

Product Evaluation

GDR138 | 0520

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: GDR-138

Effective Date: May 1, 2020

Re-evaluation Date: May 2024

Product Name: Commercial BuildMark, Commercial TradeMark, Aspen AP138C, Aspen AP200C, AlumaView AV200, AlumaView AV300, TH160, TM175, TM200, FlexFit 175, SteelForm S24, and SteelForm S20 Commercial Steel Sectional Garage Doors, Impact Resistant

Manufacturer: Raynor Garage Doors
1101 East River Road
Dixon, IL 61021
(800) 472-9667

General Description:

The garage doors listed in this evaluation report are for commercial use and are impact resistant. This evaluation report includes the following door series:

- Commercial BuildMark: pan-style, steel sectional doors
 - 26-gauge construction
 - 2" thick door sections
 - Wood-grain texture.
 - 2" track and rollers (with 3" optional)
 - Tongue-and-groove section joint.

- Commercial TradeMark: pan-style, steel sectional doors
 - 24-gauge construction
 - 2" thick door sections
 - Wood-grain texture.
 - 2" track and rollers (with 3" optional)
 - Tongue-and-groove section joint.

- Aspen AP138C: sandwich-style, steel sectional doors
 - 27-gauge exterior / 27-gauge interior construction
 - 1-3/8" thick door sections
 - Polyurethane insulation
 - Wood-grain texture.
 - 2" track and rollers (with 3" optional)
 - Tongue-and-groove section joint.

- Aspen AP200: sandwich-style, steel sectional doors
 - 27-gauge exterior / 27-gauge interior construction
 - 2" thick door sections
 - Polyurethane insulation
 - Wood-grain texture.
 - 2" track and rollers (with 3" optional)
 - Tongue-and-groove section joint.

- AlumaView AV200: extruded aluminum sectional doors
 - Full-view style
 - 2" thick door sections
 - 2" track and rollers (with 3" optional)
 - Tongue-and-groove section joint.

- AlumaView AV300: extruded aluminum sectional doors
 - Full-view style
 - 3" thick door sections
 - 2" track and rollers (with 3" optional)
 - Tongue-and-groove section joint.

- TH160 / TM175 / TM200 sandwich-style, steel sectional doors
 - TH160
 - 27-gauge exterior / 27-gauge interior construction
 - 1.65" thick door sections
 - TM175
 - 25-gauge exterior / 27-gauge interior construction
 - 1.75" thick door sections

- TM200
 - 27-gauge exterior / 27-gauge interior construction
 - 2" thick door sections
- ALL
 - Polyurethane insulation.
 - Stucco texture with horizontal grooves.
 - 2" track and rollers (with 3" optional)
 - Ship lap section joint.
- SteelForm: pan-style, steel sectional doors
 - Model S24: 24-gauge pan
 - Model S20: 20-gauge pan
 - 2" thick door sections
 - Horizontal features: Two deep ribs and four pencil grooves
 - 2" track and rollers (with 3" optional)
 - Tongue-and-groove section joint.
 - Compatible with AlumaView sections of same thickness.

Hardware:

The hardware requirements vary by construction. Refer to the drawing for detailed information.

Glazing:

Glazing is available with many of the doors. Each design drawing includes specific information regarding glazing construction, daylight opening size, and attachment of glazing to the door section. The glazing is impact resistant.

Product Identification: The doors have warning labels applied during manufacturing.

The doors will also have a second label, applied by the installer, that includes the manufacturer's name; the Series/Model number; the allowable design pressure rating; the design drawing number; and the test standards (ANSI/DASMA 108, ANSI/DASMA 115, Impact Rated).

Limitations:

The doors are impact resistant.

Some door options include glazing.

The doors do not contain louvers.

The maximum height of each door section must not exceed 26-1/2". Refer to the design drawings for the actual height for a specific door.

The doors have a maximum width as shown on Sheet 1 of each design drawing. Refer to Tables 1-12 in this evaluation report.

The doors have a maximum allowable height of 24'. Refer to the design drawings for the actual height for a specific door.

Design Pressures: The design pressure ratings for the door are specified in Tables 1-12 and on the design drawings.

Impact protection: These doors have been tested for windborne debris resistance. An impact protective system is not required.

Installation:

General: The doors must be installed in accordance with the manufacturer's published installation instructions, design drawings (signed, sealed, and dated by John E. Scates, P.E) and this product evaluation report.

Design Drawings: Install the doors as specified on the design drawings. The manufacturer will provide the design drawings with the door. John E. Scates, PE sealed each page of the design drawings. The first page of the design drawing has the seal date. Each drawing is sealed March 31, 2020. The drawing number and revision (A, B, or C) are specified in Tables 1-12. The following information is provided on the design drawings:

- Product Description
- Drawing Number
- Model Numbers
- Design Pressure Ratings
- Maximum Width and Maximum Height

A copy of the design drawings must be available at all times at the job site during installation.

The information within this evaluation report governs if there are any conflicts between the manufacturer's instructions and this evaluation report.

Interior reinforcement hardware configurations will vary based on the garage door dimensions and wind pressure requirements. Refer to Tables 1-12 for maximum allowable door dimensions, allowable design pressures, and applicable drawings. Required reinforcement configurations are shown in the drawings.

The rated design pressures may not be achieved unless the door is held closed during the wind event. The door must be locked closed, or alternately an electric drawbar operator attached to the door prior to the wind event. On doors up to 9' wide, one track must be engaged with a lock. On wider doors, both tracks must be engaged with a lock (right and left side).

Attachment of Doors to Wall Framing:

The door track is designed to be attached to minimum Douglas Fir-Larch dimension lumber (Specific Gravity 0.48) or better. This may be accomplished by securing a minimum Douglas Fir-Larch 2x6 to the building as shown on sheets 1 and 2 of each drawing. Details for wood-framed

openings and concrete openings are included on the drawings. For other wall construction, DASMA Technical Data Sheet, TDS-161 may be used.

Gypsum wallboard is not permitted beneath the wood 2x6. The wood 2x6 must directly contact the structural material of the wall.

For the doors listed in Tables 8 through 12, the door is provided with 1" of overlap at the jambs (example 9'-2" wide rather than 9'-0" wide). The door track may be attached directly to steel, grout-filled CMU, and concrete walls as detailed on Sheet 2 of these drawings. When ordering this product for direct attachment, be sure to specify the proper track (angle-out, angle-in, or bracket mount) as required to meet edge distance requirements for fasteners and anchors.

Note: Keep the manufacturer's installation instructions and the appropriate design drawings, available on the job site during installation. Use corrosion resistant fasteners as specified in the IRC, the IBC.

Table 1
Aspen AP138C / AP200C Sandwich Doors

Drawing	Model	Pattern	Maximum Width (Feet)	Maximum Door Height	Maximum Section Height	Center Hinges (min)	Design Pressure (psf)	
							Pos	Neg
P-2900-B	AP138C	All	8'-0"	10'	21"	1	+55.0	-62.0
P-2900-B	AP138C	All	9'-0"	10'	21"	1	+55.0	-62.0
P-2900-B	AP138C	Colonial	10'-0"	10'	21"	2	+39.1	-43.5
P-2900-B	AP138C	Ranch/CH	10'-0"	10'	21"	1	+39.1	-43.5
P-2900-B	AP138C	All	12'-0"	10'	21"	2	+39.1	-43.5
P-2900-B	AP138C	Colonial	14'-0"	10'	21"	4	+29.7	-33.1
P-2900-B	AP138C	Ranch/CH	14'-0"	10'	21"	2	+29.7	-33.1
P-2900-B	AP138C	All	16'-0"	10'	21"	3	+29.7	-33.1
P-2900-B	AP200C	All	8'-0"	10'	21"	1	+60.0	-65.0
P-2900-B	AP200C	All	9'-0"	10'	21"	1	+60.0	-65.0
P-2900-B	AP200C	Colonial	10'-0"	10'	21"	2	+42.8	-47.6
P-2900-B	AP200C	Ranch/CH	10'-0"	10'	21"	1	+42.8	-47.6
P-2900-B	AP200C	All	12'-0"	10'	21"	2	+42.8	-47.6
P-2900-B	AP200C	Colonial	14'-0"	10'	21"	4	+32.5	-35.9
P-2900-B	AP200C	Ranch/CH	14'-0"	10'	21"	2	+32.5	-35.9
P-2900-B	AP200C	All	16'-0"	10'	21"	3	+32.5	-35.9

Table 2
Aspen AP138C / AP200C Sandwich Doors

Drawing	Model	Pattern	Maximum Width (Feet)	Maximum Door Height	Maximum Section Height	Center Hinges (min)	Design Pressure (psf)	
							Pos	Neg
P-2901-B	AP138C AP200C	All	8'-0"	10'	24"	1	+50.0	-55.0
P-2801-B	AP138C AP200C	All	9'-0"	10'	24"	1	+50.0	-55.0
P-2801-B	AP138C AP200C	Colonial	10'-0"	10'	24"	2	+50.0	-55.0
P-2801-B	AP138C AP200C	Ranch/CH	10'-0"	10'	24"	1	+50.0	-55.0

Table 3
Aspen AP138C / AP200C Sandwich Doors

Drawing	Model	Pattern	Maximum Width (Feet)	Maximum Door Height	Maximum Section Height	Center Hinges (min)	Design Pressure (psf)	
							Pos	Neg
P-2902-B	AP138C	All	8'-0"	10'	21"	1	+66.3	-73.0
P-2902-B	AP138C	All	9'-0"	10'	21"	1	+66.3	-73.0
P-2902-B	AP138C	Colonial	10'-0"	10'	21"	2	+51.5	-60.6
P-2902-B	AP138C	Ranch/CH	10'-0"	10'	21"	1	+51.5	-60.6
P-2902-B	AP138C	All	12'-0"	10'	21"	2	+51.5	-60.6
P-2902-B	AP138C	Colonial	14'-0"	10'	21"	4	+37.0	-45.0
P-2902-B	AP138C	Ranch/CH	14'-0"	10'	21"	2	+37.0	-45.0
P-2902-B	AP138C	All	16'-0"	10'	21"	3	+37.0	-45.0
P-2902-B	AP138C	Colonial/Ranch	18'-0"	10'	21"	3	+33.4	-36.7
P-2902-B	AP138C	Colonial	20'-0"	10'	21"	5	+33.4	-36.7
P-2902-B	AP138C	Ranch	20'-0"	10'	21"	4	+33.4	-36.7
P-2902-B	AP200C	All	8'-0"	10'	21"	1	+73.5	-80.0
P-2902-B	AP200C	All	9'-0"	10'	21"	1	+73.5	-80.0
P-2902-B	AP200C	Colonial	10'-0"	10'	21"	2	+56.5	-65.5
P-2902-B	AP200C	Ranch/CH	10'-0"	10'	21"	1	+56.5	-65.5
P-2902-B	AP200C	All	12'-0"	10'	21"	2	+56.5	-65.5
P-2902-B	AP200C	Colonial	14'-0"	10'	21"	4	+45.0	-52.0
P-2902-B	AP200C	Ranch/CH	14'-0"	10'	21"	2	+45.0	-52.0
P-2902-B	AP200C	All	16'-0"	10'	21"	3	+45.0	-52.0
P-2902-B	AP200C	Colonial/Ranch	18'-0"	10'	21"	3	+33.4	-36.7
P-2902-B	AP200C	Colonial	20'-0"	10'	21"	5	+33.4	-36.7
P-2902-B	AP200C	Ranch	20'-0"	10'	21"	4	+33.4	-36.7

Table 4
Aspen AP200C Sandwich Doors

Drawing	Model	Pattern	Maximum Width (Feet)	Maximum Door Height	Maximum Section Height	Center Hinges (min)	Design Pressure (psf)	
							Pos	Neg
P-2914-B	AP200C	All	8'-0"	18'	21"	1	+60.0	-65.5
P-2914-B	AP200C	All	9'-0"	18'	21"	1	+60.0	-65.5

Table 5
Commercial BuildMark and Commercial TradeMark Pan Doors

Drawing	Model	Pattern	Maximum Width (Feet)	Maximum Door Height	Maximum Section Height	Center Stiles (min)	Design Pressure (psf)	
							Pos	Neg
P-2903-B	Com. BuildMark Com. TradeMark	All	8'-0"	16'	21"	3	+41.6	-47.1
P-2903-B	Com. BuildMark Com. TradeMark	All	9'-0"	16'	21"	3	+41.6	-47.1

Table 6
Commercial BuildMark and Commercial TradeMark Pan Doors

Drawing	Model	Pattern	Maximum Width (Feet)	Maximum Door Height	Maximum Section Height	Center Stiles (min)	Design Pressure (psf)	
							Pos	Neg
P-2904-B	Com. BuildMark Com. TradeMark	All	8'-0"	16'	21"	3	+29.7	-33.1
P-2904-B	Com. BuildMark Com. TradeMark	All	9'-0"	16'	21"	3	+29.7	-33.1
P-2904-B	Com. BuildMark Com. TradeMark	Colonial	10'-0"	16'	21"	4	+29.7	-33.1
P-2904-B	Com. BuildMark Com. TradeMark	Ranch/ CH	10'-0"	16'	21"	3	+29.7	-33.1
P-2904-B	Com. BuildMark Com. TradeMark	All	12'-0"	16'	21"	5	+29.7	-33.1
P-2904-B	Com. BuildMark Com. TradeMark	Colonial	14'-0"	16'	21"	6	+29.7	-33.1
P-2904-B	Com. BuildMark Com. TradeMark	Ranch/CH	14'-0"	16'	21"	5	+29.7	-33.1
P-2904-B	Com. BuildMark Com. TradeMark	All	16'-0"	16'	21"	7	+29.7	-33.1

Table 7
Commercial BuildMark and Commercial TradeMark

Drawing	Model	Pattern	Maximum Width (Feet)	Maximum Door Height	Maximum Section Height	Center Stiles (min)	Design Pressure (psf)	
							Pos	Neg
P-2905-B	Com. BuildMark Com. TradeMark	All	8'-0"	16'	21"	3	+37.4	-41.7
P-2905-B	Com. BuildMark Com. TradeMark	All	9'-0"	16'	21"	3	+37.4	-41.7
P-2905-B	Com. BuildMark Com. TradeMark	Colonial	10'-0"	16'	21"	4	+37.4	-41.7
P-2905-B	Com. BuildMark Com. TradeMark	Ranch/CH	10'-0"	16'	21"	3	+37.4	-41.7
P-2905-B	Com. BuildMark Com. TradeMark	All	12'-0"	16'	21"	5	+37.4	-41.7
P-2905-B	Com. BuildMark Com. TradeMark	Colonial	14'-0"	16'	21"	6	+37.4	-41.7
P-2905-B	Com. BuildMark Com. TradeMark	Ranch/CH	14'-0"	16'	21"	5	+37.4	-41.7
P-2905-B	Com. BuildMark Com. TradeMark	All	16'-0"	16'	21"	7	+37.4	-41.7
P-2905-B	Com. BuildMark Com. TradeMark	All	18'-0"	16'	21"	7	+37.4	-41.7

Table 8
AV200 Aluminum Doors
with 1-inch of Door overlap per side

Drawing	Model	Pattern	Maximum Width (Feet)	Maximum Door Height	Maximum Section Height	Center Stiles (min)	Design Pressure (psf)	
							Pos	Neg
P-2909-B	AV200	All	8'-2"	20'	26-1/2"	2	+43.0	-48.0
P-2909-B	AV200	All	9'-2"	20'	26-1/2"	2	+43.0	-48.0
P-2909-B	AV200	All	10'-2"	20'	26-1/2"	2	+43.0	-48.0
P-2909-B	AV200	All	12'-2"	20'	26-1/2"	3	+43.0	-48.0
P-2909-B	AV200	All	14'-2"	20'	26-1/2"	3	+43.0	-48.0

Table 9
AV300 Aluminum Doors
with 1-inch of Door overlap per side

Drawing	Model	Pattern	Maximum Width (Feet)	Maximum Door Height	Maximum Section Height	Center Hinges (min)	Design Pressure (psf)	
							Pos	Neg
P-2910-C	AV300	All	8'-2"	24'	26-3/16"	2	+43.0	-48.0
P-2910-C	AV300	All	9'-2"	24'	26-3/16"	2	+43.0	-48.0
P-2910-C	AV300	All	10'-2"	24'	26-3/16"	2	+43.0	-48.0
P-2910-C	AV300	All	12'-2"	24'	26-3/16"	3	+43.0	-48.0
P-2910-C	AV300	All	14'-2"	24'	26-3/16"	3	+43.0	-48.0
P-2910-C	AV300	All	16'-2"	24'	26-3/16"	3	+32.0	-36.0
P-2910-C	AV300	All	18'-2"	24'	26-3/16"	3	+32.0	-36.0

Table 10
TH160, TM175, TM200 Commercial Steel Sandwich Doors
with 1-inch of Door overlap per side

Drawing	Model	Pattern	Maximum Width (Feet)	Maximum Door Height	Maximum Section Height	Center Stiles (min)	Design Pressure (psf)	
							Pos	Neg
P-2911-B	TH160 TM175 TM200	All	8'-2"	24'	24"	1	+29.3	-32.6
P-2911-B	TH160 TM175 TM200	All	9'-2"	24'	24"	1	+29.3	-32.6
P-2911-B	TH160 TM175 TM200	All	10'-2"	24'	24"	2	+29.3	-32.6
P-2911-B	TH160 TM175 TM200	All	12'-2"	24'	24"	2	+29.3	-32.6
P-2911-B	TH160 TM175 TM200	All	14'-2"	24'	24"	3	+29.3	-32.6
P-2911-B	TH160 TM175 TM200	All	16'-2"	24'	24"	3	+29.3	-32.6
P-2911-B	TH160 TM175 TM200	All	18'-2"	24'	24"	4	+23.3	-26.0

Table 11
SteelForm (S24, S20) Commercial Steel Pan Doors
with 1-inch of Door overlap per side

Drawing	Model	Maximum Width (Feet)	Maximum Door Height	Maximum Section Height	Center Hinges (min)	Design Pressure (psf)	
						Pos	Neg
P-2913-B	SteelForm	8'-2"	24'	24"	3	+80.0	-85.8
P-2913-B	SteelForm	9'-2"	24'	24"	3	+80.0	-85.8
P-2913-B	SteelForm	10'-2"	24'	24"	4	+60.0	-74.5
P-2913-B	SteelForm	12'-2"	24'	24"	5	+60.0	-74.5
P-2913-B	SteelForm	14'-2"	24'	24"	6	+40.0	-52.0
P-2913-B	SteelForm	16'-2"	24'	24"	7	+40.0	-52.0
P-2913-B	SteelForm	18'-2"	24'	24"	8	+40.0	-52.0

Table 12
FlexFit 175
with 1-inch of Door overlap per side

Drawing	Model	Maximum Width (Feet)	Maximum Door Height	Maximum Section Height	Design Pressure (psf)	
					Pos	Neg
P-2915-A	FlexFit 175	5'-2"	12'	24"	+35.0	-37.8
P-2915-A	FlexFit 175	6'-2"	12'	24"	+35.0	-37.8
P-2915-A	FlexFit 175	7'-2"	12'	24"	+35.0	-37.8
P-2915-A	FlexFit 175	8'-2"	12'	24"	+35.0	-37.8
P-2915-A	FlexFit 175	9'-2"	12'	24"	+35.0	-37.8
P-2915-A	FlexFit 175	10'-2"	12'	24"	+35.0	-37.8