

## Product Evaluation

GDR83 | 0422

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-83

**Effective Date:** April 1, 2022

**Re-evaluation Date:** April 2026

**Product Name:** Models 2216, 2283, 2516, 2583, 4216, 4283, 5216, 5283, 5916, 5983, Residential Sectional Steel Doors, Non-Impact Resistant Garage Doors

**Manufacturer:** C.H.I. Overhead Doors  
1485 Sunrise Drive  
Arthur, IL 61911  
(800) 677-2650

### General Description:

All doors are residential sandwich sectional overhead doors constructed from galvanized steel with a baked on polyester finish.

The 2283, 2583, 4283, 5283, 5983 model doors are constructed from 27-gauge steel exterior with 27-gauge steel back panels, insulated with expanded polystyrene insulation.

The 2216, 2516, 4216, 5216, 5916 model doors are constructed from 27-gauge steel exterior with 27-gauge steel back panels, insulated with poured-in urethane insulation.

The doors use a combination of 3" U-bars for horizontal reinforcement.

Drawing number, design pressures, dimensions, and glazing dimensions are shown in Table 1.

**Product Identification:** A label will be affixed to the steel sectional overhead door. The label must include the manufacturer's name (CHI Overhead Doors); series/model number of door; the allowable design pressure rating; the design drawing number; and the test standards (ANSI/DASMA 108). The installer will verify that the label is clearly marked indicating which door assembly is being installed, in addition to verifying that the design pressure rating is clearly marked.

**Limitations:**

This evaluation report includes non-impact resistant sectional garage doors.

Doors may include optional glazing.

The maximum height of each door section must not exceed 21". Refer to the design drawings for the allowable section height for a particular door.

The doors have a maximum allowable width of 20'-0". Refer to Table 1 for the maximum sectional overhead door dimensions.

The doors have a maximum allowable height of 20 feet.

The doors are reinforced with either 0.040" thick or 0.051" thick steel struts. The placement and installation of the struts are shown on the design drawings.

Table 1 specifies the design pressure ratings.

**Impact Protection:** These doors have not been tested for windborne debris resistance.

**Installation:**

**Design Drawings:** The doors are to be installed as specified on the design drawings. The manufacturer will provide the design drawings with the door. The drawing numbers are specified in Table 1. Each page of the design drawing is dated March 9, 2022. Each page of the drawing is sealed by John E. Scates, P.E. and the first page is digitally signed and dated March 30, 2022 by John E. Scates, P.E.

**Attachment of Doors to the Building:** Doors are secured to the wall structure as specified in the Jamb Attachment details. The Jamb Attachment details include the following drawings:

BJA-101R8  
BJA-102R7  
BJA-103R8  
BJA-104R8  
BJA-105R7  
BJA-105R5  
BJA-106R5

Each drawing is dated March 26, 2020 and sealed by John E. Scates. Drawing BJA-101R8 is digitally signed and dated January 7, 2021.

**Note:**

The conditions and construction of the building structure must comply with the specifications on the Jamb Attachment drawings to ensure that the fasteners/anchors will deliver their intended design performance. The building construction shown in these door and jamb attachment drawings are only illustrative to locate fasteners. The manufacturer does not design the building nor ensure that it can carry the imposed loads from the door system.

Use of corrosion resistant fasteners as specified in the IRC and the IBC.

The manufacturer's installation instructions, the design drawings, and the Jamb Attachment Drawings, must be available at the job site during installation.

**Non-impact Resistant Doors**

**Design Drawings:** Specified in Table 1.

**Allowable Dimensions:** Specified in Table 1.

**Design Pressures:** Specified in Table 1.

**Glazing (Optional):** Glass options are specified on the design drawings. Glass is secured to the panels using a molded frame with the following fastener patterns:

- Short panel; maximum DLO of 16-1/2" x 10"; 2 fasteners per vertical side and 3 fasteners per horizontal side; 10 total
- Long panel; maximum DLO of 37-7/8" x 12-3/16"
  - Insulated glass: 3 fasteners per vertical side; 5 fasteners per horizontal side; 16 total
  - Non-insulated glass: 1 fastener at each corner; 2 fasteners per vertical side; 5 fasteners per horizontal side; 18 total
- Oversize panel; maximum DLO of 39-3/8" x 12-1/2"; 3 fasteners per vertical side and 5 fasteners per horizontal side; 16 total

**Louvers:** Not permitted.

**Table 1: Non-Impact Rated Assemblies**

Max. Door Width	Max. Door Height	Horizontal Reinforcement	Drawing Number	Design Pressure (psf)	Glass Option
8'-0"	See Drawing	0.040" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z4-09-02303	+26.1/-29.5	Yes
9'-0"				+23.2/-26.2	
8'-0"	See Drawing	0.040" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z8-09-02303	+43.1/-48.9	Yes
9'-0"				+38.3/-43.5	
8'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z9-09-02303	+49.8/-57.9	Yes
9'-0"				+44.3/-51.5	
9'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z10-09-02303	+50.7/-57.5	Yes
10'-0"				+41.1/-46.6	
10'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z3-10-02303	+19.5/-22.0	Yes (std)
10'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z3-10-023L3	+19.5/-22.0	Yes (wide)
8'-0"	See Drawing	0.040" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z5-10-02303	+34.1/ -38.5	Yes (std)
9'-0"				+30.3/ -34.2	
10'-0"				+27.3/ -30.8	
12'-0"				+19.0/ -21.4	

**Table 1: Non-Impact Rated Assemblies (Continued)**

Max. Door Width	Max. Door Height	Horizontal Reinforcement	Drawing Number	Design Pressure (psf)	Glass Option
8'-0"	See Drawing	0.040" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z5-10-023L3	+34.1/ -38.5	Yes (wide)
9'-0"				+30.3/-34.2	
10'-0"				+27.3/ -30.8	
12'-0"				+19.0/ -21.4	
10'-0"	See Drawing	0.040" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z6-10-02303	+31.4/ -35.5	Yes (std)
12'-0"				+21.8/ -24.7	
10'-0"	See Drawing	0.040" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z6-10-023L3	+31.4/ -35.5	Yes (wide)
12'-0"				+21.8/ -24.7	
10'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z7-10-02303	+36.0/ -40.6	Yes (std)
12'-0"				+25.0/ -28.2	
10'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z7-10-023L3	+36.0/ -40.6	Yes (wide)
12'-0"				+25.0/ -28.2	
10'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z10-10-02303	+50.7/ -57.5	Yes (std)
12'-0"				+35.2/ -39.9	
10'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z10-10-023L3	+50.7/ -57.5	Yes (wide)
12'-0"				+35.2/ -39.9	

**Table 1: Non-Impact Rated Assemblies (Continued)**

Max. Door Width	Max. Door Height	Horizontal Reinforcement	Drawing Number	Design Pressure (psf)	Glass Option
12'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z4-16-02303	+29.6/ -32.9	Yes
14'-0"				+25.4/ -28.2	
15'-0"				+23.7/ -26.3	
16'-0"				+22.2/ -24.7	
14'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z5-16-02303	+29.9/ -33.3	Yes
15'-0"				+27.9/ -31.0	
16'-0"				+26.2/ -29.1	
12'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z6-16-02303	+40.8/ -45.5	Yes
16'-0"				+30.6/ -34.1	
18'-0"				+24.2/ -26.9	
20'-0"				+19.6/ -21.8	
12'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z7-16-02303	+46.0/ -51.2	Yes
14'-0"				+39.4/ -43.9	
15'-0"				+36.8/ -41.0	
16'-0"				+34.5/ -38.4	

**Table 1: Non-Impact Rated Assemblies (Continued)**

Max. Door Width	Max. Door Height	Horizontal Reinforcement	Drawing Number	Design Pressure (psf)	Glass Option
12'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z8-16-02303	+52.7/ -59.2	Yes
14'-0"				+45.1/ -50.7	
15'-0"				+42.1/ -47.4	
16'-0"				+39.5/ -44.4	
20'-0"				+25.3/ -28.4	
14'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z9-16-02303	+48.1/ -53.6	Yes
15'-0"				+44.9/ -50.0	
16'-0"				+42.1/ -46.9	
15'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z10-16-02303	+51.4/ -57.3	Yes
16'-0"				+48.2/ -53.7	
18'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z3-18-02303	+18.7/ -20.8	Yes
18'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z6-18-02303	+30.1/ -33.5	Yes
20'-0"				+24.4/ -27.1	
18'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z7-18-02303	+34.5/ -38.4	Yes

**Table 1: Non-Impact Rated Assemblies (Continued)**

Max. Door Width	Max. Door Height	Horizontal Reinforcement	Drawing Number	Design Pressure (psf)	Glass Option
15'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z8-18-02303	+47.4/ -53.3	Yes
16'-0"				+44.4/ -50.0	
18'-0"				+39.5/ -44.4	
20'-0"				+32.0/ -36.0	
18'-0"	See Drawing	0.051" thick x 3" 50 ksi U-Bar See drawing for strut quantity	Z9-18-02303	+42.1/ -46.9	Yes
20'-0"				+34.1/ -38.0	