

Product Evaluation

GDR24 | 0722

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: July 1, 2022

Re-evaluation Date: July 2026

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

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

Marketed Under: Clopay
Ideal
Holmes

Sold as: 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 wind load label affixed. The label includes the manufacturer's name (Clopay); the manufacturing product code; the drawing number; the allowable design pressure rating; and the test standards (ANSI/DASMA 108 or TAS 202; ANSI/DASMA 115 or TAS 201/203; and the TDI product evaluation report number (GDR-24).

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 design drawings, allowable dimensions, and design pressures for both non-impact and impact resistant sectional garage doors.

Non-impact garage door specifications are in Table 1, Table 2, and Table 3.

Impact resistant garage door specifications are in Table 4 and Table 5.

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 have a maximum allowable width of 24'-2". Refer to Tables 1 through 5 for the allowable width of the door for a particular door model.

The doors have a maximum allowable height of 18'.

Louvers are not permitted.

Doors may have optional glazing. The design drawings and the tables in this evaluation report indicate if glazing is an option. The allowable glass construction, maximum daylight opening size and attachment of the glass to the door panels is specified on the design drawings. Full view glass is held in place with retainers that are glued to the door panel. Fasteners are not used.

The design pressure rating for a particular model door is specified in Tables 1 through 5.

Impact Resistance:

The door assemblies specified in Table 4 and Table 5 have been tested for impact resistance. The doors passed a Missile Level equivalent to Missile Level D in ASTM E 1996-14a. It is not necessary to provide an impact protective system. Impact resistant doors may have impact resistant glazing as detailed on the design drawings.

The doors assemblies specified in Table 1, Table 2, and Table 3 have not been tested for windborne debris resistance. Doors that contain glazing may not be installed in areas that require windborne debris protection unless the door is protected with an impact protective system.

Installation Instructions:

Design Drawings: Install doors as specified on the design drawings. The design drawings must be provided with the door. Each page of the design drawings must be sealed, dated, and signed by Mark W. Westerfield, PE. The seal date of the drawing is specified on the design drawings.

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-REV04, signed and sealed on July 28, 2021, by Mark Westerfield, P.E., specifies the attachment of the wood jambs to the wood-framed walls.

Attachment of Door Components directly to Steel Framed Walls: Attach continuous/reverse angle of the vertical tracks of the door directly to minimum 12-gauge steel jambs with the fasteners specified on the Jamb Fastener Analysis Connecting to Existing Structure, document CBPC-JFA-0002-REV01, signed and sealed on May 31, 2022, by Mark Westerfield, P.E.

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

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, C0ST, C0SS	225, 225S, 224, 224S	12'-2"	18'-0"	101856-TDI Rev. 15, 02/2022 Sealed 5/31/2022	+25.0, -25.0	Yes
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, C0ST, C0SS	224, 224S	16'-2"	18'-0"	101886-TDI Rev. 16, 02/2022 Sealed 5/31/2022	+25.0, -25.0	Yes
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, C0ST, C0SS	224, 224S	20'-2"	18'-0"	102126-TDI Rev. 14, 02/2022 Sealed 5/31/2022	+25.0, -25.0	Yes
C-PAN-1E448	524, 524v, 524S, 520, 520S	C4ST, C4SV, C4SS, C0ST, C0SS	224, 224S	24'-2"	18'-0"	103333-TDI Rev. 7, 02/2022 Sealed 5/31/2022	+25.0, -25.0	Yes
C-DSIE-1F447	3200, 3220	N/A	240, 240G	12'-2"	18'-0"	101687-TDI Rev. 13, 02/2022 Sealed 5/31/2022	+25.0, -28.0	Yes
C-DISE-1F447	3200, 3220	N/A	240, 240G	20'-2"	18'-0"	101682-TDI Rev. 12, 02/2022 Sealed 5/31/2022	+25.0, -28.0	Yes
C-DISE-1F447	3200, 3220	N/A	240, 240G	24'-2"	18'-0"	103334-TDI Rev. 7, 02/2022 Sealed 6/06/2022	+25.0, -25.0	Yes
C-AL-1F499	902	C2AL	N/A	24'-2"	18'-0"	103332-TDI Rev. 7, 02/2022 Sealed 5/31/2022	+25.0, -25.0	Yes
C-AL-1F499	902, 903	C2AL, C3AL	N/A	24'-2"	18'-0"	105199-TDI Rev. 1, 02/2022 Sealed 5/31/2022	+25.0, -25.0	Yes

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

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	20'-2"	18'-0"	105198-TDI Rev. 1, 02/2022 Sealed 5/31/2022	+25.0, -28.0	Yes
C-DSIE-1F447	3200, 3220	N/A	240	24'-2"	18'-0"	105197-TDI Rev. 1, 02/2022 Sealed 5/31/2022	+25.0, -25.0	Yes
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, C0ST, C0SS	224, 224S	24'-2"	18'-0"	105196-TDI Rev. 1, 02/2022 Sealed 5/31/2022	+25.0, -25.0	Yes
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, C0ST, C0SS	224, 224S	20'-2"	18'-0"	105077-TDI Rev. 1, 02/2022 Sealed 5/31/2022	+25.0, -25.0	Yes
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, C0ST, C0SS	224, 224S	16'-2"	18'-0"	105032-TDI Rev. 1, 02/2022 Sealed 5/31/2022	+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, C0ST, C0SS	224, 224S	8'-2"	18'-0"	101874-TDI Rev. 16, 02/2022 Sealed 6/06/2022	+30.0, -30.0	Yes
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, C0ST, C0SS	224, 224S	10'-2"	18'-0"	101875-TDI Rev. 15, 02/2022 Sealed 5/31/2022	+30.0, -30.0	Yes

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

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, C0SS	224, 224S	12'-2"	18'-0"	101869-TDI Rev. 15, 02/2022 Sealed 5/31/2022	+30.0, -30.0	Yes
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, C0ST, C0SS	224, 224S	16'-2"	18'-0"	101885-TDI Rev. 18, 02/2022 Sealed 5/31/2022	+32.0, -32.0	Yes
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, C0ST, C0SS	224, 224S	22'-2"	18'-0"	103319-TDI Rev. 7, 02/2022 Sealed 5/31/2022	+30.0, -30.0	Yes
C-DSIE-1F447	3200, 3220	N/A	240, 240G	16'-2"	18'-0"	200040-TDI Rev. 17, 02/2022 Sealed 5/31/2022	+30.0, -32.0	Yes
C-DSIE-1F447	3200, 3220	N/A	240, 240G	22'-2"	18'-0"	103320-TDI Rev. 7, 02/2022 Sealed 5/31/2022	+30.0, -30.0	Yes
C-AL-1F499	902	C2AL	N/A	12'-2"	18'-0"	103275-TDI Rev. 9, 02/2022 Sealed 5/31/2022	+32.0, -32.0	Yes
C-AL-1F499	902	C2AL	N/A	16'-2"	18'-0"	103294-TDI Rev. 6, 02/2022 Sealed 5/31/2022	+32.0, -32.0	Yes
C-AL-1F499	902	C2AL	N/A	20'-2"	18'-0"	103296-TDI Rev. 8, 02/2022 Sealed 5/31/2022	+30.0, -30.0	Yes
C-AL-1F499	902	C2AL	N/A	22'-2"	18'-0"	103324-TDI Rev. 7, 02/2022 Sealed 5/31/2022	+30.0, -30.0	Yes
C-AL-1F499	902, 903	C2AL, C3AL	N/A	20'-2"	18'-0"	105088-TDI Rev. 1, 02/2022 Sealed 5/31/2022	+30.0, -30.0	Yes

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

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, C0SS	224, 224S	22'-2"	18'-0"	105064-TDI Rev. 1, 02/2022 Sealed 5/31/2022	+30.0, -30.0	Yes
C-AL-1F499	902, 903	C2AL, C3AL	N/A	22'-2"	18'-0"	105059-TDI Rev. 2, 02/2022 Sealed 5/31/2022	+30.0, -30.0	Yes
C-DSIE-1F447	3200, 3220	N/A	240	22'-2"	18'-0"	105054-TDI Rev. 1, 02/2022 Sealed 5/31/2022	+30.0, -30.0	Yes
C-AL-1F499	902, 903	C2AL, C3AL	N/A	16'-2"	18'-0"	105043-TDI Rev. 1, 02/2022 Sealed 5/31/2022	+32.0, -32.0	Yes
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, C0ST, C0SS	224, 224S	16'-2"	18'-0"	105033-TDI Rev 1, 02/2022 Sealed 5/31/2022	+32.0, -32.0	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, C0SS	224, 224S	10'-2"	18'-0"	102445-B- TDI Rev. 10, 02/2022 Sealed 5/31/2022	+37.0, -42.0	Yes
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, C0ST, C0SS	224, 224S	12'-2"	18'-0"	102446-TDI Rev. 12, 02/2022 Sealed 3/08/2022	+37.0, -42.0	No

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

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-1F448	3200, 3220	N/A	240, 240G	10'-2"	18'-0"	101617-TDI Rev. 12, 02/2022 Sealed 3/08/2022	+37.0, -40.0	No
C-DSIE-1F447	3200, 3220	N/A	240, 240G	12'-2"	18'-0"	101678-TDI Rev. 12, 02/2022 Sealed 3/08/2022	+40.0, -40.0	No
C-DSIU-1D477	3717, 3718, 3720, 3722 3724, 3730	C7X17 C7X18 C7X20 C0X22 C7X24	240U, 244U	10'-2"	18'-0"	104039-B-TDI Rev. 7, 02/2022 Sealed 5/31/2022	+37.0, -44.0	Yes
C-DSIU-1D477	3717, 3718, 3720, 3722 3724, 3730	C7X17 C7X18 C7X20 C0X22 C7X24	240U, 244U	14'-2"	18'-0"	104861-B-TDI Rev. 3, 02/2022 Sealed 5/31/2022	+36.0, -40.0	Yes
C-DSIU-1D477	3717, 3718, 3720, 3722 3724, 3730	C7X17 C7X18 C7X20 C0X22 C7X24	240U, 244U	16'-2"	18'-0"	104801-B-TDI Rev. 4, 02/2022 Sealed 5/31/2022	+37.0, -42.0	Yes
C-DSIU-1D477	3717, 3718, 3720, 3722 3724, 3730	C7X17 C7X18 C7X20 C0X22 C7X24	240U, 244U	18'-2"	18'-0"	104826-B-TDI Rev. 3, 02/2022 Sealed 5/31/2022	+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, C0SS	224, 224S	10'-2"	18'-0"	102445-A- TDI Rev. 10, 02/2022 Sealed 5/31/2022	+37.0, -42.0	No
C-DSIU-1D477	3717, 3718, 3720, 3722 3724, 3730	C7X17 C7X18 C7X20 C0X22 C7X24	240U, 244U	10'-2"	18'-0"	104039-A-TDI Rev. 7, 02/2022 Sealed 5/31/2022	+37.0, -44.0	Yes
C-DSIU-1D477	3717, 3718, 3720, 3722 3724, 3730	C7X17 C7X18 C7X20 C0X22 C7X24	240U, 244U	14'-2"	18'-0"	104861-A-TDI Rev. 3, 02/2022 Sealed 5/31/2022	+36.0, -40.0	Yes
C-DSIU-1D477	3717, 3718, 3720, 3722 3724, 3730	C7X17 C7X18 C7X20 C0X22 C7X24	240U, 244U	16'-2"	18'-0"	104801-A-TDI Rev. 4, 02/2022 Sealed 5/31/2022	+37.0, -42.0	Yes
C-PAN-1E448	524, 524V, 524S, 520, 520S	C4ST, C4SV, C4SS, C0ST, C0SS	224, 224S	16'-2"	18'-0"	104858-TDI Rev. 2, 02/2022 Sealed 3/08/2022	+38.0, -42.0	No
C-DSIU-1D477	3717, 3718, 3720, 3722 3724, 3730	C7X17 C7X18 C7X20 C0X22 C7X24	240U, 244U	18'-2"	18'-0"	104826-A-TDI Rev. 3, 02/2022 Sealed 5/31/2022	+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. 11, 02/2022 Sealed 3/08/2022	+52.0, -58.0	No
C-PAN-1E448	524, 520	C4ST, C0ST	224	12'-2"	18'-0"	104813-TDI Rev. 2, 02/2022 Sealed 3/08/2022	+50.0, -56.0	No