

**Re:** Evaluation Report for Models 5140/9100/9600  
FL 9174

**Manufacturer:** Wayne Dalton, A Division of Overhead Door Corporation  
3395 Addison Drive  
Pensacola, FL 32514

One Door Drive  
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Mt. Hope, OH 44660

**Technical Contact:** Todd Clark, MSME  
Senior Product Engineer

**Date:** June 3, 2021

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## **1. PRODUCT NAME**

Models 5140/9100/9600

## **2. SCOPE OF EVALUATION**

Structural Transverse Wind Loads and Large Missile Impact and Cyclic Wind Pressure Resistance. Since every door size cannot be tested, engineering analysis using a comparative analysis, as permitted per the Florida Product approval 61G20-3, was used to analyze the doors and make the wind load designs. These doors were tested at an accredited laboratory according to ANSI/DASMA 108-2002 and ANSI/DASMA 115-2005. ANSI/DASMA 108-2002 is equivalent to ANSI/DASMA 108-2012 and ANSI/DASMA 115-2005 is equivalent to ANSI/DASMA 115-2012.

## **3. REFERENCE MATERIAL**

The following items were used to prepare the evaluation report:

- A. Florida Product Approval, FL 9174
- B. Evaluation Report, John E. Scates, P.E., dated June 10, 2011
- C. Evaluation Report, Gordon Thomas, P.E. dated December 22, 2017
- D. Wayne Dalton Drawings listed in Table 1

## **4. USES**

Models 5140/9100/9600 garage doors are used for residential applications with specified allowable design pressures.

## **5. DESCRIPTION**

### **General**

Model 5120/9100 is constructed of 30 gage, ASTM A653-20 CS Type B exterior steel skin with an ASTM A525 G-30 galvanized coating and two coats of polyester paint, a foamed in place polyurethane core, with an interior poly laminate skin, having a thickness of 1.1" for sections with a maximum height of 21" and a thickness of 1.4" for sections with a maximum height of 24". Includes foamed-in-place ribs and a stamped or flush facer design.

Model 5140/9400 is constructed of 30 gage, ASTM A653-20 CS Type B exterior steel skin with an ASTM A525 G-30 galvanized coating and two coats of polyester paint, a foamed in place polyurethane core, with an interior poly laminate skin, having a thickness of 1.4" for sections with a maximum height of 24". Includes foamed-in-place ribs and a ¼" deep recessed facer panel that may use optional decorative trim.

Model 9600 is constructed of 30 gage, ASTM A653-20 CS Type B exterior steel skin with an ASTM A525 G-30 galvanized coating and two coats of polyester paint, a foamed in place polyurethane core, with an interior galvanized and painted 32 gage skin, having a thickness of 1.4" for sections with a maximum height of 24". Includes foamed-in-place ribs and a stamped or flush facer design.

Model 6100 is constructed of 30 gage, ASTM A653-20 CS Type B exterior steel skin with an ASTM A525 G-30 galvanized coating and two coats of polyester paint, a foamed in place polyurethane core, with an interior poly laminate skin, having a thickness of 1.4" for sections with a maximum height of 24". Includes foamed-in-place ribs and a flush facer design with ½" MDF decorative overlay.

#### **Door Tracks**

All door assemblies listed in this report have both vertical and horizontal tracks from a minimum 16 gage, 33 ksi steel and finished with an ASTM A525 G-40 galvanized coating. The vertical tracks are attached to the supporting structure with jamb brackets as specified on the most recent manufacturer's installation instructions/drawings.

#### **Glazed Sections**

Glazing option is available with on select door options. See Table 1.

#### **Wind Load Bracing**

All option code assemblies listed in Table 1 of this report are either un-reinforced or braced on the inside of the doors with three-inch horizontal spanning U-bars.

Three-inch U-bars are made of either 18 gauge or 20 gage ASTM A653-20 steel with a minimum yield of 80 ksi and are finished with an ASTM A525 minimum G-40 galvanized coating.

Refer to most recent manufacturer's installation instructions/drawings for the locations of the wind load bracing specific to each option code assembly.

#### **Jamb Attachment**

Method of securing the door to the mounting surface is detailed in the Jamb Connection Supplement, P/N 324620.

### **5. INSTALLATION**

All drawings listed in this report are to be installed in accordance with the most recent manufacturer's published installation instructions/drawings and this report.

The most recent manufacturer's installation instructions/drawings shall be strictly adhered to and a copy of these instructions/drawings should be available at all times on the job site during installation.

### **6. ALLOWABLE TRANSVERSE WIND LOADS**

Design wind load pressures for garage doors shall be determined in accordance with Florida Building Code and shall not exceed the allowable transverse wind loads shown in the following table.

**Table 1: Models 5140/9100/9600**  
**Allowable Transverse Wind Loads and Impact Rating**

| Windload<br>Specification<br>Option Code | Drawing | Maximum Size |        | Positive<br>Design PSF | Negative<br>Design PSF | Glazing<br>Available<br>(Yes/No) | Impact<br>Rated<br>(Yes/No) |
|------------------------------------------|---------|--------------|--------|------------------------|------------------------|----------------------------------|-----------------------------|
|                                          |         | Width        | Height |                        |                        |                                  |                             |
| 0228                                     | 318958  | 9'-0"        | 8'-9"  | 26.90                  | 30.80                  | Yes                              | Yes                         |
| 0234                                     | 319022  | 9'-0"        | 8'-9"  | 43.20                  | 49.60                  | Yes                              | Yes                         |
| 0229                                     | 318959  | 16'-0"       | 8'-9"  | 15.30                  | 17.00                  | Yes                              | No                          |
| 0230                                     | 318960  | 16'-0"       | 8'-9"  | 25.90                  | 28.80                  | Yes                              | Yes                         |
| 0231                                     | 318996  | 16'-0"       | 8'-9"  | 30.00                  | 33.50                  | No                               | Yes                         |
| 0235                                     | 319023  | 16'-0"       | 8'-0"  | 39.20                  | 43.70                  | Yes                              | Yes                         |
| 0232                                     | 318999  | 18'-0"       | 8'-9"  | 12.40                  | 13.80                  | Yes                              | No                          |
| 0233                                     | 319000  | 18'-0"       | 8'-9"  | 18.50                  | 20.70                  | Yes                              | No                          |
| 0236                                     | 319024  | 18'-0"       | 8'-9"  | 30.00                  | 33.50                  | Yes                              | Yes                         |
| 0237                                     | 319025  | 18'-0"       | 8'-9"  | 39.20                  | 43.70                  | Yes                              | Yes                         |
| 0600                                     | 319026  | 9'-0"        | 10'-0" | 26.90                  | 30.80                  | Yes                              | No                          |
| 0601                                     | 319027  | 9'-0"        | 10'-0" | 41.00                  | 46.30                  | Yes                              | Yes                         |
| 0602                                     | 319028  | 16'-0"       | 10'-0" | 15.30                  | 17.00                  | Yes                              | No                          |
| 0603                                     | 319029  | 16'-0"       | 10'-0" | 23.00                  | 25.00                  | Yes                              | No                          |
| 0607                                     | 319033  | 16'-0"       | 8'-9"  | 25.90                  | 28.80                  | Yes                              | No                          |
| 0604                                     | 319030  | 16'-0"       | 8'-0"  | 39.20                  | 43.70                  | Yes                              | Yes                         |
| 0605                                     | 319031  | 18'-0"       | 10'-0" | 15.30                  | 17.00                  | Yes                              | No                          |
| 0608                                     | 319034  | 18'-0"       | 8'-9"  | 18.50                  | 20.70                  | Yes                              | No                          |
| 0606                                     | 319032  | 18'-0"       | 8'-0"  | 30.00                  | 33.50                  | Yes                              | No                          |
| 0609                                     | 319035  | 18'-0"       | 8'-0"  | 39.20                  | 43.70                  | No                               | Yes                         |

## 7. SUBSTANTIATING DATA

1. Test Report Numbers ETC-06-976-1757.1, ETC06-976-18185.0, ETC-06-976-190110.0, CTLA 1911W, CTLA 1911W-3, CTLA 2020W, and CTLA 2020W-1 by ETC Laboratories, 297 Buell Rod, Rochester, NY and Certified Testing Laboratories, Architectural Division, 7252 Norcoossee Rd., Orlando, FL conducted at Wayne-Dalton Test Facility in Penacola, Florida.
2. Both test labs were accredited at the time of testing.
3. Installation instructions and supplemental data sheets prepared by Wayne Dalton, a Division of Overhead Door Corporation.

## 8. REPORT SUMMARY

Upon review of the data submitted by Wayne Dalton, a Division of Overhead Door Corporation, it is my opinion that the models as described in this report conform with or are a suitable alternative to the code standards and sections in the Florida Building Code 7<sup>th</sup> Edition (2020).

## 9. LIMITATIONS

Any reference in this report to the manufacturer's "most recent" information is a direct reference to the most recent information submitted by Wayne Dalton, a Division of Overhead Door Corporation to the Florida Building Commission as part of their Florida Product Approval application for the drawings listed in Table 1 of this report. This evaluation report and the most recent installation instructions, when required by the building official, shall be submitted at the time of permit application.

The design of the supporting structural elements shall be the responsibility of the design professional for the building structure and in accordance with current building codes for the loads listed in Table 1 of this report. The doors should not be located in areas where the transverse wind loads exceed the allowable loads shown in Table 1 of this report.

#### 10. IDENTIFICATION

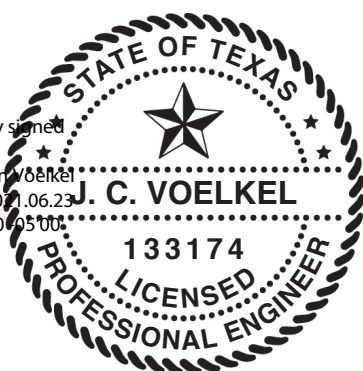
Each Model series covered by this report shall be labeled with the manufacturer's name and/or trademark for field identification.

Please feel free to contact me if you need any additional information.

Sincerely,

John  
Christian  
Voelkel

Digitally signed  
by John  
Christian Voelkel  
Date: 2021.06.23  
11:43:50 -0500



Christian Voelkel  
FL PE 82229