyrene foam that is bonded to the interior and exterior steel skins. Available with 24” x 8 windows. Maximum door height is 10’-0”.

4.3 Raynor EnergyCore EC224: Same as EC200 except for the exterior skin is 0.022-inch-thick galvanized roll-formed steel.

4.4 SteelForm S24: Sections shall be pan style 2” thick, roll formed from 24 ga. (.023 min.) commercial quality hot dip galvanized steel. Each door section has two deep ribs and four pencil grooves for additional strength and a tongue and groove section joint. Available with 24” x 8 windows. Maximum door height is 10’-0”.

4.5 SteelForm S20: Sections shall be pan style 2” thick, roll formed from 20 ga. (.035 min.) commercial quality hot dip galvanized steel. Each door section has two deep ribs and four pencil grooves for additional strength and a tongue and groove section joint. Available with 24” x 8 windows. Maximum door height is 10’-0”.

5. Installation

5.1 General: Raynor garage doors are to be installed in accordance with the manufacturer’s published installation instructions, engineering drawings and this report. The manufacturer’s published installation instructions and this report shall be strictly adhered to, and a copy of these instructions shall be available at all times on the job site during installation. The information within this report governs if there are any conflicts between the manufacturer’s instructions and this report.

6. Allowable Wind Loads

6.1 General: The doors shown in Table 1 were tested to ANSI/DASMA 108 for static air pressure.

Table 1

Door Model	Tested Width	Center Hinges per Sect.	Drawing Number	Design Loads (psf)		Large Missile Impact Resistant	Test Report Number	Test Date
ThermaSeal TM200	9'-2"	1	P-2605	20.1	-22.8	No	2130	4/5/2023
Raynor EnergyCore EC200				15.1	-17.1		2131	4/10/2023
Raynor EnergyCore EC224								
SteelForm S24							2129	4/4/2023
SteelForm S20								

7. Substantiating Data

7.1 Test Reports: Testing for doors shown in Table 1 were done at Raynor Garage Doors test lab in Dixon, Illinois which was accredited by ANSI National Accreditation Board (ANAB) at the time of testing, scope of accreditation can be found at http://www.anab.org. Testing was witnessed by an independent third-party Florida Registered Professional Engineer, Scott A. Brown P.E. Test reports were prepared by the test lab and signed and sealed by the witnessing Florida P.E. See Table 1 for report numbers and test dates.

7.2 Engineering Drawings: Drawings were prepared by Raynor Garage Doors under the direction of Scott A. Brown P.E. and then reviewed, signed, sealed, and dated by Scott A. Brown P.E. See Table 1 for drawing numbers.

7.3 Calculations: Calculations on jamb attachment, the results are shown on drawings listed in this report.

8. Limitations

8.1 The doors shall be installed in accordance with the manufacturer's published installation instructions in this report and the manufacturer's published installation instructions, engineering drawings and this report.

8.2 The structural elements supporting the door track brackets shall be designed by a registered professional engineer for the wind loads shown on the drawings listed in this evaluation.

8.3 The doors shall not be installed in areas where the transverse wind loads exceed the allowable loads shown in Table 1.

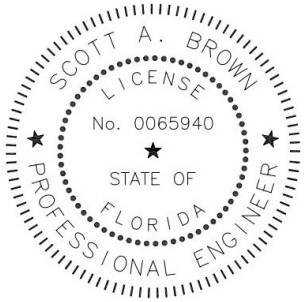
8.4 Doors listed in this report do not address the requirements of the High Velocity Hurricane Zone (HVHZ).

9. Identification

9.1 Each Raynor Garage Door covered by this report shall be labeled with the manufacturer's name, drawing number and Florida approval number for field identification.

10. Further Information

10.1 Scott A. Brown F.P.E. #65940 does not have, nor intend to acquire a financial interest in Raynor Mfg. or any other company manufacturing or distributing products for which this report is being issued; Scott A. Brown F.P.E. #65940 is not controlled by Raynor Mfg. or any other company manufacturing or distributing any portion of the product being tested, evaluated, or approved by this report.



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by Scott A Brown
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Scott A. Brown, P.E. Lic. No. 65940
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Structural Adequacy for Wind Load

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