

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION

GDR-78

Effective June 1, 2013

Revised October 1, 2013

*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 shall be subject to reevaluation **September 2016**.*

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.

Series 170/180 Steel Sectional Garage Doors, Non-Impact Resistant and Impact Resistant, as manufactured by:

Overhead Door Corporation
2501 S. State Hwy 121, Suite 200
Lewisville, TX 75067
(800) 275-3290

will be accepted for use in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with this product evaluation, the manufacturer's installation instructions, and the design drawings specified in this evaluation report. Installation instructions and design drawings shall be available on the job site during installation.

PRODUCT DESCRIPTION

Series 170/180 doors are sectional overhead doors. The doors sections are constructed of ASTM A653-00 galvanized FS Type B steel. The galvanized steel sections have a two coat polyester finish. The door sections are 2-inch thick. The front panels are embossed with a textured surface. The panel joints are tongue and groove. Refer to Table 1 for series names and descriptions. Each door section is reinforced with either 20 gauge or 16 gauge box-shaped end stiles and 20 gauge box-shaped center stiles. This evaluation report includes both impact resistant and non-impact resistant doors. The door also has an option for a 1/2" non-structural decorative overlay.

PRODUCT IDENTIFICATION

The door has a windload label, which is applied during installation and includes the manufacturer's name, the Series/Model number, the design pressure rating, and whether the door is impact rated.

LIMITATIONS

This evaluation report includes both non-impact resistant and impact resistant doors.

All non-impact resistant doors have the option to include glazing.

All impact resistant doors have the option to include impact-resistant glazing.

Non-impact doors have the option to include louvers in the bottom section.

All impact resistant doors do not include louvers.

The maximum height of each door section shall not exceed 21 inches.

The doors shall have a maximum width of 18 feet.

The doors shall have a maximum height of 14 feet. Refer to the tables in this evaluation report for allowable door heights for specific doors.

The doors are reinforced with either 18 gauge or 20 gauge steel U-bars, and in some cases, a vertical wind load post is required to obtain the design pressure rating. The placement and installation of the reinforcement and wind load post are shown on the design drawings.

**Table 1
 Model Series Numbers and Design**

Section Type	Exterior Steel Thickness	Panel Design	Series Number
PAN	25ga	Short Panel	170
		Long Panel	171
		V5	175
		V12	172
	24ga	Short Panel	173
		Long Panel	174
		V5	176
		V12	177
INSULATED	25ga	Short Panel	180
		Long Panel	181
		V5	185
		V12	182
	24ga	Short Panel	183
		Long Panel	184
		Flush 1-5/8" Insul	185
		V5	186
		V12	187

Non-Impact Resistant Doors

Design drawings: Specified in Table 2.

Allowable dimensions: Specified in Table 2.

Design pressures: Table 2.

Glazing (Optional): Glass is single strength (0.090" thick) annealed monolithic in molded frames. The glass units are screwed into the door sections with ten (10) No. 8 screws. The dimensions of the glass panel shall not exceed 10.69" width by 16.94" high.

Louvers: Minimum 0.040" thick aluminum louvers in molded frames fastened to the door panels with ten (10) No. 8 screws. The louver panels are installed in the bottom section. The dimensions of the louver panel shall not exceed 10.69" width by 16.94" high.

Impact protection: These doors have not been tested for windborne debris resistance. Doors that contain glazing may not be installed in the Inland I zone without protection from an impact protective system. All doors (with and without glazing) that are installed in the Seaward zone will need to be protected with an impact protective system.

Table 2
Windload Drawing Number, Allowable Door Dimensions,
Glazing Options and Design Pressure Rating
Non-Impact Resistant Doors

Windload Drawing Number	Maximum Door Width	Maximum Door Height	Glass Option	Vertical Windload Post	Design Pressure (psf)
D-411040, Rev B, Sealed 4/5/13	9'-0"	14'-0"	Yes	No	+22.9, -26.3
D-411041, Rev B, Sealed 4/5/13	9'-0"	14'-0"	Yes	No	+26.9, -30.8
D-411042, Rev B, Sealed 4/5/13	9'-0"	14'-0"	Yes	No	+35.7, -41.0
D-411043, Rev B, Sealed 4/5/13	9'-0"	14'-0"	Yes	No	+46.0, -52.0
D-411046, Rev B, Sealed 4/5/13	16'-0"	14'-0"	Yes	No	+23.0, -25.0
D-411047, Rev B, Sealed 4/5/13	16'-0"	14'-0"	Yes	No	+30.0, -33.5
D-411048, Rev B, Sealed 4/5/13	16'-0"	14'-0"	Yes	No	+34.4, -38.3
D-411049, Rev B, Sealed 4/5/13	16'-0"	14'-0"	Yes	No	+46.0, -52.0
D-411051, Rev B, Sealed 4/5/13	18'-0"	14'-0"	Yes	No	+18.5, -20.7
D-411052, Rev B, Sealed 4/5/13	18'-0"	14'-0"	Yes	No	+34.4, -38.3
D-411053, Rev B, Sealed 4/5/13	18'-0"	8'-0"	Yes	Yes	+34.4, -38.3
D-411054, Rev B, Sealed 4/5/13	18'-0"	8'-0"	Yes	Yes	+46.0, -52.0

Impact Resistant Doors

Design drawings: Specified in Table 3.

Allowable dimensions: Specified in Table 3.

Design pressures: Table 3.

Glazing (Optional): Impact-resistant glazed window frame assemblies are shipped to the distributor as assembled units with the polycarbonate glazing installed in the overhead door window section panel under quality assurance guidelines audited by the Intertek Group, PLC. The glazing shall be minimum $\frac{1}{4}$ " polycarbonate. Each glazing lite is fastened with a minimum of ten (10) No. 8 x 1" sheet metal screws; securing the inside frame to the outside frame with two (2) screws along each vertical side located 2" from each corner, and at the head and sill with three (3) screws located 2 $\frac{1}{2}$ " from each corner and at the midpoint. The dimensions of the glazing shall not exceed 18.53" wide by 12.41" high cutout.

Louvers: Not permitted.

Impact protection: These door assemblies satisfy the Texas Department of Insurance criteria for protection from windborne debris in both the **Inland I zone** and the **Seaward zone**. The door assembly passed an impact standard equivalent to Missile Level D in ASTM E 1996-04. The door assembly may be installed on the structure as long as the design pressure rating for the assembly is not exceeded. These door assemblies will not require protection with an impact protective system. **NOTE:** The louvers are not impact resistant. They may not be used on a door that is installed to resist windborne debris.

Table 3
Windload Specification Option Code, Allowable Door Dimensions,
Glazing Options and Design Pressure Rating
Impact Resistant Doors

Windload Drawing Number	Maximum Door Width	Maximum Door Height	Glass Option	Vertical Windload Post	Design Pressure (psf)
411043, Rev B, Sealed 4/5/13	9'-0"	14'-0"	Yes	No	+46.0, -52.0
411047, Rev B, Sealed 4/5/13	16'-0"	14'-0"	Yes	No	+30.0, -33.5
411048, Rev B, Sealed 4/5/13	16'-0"	14'-0"	Yes	No	+34.4, -38.3
411049, Rev B, Sealed 4/5/13	16'-0"	14'-0"	Yes	No	+46.0, -52.0
411052, Rev B, Sealed 4/5/13	18'-0"	14'-0"	Yes	No	+34.4, -38.3
411053, Rev B, Sealed 4/5/13	18'-0"	8'-0"	Yes	Yes	+34.4, -38.3
411054, Rev B, Sealed 4/5/13	18'-0"	8'-0"	Yes	Yes	+46.0, -52.0

INSTALLATION INSTRUCTIONS

Design Drawings: The doors shall be installed as specified on the design drawings. The design drawings shall be provided with the door. Each page of the design drawings shall be signed, sealed, and dated by Mark A. Sawicki, PE. The tables indicate the date the drawings were sealed.

In addition to providing the design drawings, the following documents shall be provided with the door:

- Jamb Connection Supplement, Drawing Number 411241, Revision P3, 7 pages (including cover), signed and sealed by John E. Scates, P.E. on April 11, 2013.
- Windload Commercial Track Supplement, Drawing Number D-411059, signed, sealed, and dated February 21, 2011 by Mark A Sawicki, P.E.

Attachment of Doors to Wall (Use One of the Following Methods):

Attachment of Door Components to Steel Wall Framing: Brackets for the vertical tracks and for the flag angles of the door may be attached directly to the steel door jamb framing in accordance with the Windload Commercial Track Supplement, Drawing Number 411059, signed and sealed on February 21, 2011, by Mark A. Sawicki, P.E.

Attachment of Door Components to Wood-Framed Walls Using a Wood Jamb: Brackets for the vertical tracks and for the flag angles of the door shall be attached directly to wood jambs with the fasteners specified on the design drawings. The wood jambs and the attachment of the wood jambs to the wood-framed walls shall be as specified in the Jamb Connection Supplement, Drawing Number 411241, Rev. P3, signed and sealed on April 11, 2013 by John E. Scates, P.E.

Attachment of Door Components to Concrete/Masonry Block Walls Using a Wood Jamb: Brackets for the vertical tracks and for the flag angles of the door shall be attached directly to wood jambs with the fasteners specified on the design drawings. The wood jambs and the attachment of the wood jambs to the concrete wall shall be as specified in the Jamb Connection Supplement, Drawing Number 411241, Rev. P3, signed and sealed on April 11, 2013 by John E. Scates, P.E.

Attachment of Door Components Using Direct Mount Method: Brackets for the vertical tracks and for the flag angles of the door may be attached directly to the door jamb framing in accordance with the Jamb Connection Supplement, Drawing Number 411241, Rev P3, signed and sealed on April 11, 2013, by John E. Scates, P.E.

Note: The manufacturer's installation instructions, the appropriate design drawing, and the Jamb Connection Supplement, shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.