

TEXAS DEPARTMENT OF INSURANCE

Engineering Services Program / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104
Phone No. (512) 322-2212 Fax No. (512) 463-6693

PRODUCT EVALUATION GDR-82

Effective February 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 **February 2017**.*

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.

Models 2240, 2241, 2250, 2251, 4240, 4241, 4250, 4251, 5240, 5241, 5250, and 5251 Residential Sectional Steel Garage Doors, Non-Impact Resistant, manufactured by:

C.H.I. Overhead Door Company
P.O. Box 260
Arthur, Illinois 61911
Telephone: (800) 677-2650

will be acceptable for use in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with this product evaluation and the appropriate design drawings referenced in this evaluation report.

PRODUCT DESCRIPTION

Model 2240, 2241, 2250, 2251, 4240, 4241, 4250, 4251, 5240, 5241, 5250, and 5251 doors are residential sectional garage doors constructed from galvanized steel with a baked on polyester finish. The 2250, 2251, 4250, 4251, 5250, and 5251 model doors are constructed from 25 gauge steel and may be insulated with expanded polystyrene insulation. The 2240, 2241, 4240, 4241, 5240, 5241 model doors are constructed from 24 gauge steel and may be insulated with expanded polyurethane insulation. The doors use a combination of 3" U-bars and/or 6" C-channels for horizontal reinforcement. Drawing number, design pressures, door width, horizontal reinforcement, and glazing options are shown in Table 1.

Product Identification: A label will be affixed to the sectional overhead door. The label shall include the manufacturer's name, product name, and the allowable design pressure rating. 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

Maximum Section Height: The maximum height of each door section shall not exceed 21 inches.

Maximum Width: The doors shall have a maximum width of 22 feet. Refer to Table 1 and the design drawings for the allowable door width dimensions.

Maximum Height: The doors shall have a maximum height of 20 feet. Refer to the design drawings for allowable door heights for specific doors.

Horizontal Reinforcement: The doors are reinforced with either 17 gauge or 19 gauge 3" steel struts or a combination of 17 gauge 3" steel struts and 16 gauge 6" C-channels. The quantity, placement, and installation of the struts and the C-channels are shown on the design drawings.

Stiles: The required number of stiles is specified on the design drawings.

Design drawings: Specified in Table 1.

Design pressures: Specified in Table 1.

Glazing (Optional): Glass options are specified on the design drawings.

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 windborne debris protection. All doors (with and without glazing) that are installed in the **Seaward zone** will need windborne debris protection.

INSTALLATION INSTRUCTIONS

Design Drawings: The doors shall be installed as specified on the design drawings. The design drawings shall be provided with the door. The drawing numbers are specified in Table 1. Each page of the design drawings are dated December 03, 2012. Each page is signed, sealed, and dated December 20, 2012 by John E. Scates, P.E. The following information, as a minimum, shall be provided on the design drawings:

- Drawing Number
- Design Pressures Rating
- Maximum Width and Maximum Height
- Maximum Section Height

Supplemental Instructions: The doors shall also be installed as specified in the following document, which shall be provided with the door:

- "Supplemental Instructions Residential Pan Doors," pages 1 thru 2 of 2. Each page of the Supplemental Instructions shall be signed, sealed, and dated December 10, 2012 by John E. Scates, P.E.

Attachment of Doors to Wall Framing: In addition to providing the design drawings, the following documents shall be provided with the door:

- Back Jamb Attachment Detail Concrete Anchors, Drawing Number BJA-101-02, dated 9-28-2011, signed, sealed, and dated December 10, 2012 by John E. Scates, P.E.
- Back Jamb Attachment detail Lag Screw, Drawing Number BJA-102-01, dated 4-18-2011, signed, sealed, and dated December 10, 2012 by John E. Scates, P.E.
- Steel Attachment Detail, Drawing Number BJA-103-01, dated 4-18-2011, signed, sealed, and dated December 10, 2012 by John E. Scates, P.E.
- CMU Block Wall Detail, Drawing number BJA-104-02, dated 7-11-2011, signed, sealed, and dated December 10, 2012 by John E. Scates, P.E.

- Concrete Wall Attachment Detail, Drawing Number BJA-105-01, dated 7-11-2011, signed, sealed, and dated December 10, 2012 by John E. Scates, P.E.

Note: The manufacturer's installation instructions, the appropriate design drawings, the Supplemental Instructions, and the appropriate attachment detail 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.

Table 1
Models 2240, 2241, 2250, 2251, 4240, 4241, 4250, 4251, 5240, 5241, 5250, and 5251

Door Width	Horizontal Reinforcement	Glass Option	Design Pressures (psf)	Drawing Number
6'-0"	17 gauge, 3" U-bars	Yes	+32.5 / -36.7	TZ3-10-01313
7'-6"		Yes	+26.0 / -29.3	
8'-0"		Yes	+24.3 / -27.6	
8'-6"		Yes	+22.9 / -25.9	
9'-0"		Yes	+21.6 / -24.5	
9'-6"		Yes	+20.5 / -23.2	
10'-0"		Yes	+19.5 / -22.0	
12'-0"	17 gauge, 3" U-bars	Yes	+24.9 / -27.7	TZ3-16-013L3
12'-6"		Yes	+23.9 / -26.6	
13'-0"		Yes	+23.0 / -25.6	
13'-6"		Yes	+22.2 / -24.7	
14'-0"		Yes	+21.4 / -23.8	
14'-6"		Yes	+20.6 / -23.0	
15'-0"		Yes	+19.9 / -22.2	
15'-6"		Yes	+19.3 / -21.5	
16'-0"		Yes	+18.7 / -20.8	
16'-2"		Yes	+18.3 / -20.4	
12'-0"		17 gauge, 3" U-bars	Yes	
12'-6"	Yes		+23.9 / -26.6	
13'-0"	Yes		+23.0 / -25.6	
13'-6"	Yes		+22.2 / -24.7	
14'-0"	Yes		+21.4 / -23.8	
14'-6"	Yes		+20.6 / -23.0	
15'-0"	Yes		+19.9 / -22.2	
15'-6"	Yes		+19.3 / -21.5	
16'-0"	Yes		+18.7 / -20.8	
16'-2"	Yes		+18.3 / -20.4	
17'-0"	17 gauge, 3" U-bars		Yes	+19.8 / -21.9
17'-6"		Yes	+19.2 / -21.4	
18'-0"		Yes	+18.7 / -20.8	
18'-2"		Yes	+18.4 / -20.4	
6'-0"	19 gauge, 3" U-bars	Yes	+34.8 / -39.3	TZ4-09-013L3
7'-0"		Yes	+29.8 / -33.7	
7'-6"		Yes	+27.8 / -31.4	
8'-0"		Yes	+26.1 / -29.5	
8'-6"		Yes	+24.6 / -27.7	
9'-0"		Yes	+23.2 / -26.2	
9'-6"		Yes	+20.8 / -23.5	
9'-10"		Yes	+19.4 / -21.9	

Table 1
Models 2240, 2241, 2250, 2251, 4240, 4241, 4250, 4251, 5240, 5241, 5250, and 5251

Door Width	Horizontal Reinforcement	Glass Option	Design Pressures (psf)	Drawing Number
6'-0"	19 gauge, 3" U-bars	Yes	+38.6 / -43.6	TZ4-10-01313
7'-0"		Yes	+33.1 / -37.4	
7'-6"		Yes	+30.9 / -34.9	
8'-0"		Yes	+29.0 / -32.7	
8'-6"		Yes	+27.3 / -30.8	
9'-0"		Yes	+25.8 / -29.1	
9'-6"		Yes	+24.4 / -27.5	
10'-0"		Yes	+23.2 / -26.2	
10'-6"		Yes	+21.0 / -23.7	
11'-0"		Yes	+19.2 / -21.7	
12'-0"		17 gauge, 3" U-bars	Yes	
12'-6"	Yes		+28.4 / -31.6	
13'-0"	Yes		+27.3 / -30.4	
13'-6"	Yes		+26.3 / -29.3	
14'-0"	Yes		+25.4 / -28.2	
14'-6"	Yes		+24.5 / -27.3	
15'-0"	Yes		+23.7 / -26.3	
15'-6"	Yes		+22.9 / -25.5	
16'-0"	Yes		+22.2 / -24.7	
16'-6"	Yes		+20.9 / -23.2	
16'-10"	Yes		+20.1 / -22.3	
17'-0"	17 gauge, 3" U-bars	Yes	+23.5 / -26.2	TZ4-18-01313
17'-6"		Yes	+22.8 / -25.4	
18'-0"		Yes	+22.2 / -24.7	
18'-6"		Yes	+21.0 / -23.4	
19'-0"		Yes	+19.9 / -22.2	
19'-10"		Yes	+18.3 / -20.3	
6'-0"	17 gauge, 3" U-bars	Yes	+41.0 / -46.2	TZ5-09-013L3
7'-0"		Yes	+35.1 / -39.6	
8'-0"		Yes	+30.7 / -34.7	
8'-6"		Yes	+28.9 / -32.6	
9'-0"		Yes	+27.3 / -30.8	
9'-6"		Yes	+24.5 / -27.6	
10'-0"		Yes	+22.1 / -24.9	
10'-6"		Yes	+20.1 / -22.6	
10'-8"		Yes	+19.4 / -21.9	

Table 1
Models 2240, 2241, 2250, 2251, 4240, 4241, 4250, 4251, 5240, 5241, 5250, and 5251

Door Width	Horizontal Reinforcement	Glass Option	Design Pressures (psf)	Drawing Number
6'-0"	19 gauge, 3" U-bars	Yes	+45.5 / -51.3	TZ5-10-01313
7'-6"		Yes	+36.4 / -41.0	
8'-0"		Yes	+34.1 / -38.5	
8'-6"		Yes	+32.1 / -36.2	
9'-0"		Yes	+30.3 / -34.2	
9'-6"		Yes	+28.8 / -32.4	
10'-0"		Yes	+27.3 / -30.8	
10'-2"		Yes	+26.4 / -29.8	
10'-6"		Yes	+24.8 / -27.9	
11'-0"		Yes	+22.6 / -25.4	
12'-0"		Yes	+19.0 / -21.4	
12'-0"		17 gauge, 3" U-bars	Yes	
12'-6"	Yes		+33.6 / -37.3	
13'-0"	Yes		+32.3 / -35.8	
13'-6"	Yes		+31.1 / -34.5	
14'-0"	Yes		+29.9 / -33.3	
15'-0"	Yes		+27.9 / -31.0	
15'-6"	Yes		+27.0 / -30.0	
16'-0"	Yes		+26.2 / -29.1	
16'-10"	Yes		+23.7 / -26.4	
6'-4"	19 gauge, 3" U-bars	Yes	+49.6 / -56.1	TZ6-10-01313
7'-0"		Yes	+44.9 / -50.7	
7'-6"		Yes	+41.9 / -47.3	
8'-0"		Yes	+39.3 / -44.4	
8'-6"		Yes	+36.9 / -41.8	
9'-0"		Yes	+34.9 / -39.4	
10'-0"		Yes	+31.4 / -35.5	
10'-6"		Yes	+28.5 / -32.2	
11'-0"		Yes	+26.0 / -29.3	
12'-0"		Yes	+21.8 / -24.7	
12'-6"		Yes	+20.1 / -22.7	
13'-0"		Yes	+18.6 / -21.0	
9'-4"	17 gauge, 3" U-bars	Yes	+33.6 / -38.0	TZ6-10-013L3
10'-0"		Yes	+31.4 / -35.5	
10'-6"		Yes	+28.5 / -32.2	
11'-0"		Yes	+26.0 / -29.3	
11'-6"		Yes	+23.7 / -26.8	
12'-0"		Yes	+21.8 / -24.7	
12'-6"		Yes	+20.1 / -22.7	
13'-0"		Yes	+18.6 / -21.0	

Table 1
Models 2240, 2241, 2250, 2251, 4240, 4241, 4250, 4251, 5240, 5241, 5250, and 5251

Door Width	Horizontal Reinforcement	Glass Option	Design Pressures (psf)	Drawing Number
12'-0"	17 gauge, 3" U-bars	Yes	+40.1 / -44.7	TZ6-16-013L3
12'-6"		Yes	+38.5 / -42.9	
13'-0"		Yes	+37.0 / -41.2	
13'-6"		Yes	+35.7 / -39.7	
14'-0"		Yes	+34.4 / -38.3	
15'-0"		Yes	+32.1 / -35.7	
15'-6"		Yes	+31.1 / -34.6	
16'-0"		Yes	+30.1 / -33.5	
16'-6"		Yes	+28.3 / -31.5	
17'-0"		Yes	+26.7 / -29.7	
17'-6"		Yes	+25.2 / -28.0	
18'-0"		Yes	+23.8 / -26.5	
18'-6"		Yes	+22.5 / -25.1	
19'-0"		Yes	+21.3 / -23.8	
19'-6"		Yes	+20.3 / -22.6	
20'-0"		Yes	+19.3 / -21.4	
12'-0"	17 gauge, 3" U-bars	Yes	+40.1 / -44.7	TZ6-16-01313
12'-6"		Yes	+38.5 / -42.9	
13'-0"		Yes	+37.0 / -41.2	
13'-6"		Yes	+35.7 / -39.7	
14'-0"		Yes	+34.4 / -38.3	
15'-0"		Yes	+32.1 / -35.7	
15'-6"		Yes	+31.1 / -34.6	
16'-0"		Yes	+30.1 / -33.5	
16'-6"		Yes	+28.3 / -31.5	
17'-0"		Yes	+26.7 / -29.7	
17'-4"		Yes	+25.6 / -28.5	
7'-4"		17 gauge, 3" U-bars	Yes	
8'-0"	Yes		+40.5 / -45.7	
8'-6"	Yes		+38.1 / -43.0	
9'-0"	Yes		+36.0 / -40.6	
9'-2"	Yes		+34.7 / -39.1	

Table 1
Models 2240, 2241, 2250, 2251, 4240, 4241, 4250, 4251, 5240, 5241, 5250, and 5251

Door Width	Horizontal Reinforcement	Glass Option	Design Pressures (psf)	Drawing Number
12'-0"	17 gauge, 3" U-bars	Yes	+46.0 / -51.2	TZ7-16-01313
12'-6"		Yes	+44.2 / -49.2	
13'-0"		Yes	+42.5 / -47.3	
13'-6"		Yes	+40.9 / -45.5	
14'-0"		Yes	+39.4 / -43.9	
14'-6"		Yes	+38.1 / -42.4	
15'-0"		Yes	+36.8 / -41.0	
15'-6"		Yes	+35.6 / -39.6	
16'-0"		Yes	+34.5 / -38.4	
16'-6"		Yes	+32.4 / -36.1	
17'-0"		Yes	+30.6 / -34.0	
17'-6"		Yes	+28.8 / -32.1	
18'-0"		Yes	+27.3 / -30.3	
18'-6"		Yes	+25.8 / -28.7	
19'-0"		Yes	+24.5 / -27.2	
19'-6"		Yes	+23.2 / -25.9	
20'-0"	Yes	+22.1 / -24.6		
17'-6"	17 gauge, 3" U-bars	Yes	+35.5 / -39.5	TZ7-18-01313
18'-0"		Yes	+34.5 / -38.4	
18'-6"		Yes	+32.7 / -36.4	
19'-0"		Yes	+31.0 / -34.5	
19'-6"		Yes	+29.4 / -32.7	
20'-0"		Yes	+27.9 / -31.1	
20'-6"		Yes	+26.6 / -29.6	
21'-0"		Yes	+25.3 / -28.2	
21'-6"		Yes	+24.2 / -26.9	
22'-0"		Yes	+23.1 / -25.7	
7'-8"	17 gauge, 3" U-bars	Yes	+50.0 / -56.7	TZ8-10-01313
8'-0"		Yes	+47.9 / -54.4	
9'-0"		Yes	+42.6 / -48.3	
9'-6"		Yes	+40.3 / -45.8	
10'-0"		Yes	+38.3 / -43.5	
10'-6"		Yes	+34.7 / -39.5	
11'-0"		Yes	+31.7 / -36.0	
11'-10"		Yes	+27.4 / -31.1	

Table 1
Models 2240, 2241, 2250, 2251, 4240, 4241, 4250, 4251, 5240, 5241, 5250, and 5251

Door Width	Horizontal Reinforcement	Glass Option	Design Pressures (psf)	Drawing Number
12'-6"	17 gauge, 3" U-bars	Yes	+50.6 / -56.8	TZ8-16-01313
13'-0"		Yes	+48.6 / -54.6	
13'-6"		Yes	+46.8 / -52.6	
14'-0"		Yes	+45.1 / -50.7	
14'-6"		Yes	+43.6 / -49.0	
15'-0"		Yes	+42.1 / -47.4	
15'-6"		Yes	+40.8 / -45.8	
16'-0"		Yes	+39.5 / -44.4	
16'-6"		Yes	+37.1 / -41.7	
17'-0"		Yes	+35.0 / -39.3	
17'-6"		Yes	+33.0 / -37.1	
18'-0"		Yes	+31.2 / -35.1	
18'-6"		Yes	+29.5 / -33.2	
19'-0"		Yes	+28.0 / -31.5	
19'-6"		Yes	+26.6 / -29.9	
20'-0"		Yes	+25.3 / -28.4	
14'-2"	17 gauge, 3" U-bar 16 gauge, "C" Channels	Yes	+50.2 / -56.4	TZ8-18-01313
15'-0"		Yes	+47.4 / -53.3	
16'-0"		Yes	+44.4 / -50.0	
17'-0"		Yes	+41.8 / -47.0	
17'-6"		Yes	+40.6 / -45.7	
18'-0"		Yes	+39.5 / -44.4	
18'-6"		Yes	+37.4 / -42.0	
19'-0"		Yes	+35.5 / -39.8	
19'-6"		Yes	+33.7 / -37.8	
20'-0"		Yes	+32.0 / -36.0	
20'-6"		Yes	+30.5 / -34.2	
21'-0"		Yes	+29.0 / -32.6	
22'-0"		Yes	+26.4 / -29.7	
9'-0"	17 gauge, 3" U-bars	Yes	+44.3 / -51.5	TZ9-09-013L3
9'-6"		Yes	+39.8 / -46.2	
10'-0"		Yes	+35.9 / -41.7	
10'-6"		Yes	+32.5 / -37.8	
11'-0"		Yes	+29.7 / -34.5	
11'-6"		Yes	+27.1 / -31.5	
12'-0"		Yes	+24.9 / -29.0	
12'-6"		Yes	+23.0 / -26.7	
13'-0"		Yes	+21.2 / -24.7	

Table 1
Models 2240, 2241, 2250, 2251, 4240, 4241, 4250, 4251, 5240, 5241, 5250, and 5251

Door Width	Horizontal Reinforcement	Glass Option	Design Pressures (psf)	Drawing Number
12'-0"	17 gauge, 3" U-bars	Yes	+56.1 / -62.5	TZ9-16-01313
12'-6"		Yes	+53.9 / -60.0	
13'-0"		Yes	+51.8 / -57.7	
13'-6"		Yes	+49.9 / -55.6	
14'-0"		Yes	+48.1 / -53.6	
14'-6"		Yes	+46.5 / -51.8	
15'-0"		Yes	+44.9 / -50.0	
15'-6"		Yes	+43.5 / -48.4	
16'-0"		Yes	+42.1 / -46.5	
16'-6"		Yes	+39.6 / -44.1	
17'-0"		Yes	+37.3 / -41.5	
17'-4"		Yes	+35.9 / -40.0	
15'-0"		17 gauge, 3" U-bar 16 gauge, "C" Channels	Yes	
16'-0"	Yes		+47.4 / -52.8	
17'-0"	Yes		+44.6 / -49.7	
17'-6"	Yes		+43.3 / -48.2	
18'-0"	Yes		+42.1 / -46.9	
18'-6"	Yes		+39.9 / -44.4	
19'-0"	Yes		+37.8 / -42.1	
19'-6"	Yes		+35.9 / -40.0	
20'-0"	Yes		+34.1 / -38.0	
20'-6"	Yes		+32.5 / -36.2	
21'-0"	Yes		+30.9 / -34.5	
22'-0"	Yes		+28.2 / -31.4	
8'-0"	17 gauge, 3" U-bars		No	+63.4 / -71.9
8'-6"		No	+59.6 / -67.6	
9'-0"		No	+56.3 / -63.9	
9'-6"		No	+53.4 / -60.5	
10'-0"		Yes	+50.7 / -57.5	
10'-6"		Yes	+46.0 / -52.2	
11'-0"		Yes	+41.9 / -47.5	
11'-6"		Yes	+38.3 / -43.5	
12'-0"		Yes	+35.2 / -39.9	
15'-4"	17 gauge, 3" U-bars	Yes	+50.3 / -56.0	TZ10-16-01313
16'-0"		Yes	+48.2 / -53.7	
16'-6"		Yes	+45.3 / -50.5	
17'-0"		Yes	+42.7 / -47.6	
17'-6"		Yes	+40.3 / -44.9	
18'-0"		Yes	+38.1 / -42.4	
18'-6"		Yes	+36.1 / -42.4	
19'-0"		Yes	+34.2 / -38.1	
19'-6"		Yes	+32.5 / -36.2	
20'-0"		Yes	+30.8 / -34.4	

Table 1
Models 2240, 2241, 2250, 2251, 4240, 4241, 4250, 4251, 5240, 5241, 5250, and 5251

Door Width	Horizontal Reinforcement	Glass Option	Design Pressures (psf)	Drawing Number
17'-2"	17 gauge, 3" U-bars 16 gauge, "C" Channels	Yes	+50.5 / -56.3	TZ10-18-01313
18'-0"		Yes	+48.2 / -53.7	
18'-6"		Yes	+45.6 / -50.8	
19'-0"		Yes	+43.3 / -48.2	
19'-6"		Yes	+41.1 / -45.8	
20'-0"		Yes	+39.0 / -43.5	
20'-6"		Yes	+37.2 / -41.4	
21'-0"		Yes	+35.4 / -39.5	
22'-0"		Yes	+32.3 / -35.9	