



Product Evaluation

GDR24 | 1215

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-24

Effective Date: December 1, 2015

Re-evaluation Date: November 2019

Product Name: Clopay Commercial Steel Sectional Garage Doors, Non-impact Resistant and Impact Resistant

Manufacturer: Clopay Building Products Company
8585 Duke Blvd.
Mason, OH 45040
(513) 770-4800

Marketed Under: Clopay
Ideal
Holmes

Distributed By: Ideal Door Company
Holmes Garage Door

General Description:

The garage doors specified in this product evaluation report are sectional overhead doors constructed from galvanized steel with a baked on polyester finish or with extruded aluminum stiles and rails with large glazed panels. The doors may be raised panel, flat, or formed with minor ribs and may have a smooth or an embossed wood grain texture. Insulated steel sectional garage doors will have an interior skin with either 1-5/16" thick, 1-3/4" thick or 2" thick, 1.0 pcf density polystyrene foam insulation or polyurethane foam insulation between the skins.

Product Identification: The garage door will have a label affixed. The label must include the manufacturer's name, manufacturing product code, and the allowable design pressure rating. To minimize inventory, use the same section construction configuration across several different wind load levels for

the same door model and size. The differences in the struts, track, and hardware that allows the same section to remain the same and be upgradeable for different wind load levels. The label will list all approved variations that are applicable to the section to construct, and each design drawing will list the equivalent sections.

Limitations:

- This evaluation report includes both non-impact and impact resistant sectional garage doors.
- Impact resistant doors may include optional glazing.
- The maximum height of each door section must not exceed 24". Refer to the design drawings for the allowable section height for a particular door.
- The doors must have a maximum allowable width of 24'-2". Refer to Tables 1 through 4 for the allowable width of the door for a particular door model.
- The doors must have a maximum allowable height of 18'.
- Tables 1 through 4 specify the design pressure rating for a particular model door.

Installation Instructions:

Design Drawings: Install the doors as specified on the design drawings. Provide the design drawings with the door. Mark W. Westerfield, PE must seal, date, and sign each page of the design drawings. The design drawings specify the seal date of the drawing. Provide the following information, as a minimum, within boxes located on each page of the design drawings:

- manufacturing product code
- brand names and model numbers
- drawing number
- drawing revision number
- design pressure rating
- maximum door size (width and height)
- maximum section height.

Attachment of Doors to Wall Framing: Attach the door track brackets either directly to the wall framing or to minimum 2x6 Southern Yellow Pine wood jambs that secure to the wall framing with fasteners. Use 2x6 Southern Yellow Pine dimension lumber for wood wall framing at a minimum. Each design drawing specifies the allowable methods of attachment and illustrations of the allowable methods of attachment.

Attachment of Door Components to Wood-Framed Walls Using a Wood Jamb: Attach brackets for the vertical tracks of the door directly to wood jambs with the fasteners specified on the design drawings. The Jamb Fastener Analysis Connecting Jamb to Existing Structure, document CBPC-JFA-0001-REV02, signed and sealed on August 20, 2013, by Mark Westerfield, P.E., specifies the attachment of the wood jambs to the wood-framed walls.

Note: Bring the manufacturer's installation instructions, the design drawings, and the Jamb Fastener Analysis Connecting Jamb to Existing Structure document to the job site during installation. Use corrosion resistant fasteners specified in the IRC, the IBC, and the Texas Revisions.

Non-Impact Resistant Doors

- **Design Drawings:** Specified in Table 1 through Table 3.
- **Allowable Dimensions:** Specified in Table 1 through Table 3.
- **Design Pressures:** Specified in Table 1 through Table 3.
- **Glazing:** The design drawings specify the glazing construction and dimensions.
- **Louvers:** Not permitted.

Impact Resistance:

Impact Resistant	Requirement
No	The doors specified in Table 1 through Table 3 have not been tested for windborne debris resistance. Do not install doors specified in Table 1 through Table 3 that contain glazing in the Inland I zone unless providing protection for the entire door with an impact protective system. Do not install any door specified in Table 1 through Table 3 in the Seaward zone unless providing the entire door with an impact protective system.

Impact Resistant Doors

- **Design Drawings:** Specified in Table 4 and Table 5.
- **Allowable Dimensions:** Specified in Table 4 and Table 5.
- **Design Pressures:** Specified in Table 4 and Table 5.
- **Glazing:** The design drawings specify the glazing construction and dimensions.
- **Louvers:** Not permitted.

Impact Resistance:

Impact Resistant	Requirement
Yes	The door assemblies specified in Table 4 and Table 5 satisfy TDI’s criteria for protection from windborne debris in the Inland I zone and the Seward zone. It is not necessary to provide an impact protective system. Impact resistant doors may have impact-resistant glazing as detailed on the design drawings.

Table 1 - Non-Impact Rated Assemblies; Clopay, IDEAL and Holmes W4 Doors

Manufacturing Product Code (all brands)	Model Numbers (Clopay)	Model Numbers (IDEAL)	Model Numbers (Holmes)	Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (psf)	Glass Option
C-PAN-1E458	525, 525V, 525S, 524, 520, 520S	C5EST, C5ST, C5ESV, C5SV, C5ESS, C5SS, C4ST, C4SV, C4SS, COST, COSS	225, 225S, 224, 224S	12'-2"	18'-0"	101856-TDI Rev. 13, 06/2013 Sealed 6/12/2013	+25.0, -25.0	Yes
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, COST, COSS	224, 224S	16'-2"	18'-0"	101886-TDI Rev. 14, 06/2013 Sealed 6/12/2013	+25.0, -25.0	Yes
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, COST, COSS	224, 224S	20'-2"	18'-0"	102126-TDI Rev. 11, 06/2013 Sealed 6/12/2013	+25.0, -25.0	Yes
C-PAN-1E448	524, 524v, 524S, 520, 520S	C4ST, C4SV, C4SS, COST, COSS	224, 224S	24'-2"	18'-0"	103333-TDI Rev. 5, 06/2013 Sealed 6/12/2013	+25.0, -25.0	Yes
C-DSIE-1F447	3200, 3220	N/A	240, 240G	12'-2"	18'-0"	101687-TDI Rev. 11, 06/2013 Sealed 6/12/2013	+25.0, -28.0	Yes
C-DISE-1F447	3200, 3220	N/A	240, 240G	20'-2"	18'-0"	101682-TDI Rev. 10, 06/2013 Sealed 6/12/2013	+25.0, -28.0	Yes
C-DISE-1F447	3200, 3220	N/A	240, 240G	24'-2"	18'-0"	103334-TDI Rev. 5, 06/2013 Sealed 6/12/2013	+25.0, -25.0	Yes
C-AL-1F499	902	C2AL	N/A	24'-2"	18'-0"	103332-TDI Rev. 5, 06/2013 Sealed 6/12/2013	+25.0, -25.0	Yes

Table 2 - Non-Impact Rated Assemblies; Clopay, IDEAL and Holmes W5 Doors

Manufacturing Product Code (all brands)	Model Numbers (Clopay)	Model Numbers (IDEAL)	Model Numbers (Holmes)	Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (psf)	Glass Option
C-PAN-1E458	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, COST, COSS	224, 224S	8'-2"	18'-0"	101874-TDI Rev. 14, 06/2013 Sealed 6/12/2013	+30.0, -30.0	Yes
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, COST, COSS	224, 224S	10'-2"	18'-0"	101875-TDI Rev. 13, 06/2013 Sealed 6/12/2013	+30.0, -30.0	Yes
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, COST, COSS	224, 224S	12'-2"	18'-0"	101869-TDI Rev. 13, 06/2013 Sealed 6/12/2013	+30.0, -30.0	Yes
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, COST, COSS	224, 224S	16'-2"	18'-0"	101885-TDI Rev. 16, 06/2013 Sealed 6/12/2013	+32.0, -32.0	Yes
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, COST, COSS	224, 224S	22'-2"	18'-0"	103319-TDI Rev. 5, 06/2013 Sealed 6/12/2013	+30.0, -30.0	Yes
C-DSIE-1F447	3200, 3220	N/A	240, 240G	16'-2"	18'-0"	200040-TDI Rev. 15, 06/2013 Sealed 6/12/2013	+30.0, - 32.0	Yes
C-DSIE-1F447	3200, 3220	N/A	240, 240G	22'-2"	18'-0"	103320-TDI Rev. 5, 06/2013 Sealed 6/12/2013	+30.0, -30.0	Yes
C-AL-1F499	902	C2AL	N/A	12'-2"	18'-0"	103275-TDI Rev. 7, 06/2013 Sealed 6/12/2013	+32.0, -32.0	Yes
C-AL-1F499	902	C2AL	N/A	16'-2"	18'-0"	103294-TDI Rev. 4, 06/2013 Sealed 6/12/2013	+32.0, -32.0	Yes
C-AL-1F499	902	C2AL	N/A	20'-2"	18'-0"	103296-TDI Rev. 6, 06/2013 Sealed 6/12/2013	+30.0, -30.0	Yes
C-AL-1F499	902	C2AL	N/A	22'-2"	18'-0"	103324-TDI Rev. 5, 06/2013 Sealed 6/12/2013	+30.0, -30.0	Yes

Table 3 - Non-Impact Rated Assemblies; Clopay, IDEAL and Holmes W6 Doors

Manufacturing Product Code (all brands)	Model Numbers (Clopay)	Model Numbers (IDEAL)	Model Numbers (Holmes)	Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (psf)	Glass Option
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, C0ST, COSS	224, 224S	10'-2"	18'-0"	102445-B- TDI Rev. 8, 01/2014 Sealed 3/21/2014	+37.0, -42.0	Yes
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, C0ST, COSS	224, 224S	12'-2"	18'-0"	102446-TDI Rev. 8, 06/2013 Sealed 6/12/2013	+37.0, -42.0	No
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, C0ST, COSS	224, 224S	14'-2"	18'-0"	102585-TDI Rev. 11, 06/2013 Sealed 6/12/2013	+37.0, -38.0	No
C-DSIE-1F448	3200, 3220	N/A	240, 240G	10'-2"	18'-0"	101617-TDI Rev. 10, 06/2013 Sealed 6/12/2013	+37.0, -40.0	No
C-DSIE-1F447	3200, 3220	N/A	240, 240G	12'-2"	18'-0"	101678-TDI Rev. 10, 06/2013 Sealed 6/12/2013	+40.0, -40.0	No
C-DSIU-1D477	3717, 3718, 3720, 3722 3724	C7X17 C7X18 C7X20 C0X22 C7X24	240U, 244U	10'-2"	18'-0"	104039-B-TDI Rev. 4, 02/2014 Sealed 3/21/2014	+37.0, -44.0	Yes
C-DSIU-1D477	3717, 3718, 3720, 3722 3724	C7X17 C7X18 C7X20 C0X22 C7X24	240U, 244U	14'-2"	18'-0"	104861-B-TDI Rev. 0, 03/2014 Sealed 3/21/2014	+36.0, -40.0	Yes
C-DSIU-1D477	3717, 3718, 3720, 3722 3724	C7X17 C7X18 C7X20 C0X22 C7X24	240U, 244U	16'-2"	18'-0"	104801-B-TDI Rev. 1, 03/2014 Sealed 3/21/2014	+37.0, -42.0	Yes
C-DSIU-1D477	3717, 3718, 3720, 3722 3724	C7X17 C7X18 C7X20 C0X22 C7X24	240U, 244U	18'-2"	18'-0"	104826-B-TDI Rev. 0, 01/2014 Sealed 3/21/2014	+36.0, -40.0	Yes

Table 4 - Impact Rated Assemblies; Clopay, IDEAL and Holmes W6 Doors

Manufacturing Product Code (all brands)	Model Numbers (Clopay)	Model Numbers (IDEAL)	Model Numbers (Holmes)	Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (psf)	Glass Option
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, C0ST, COSS	224, 224S	10'-2"	18'-0"	102445-A- TDI Rev. 8, 01/2014 Sealed 3/21/2014	+37.0, -42.0	No
C-DSIU-1D477	3717, 3718, 3720, 3722 3724	C7X17 C7X18 C7X20 C0X22 C7X24	240U, 244U	10'-2"	18'-0"	104039-A-TDI Rev. 4, 02/2014 Sealed 3/21/2014	+37.0, -44.0	Yes
C-DSIU-1D477	3717, 3718, 3720, 3722 3724	C7X17 C7X18 C7X20 C0X22 C7X24	240U, 244U	14'-2"	18'-0"	104861-A-TDI Rev. 0, 03/2014 Sealed 3/21/2014	+36.0, -40.0	Yes
C-DSIU-1D477	3717, 3718, 3720, 3722 3724	C7X17 C7X18 C7X20 C0X22 C7X24	240U, 244U	16'-2"	18'-0"	104801-A-TDI Rev. 1, 03/2014 Sealed 3/21/2014	+37.0, -42.0	Yes
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, C0ST, COSS	224, 224S	16'-2"	18'-0"	104858-TDI Rev. 0, 02/2014 Sealed 3/21/2014	+38.0, -42.0	No
C-DSIU-1D477	3717, 3718, 3720, 3722 3724	C7X17 C7X18 C7X20 C0X22 C7X24	240U, 244U	18'-2"	18'-0"	104826-A-TDI Rev. 0, 01/2014 Sealed 3/21/2014	+36.0, -40.0	Yes

Table 5 - Impact Rated Assemblies; Clopay, IDEAL and Holmes W8 Doors

Manufacturing Product Code (all brands)	Model Numbers (Clopay)	Model Numbers (IDEAL)	Model Numbers (Holmes)	Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (psf)	Glass Option
C-DSIE-1F447	3200, 3220	N/A	240, 240G	12'-2"	18'-0"	101705-TDI Rev. 9, 06/2013 Sealed 6/12/2013	+52.0, -58.0	No
C-PAN-1E448	524, 520	C4ST, C0ST	224	12'-2"	18'-0"	104813-TDI Rev. 0, 01/2012 Sealed 3/21/2014	+50.0, -56.0	No
C-PAN-1E448	524, 520	C4ST, C0ST	224	14'-2"	18'-0"	103288-TDI Rev. 3, 06/2012 Sealed 10/3/2012	+50.0, -56.0	No