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Evaluation reports are the opinion of the engineer who prepared the report, based on the findings, and in no way constitute or imply approval by a local building authority. The engineer, in review of the data submitted, finds that, in his opinion, the product, material, system, or method of construction specifically identified in this report conforms with or is a suitable alternate to that specified in the Florida Building Code, SUBJECT TO THE LIMITATIONS IN THIS REPORT

Jeffrey P. Arneson, an employee of Jax Apex Technology, Inc. (Apex Technology), is the authorized evaluating engineer of this report. Apex Technology is the prime professional, as defined in Florida Rule 61G-30.002, authorized to sell the engineering services performed by Jeffrey P. Arneson, and is in no way acting, nor attempting to act, as an approved evaluation entity. Neither Jeffrey P. Arneson, nor any other employee of Apex Technology, has performed calculations or testing for the products listed in this report. This evaluation is based solely upon the review, under the direct supervision of Jeffrey P. Arneson, of testing, installation drawings, and/or calculations submitted by the manufacturer.

The capacities listed in this report are based on the limiting capacities as determined from the substantiating data. We reviewed the substantiating data to a degree that allowed us to determine whether or not the work performed is consistent with the intended use of the product, and that the methods used are in compliance with, or meet the intent of, the Florida Building Code. All test reports were prepared by an approved testing laboratory.

REPORT NO: WD05108

CATEGORY: Doors

SUBMITTED BY:

Wayne Dalton, A Division of Overhead Door (Wayne-Dalton)
3395 Addison Drive
Pensacola, FL 32514

1. CERTIFICATION OF INDEPENDENCE

Jeffrey P. Arneson, the Florida engineer who prepared this report, and Apex Technology have no financial interest in the manufacturing, sales, or distribution of the products included in this report. Jeffrey P. Arneson and Apex Technology comply with all criteria as stated in Florida Rule 61G-20.

2. PRODUCT NAME

Models C20/C24/C2400 Garage Doors

3. SCOPE OF EVALUATION

Structural Transverse Wind Loads and Large Missile Impact and Cyclic Wind Pressure Resistance.

4. USES

Models C20/C24/C2400 garage doors are used for commercial applications with specified allowable design pressures.

5. DESCRIPTION

General

Model C20/C24/C2400 series doors are sectional doors constructed of ASTM A653 CS Type B steel finished with an ASTM G-60 galvanized coating and covered with two coats of polyester paint. The Model C2400 has a minimum 25 gage skin, Model C24 has a minimum 24 gage skin, and Model C20 has a minimum 20 gage skin. Each section is reinforced with 20 gage end and center stiles and connected together with 14 gage center hinges and either 14 or 11 gage end hinges. Model C2400/24/20 series doors are 2-inch thick sections available in insulated or non-insulated panels.

Aluminum full view section shall be constructed of 6063-T6 extruded aluminum. Each section shall be comprised of vertical and horizontal aluminum extrusions and shall have a 2-1/4" integral fin across the section.

Door Tracks

All door assemblies listed in this report have both vertical and horizontal tracks ranging from a minimum 15 gage to minimum 12 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.

Wind Load Bracing

All option code assemblies listed in Table 1 of this report are braced on the inside of the doors with either three-inch horizontal spanning U-bars, six-inch horizontal spanning C-channels, or a combination thereof.

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

Six-inch C-channels are made of 16 gage ASTM A653 steel with a minimum yield of 50 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.

Glazing

Glazing option is available with a minimum of 0.125-inch thick DSB glass windows that may be installed in the intermediate sections of the door. Glazing shall have a maximum height of 6.70" and a maximum length of 24.00"

6. INSTALLATION

All option code assemblies 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 shall be available at all times on the job site during installation.

7. ALLOWABLE TRANSVERSE WIND LOADS

Design wind load pressures for garage doors shall be determined in accordance with section 1609 of 7th Edition Florida Building Code and shall not exceed the allowable transverse wind loads shown in the following tables:

Table 1: Models C20/C24/C2400 Allowable Transverse Wind Loads

Option Code	Positive Design PSF	Negative Design PSF	Maximum Size		Glazing available	AFV available	Door Impact Resistant
			Width	Height			
2000	20.90	23.60	9'-2"	24'-1"	Yes	Yes	No
2001	28.40	32.20	9'-2"	24'-1"	Yes	Yes	No
2002	37.50	42.50	9'-2"	24'-1"	Yes	Yes	Yes
2003	44.00	49.80	9'-2"	24'-1"	Yes	Yes	Yes
2010	11.70	13.30	10'-2"	24'-1"	Yes	Yes	No
2011	20.90	23.60	10'-2"	24'-1"	Yes	Yes	No
2012	37.50	42.50	10'-2"	24'-1"	Yes	Yes	Yes
2013	44.00	49.80	10'-2"	24'-1"	Yes	Yes	Yes
2020	11.40	12.70	12'-2"	24'-1"	Yes	Yes	No
2021	23.70	26.60	12'-2"	24'-1"	Yes	Yes	No
2022	31.60	35.40	12'-2"	24'-1"	Yes	Yes	Yes
2023	44.00	49.80	12'-2"	24'-1"	Yes	Yes	Yes
2030	11.40	12.70	14'-2"	24'-1"	Yes	Yes	No
2031	20.20	22.70	14'-2"	24'-1"	Yes	Yes	Yes
2040	11.40	12.70	16'-2"	24'-1"	Yes	Yes	No
2041	20.20	22.70	16'-2"	24'-1"	Yes	Yes	No
2042	31.60	35.40	16'-2"	24'-1"	Yes	Yes	Yes
2043	44.00	49.80	16'-2"	24'-1"	Yes	Yes	Yes
2050	20.20	22.70	24'-2"	24'-1"	Yes	No	No
2051	31.60	35.40	24'-2"	24'-1"	Yes	No	Yes

8. SUBSTANTIATING DATA

For models C20/C24/C2400, Test Report Number ETC-07-976-19530.1 and CTLA1911W-4 in accordance with ANSI/DASMA 108-2002 for transverse wind loads and ANSI/DASMA 115-2005 for large missile impact resistance by ETC Laboratories, 297 Buell Road, Rochester, N.Y and Certified Testing Laboratories, 7252 Narcoossee Road, Orlando, FL.

Installation drawings and installation instructions prepared by Wayne-Dalton for each option code assembly listed in Table 1 of this report.

9. CODE REFERENCES

7th Edition Florida Building Code

Section 1609	Wind Loads
Section 1709.5.2	ANSI/DASMA 108
Section 1609.1.2.3	ANSI/DASMA 115

10. REPORT SUMMARY

Upon review of the data submitted by Wayne-Dalton, 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 7th Edition Florida Building Code listed in section 9 of this report.

11. 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 to the Florida Building Commission as part of their Florida Product Approval application for the option code assemblies 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 shall not be located in areas where the transverse wind loads exceed the allowable loads shown in Table 1 of this report.

The garage door assemblies listed in Table 1 of this report are not approved for use in the "High Velocity Hurricane Zone" as defined in the Florida Building Code.

12. IDENTIFICATION

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

