

## Product Evaluation

GDR131 | 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-131

**Effective Date:** April 1, 2022

**Re-evaluation Date:** July 2025

**Product Name:** Model 421 / 423 / 427 / 429 / 434 / 436 Steel Sectional Garage Doors, Impact Resistant and Non-Impact Resistant

**Manufacturer:** Overhead Door Corporation  
2501 State Hwy 121 Bsn,  
Suite 200  
Lewisville, TX 75067  
(800) 929-3667

Overhead Door Corporation  
One Door Drive  
P.O. Box 67  
Mt. Hope, OH 44660  
(330) 763-8000

**General Description:**

Model 421 / 423 / 427 / 429 / 434 / 436 series doors are sectional doors constructed of ASTM A653 CS Type B steel finished with an ASTM G-60 galvanized coating and covered with two coats of polyester paint.

Model 434 / 436 doors have a minimum 25-gauge skin. Model 427 / 429 doors have a minimum 24-gauge skin. Model 421 / 423 doors have a minimum 20-gauge skin.

Model 421 / 423 / 427 / 429 / 434 / 436 doors have 2" thick sections available in insulated or non-insulated panels.

Each section is reinforced with 20-gauge end and center stiles and are connected with 14-gauge center hinges and either 14-gauge, 13-gauge, or 11-gauge end hinges.

Optional full view sections are constructed of 6063-T6 extruded aluminum. Each section is comprised of vertical and horizontal aluminum extrusions and may have a 2-1/4" integral fin across the section.

**Product Identification:** The door has a wind load label, applied by the installer, that includes the manufacturer's name (Overhead Door); the model numbers (421 / 423 / 427 / 429 / 434 / 436); the Windload Specification Option (marked by the installer); the design pressure rating; the test standards (TAS 201, TAS 202, TAS 203); and the TDI product evaluation report number (TDI-GDR-131).

**Limitations:**

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

The doors may include the option for glazing.

The maximum width of each door panel section does not exceed 24"

The maximum door height does not exceed 24'-1". Refer to the tables in this evaluation report for allowable door heights for specific doors.

The doors have a maximum width of 24'-2".

The doors are reinforced with either 16-gauge, 18-gauge, or 20-gauge steel U-bars for horizontal reinforcement. The placement and installation of the horizontal reinforcement are shown on the design drawings.

**Design Drawings:** The doors must be installed as specified on the design drawings. The design drawings must be provided with the door. Each page must be sealed by J. C. Voelkel, PE. The drawing revision date and the dated sealed by the engineer are specified in the tables in this evaluation report. The following information, as a minimum, must be included on the design drawing:

- Drawing Number
- Windload Specification Code
- Models 421 / 423 / 427 / 429 / 434 / 436
- Design Pressure Rating
- Maximum Width and Maximum Height
- Maximum Section Height

### **Non-impact Resistant Doors**

**Design Drawings (Windload Specification Option Code):** Specified in Table 1.

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

**Design Pressures:** Table 1.

**Glazing (Optional):** Glass is double strength (0.125" thick) annealed monolithic. The dimensions of the glass and the attachment of the glass to the door panels is specified on the drawings. Glass is installed in the intermediate sections of the door.

**Aluminum Full View (Optional):** Aluminum full view sections may replace any section except top and bottom panels. Aluminum full sections have stiles and rails constructed of extruded aluminum alloy 6063-T6 with a 3-5/8" integral fin. Glazing is double strength (0.125" thick) annealed monolithic glass installed with aluminum retainers. The dimensions of the glass and the attachment of the glass to the door panels is specified on the drawings.

**Impact Protection:** These doors have not been tested for windborne debris resistance. Doors that contain glazing may not be installed in areas where windborne debris protection is required.

**Table 1**  
**Windload Specification Option Code, Allowable Door Dimensions,**  
**Glazing Options and Design Pressure Rating**

<b>Windload Specification Option Code</b>	<b>Maximum Door Width</b>	<b>Maximum Door Height</b>	<b>Glass Option</b>	<b>Aluminum Full View Available</b>	<b>Design Pressure (psf)</b>
411777; 2061 Rev A; 4/27/2021 Sealed: 5/03/2021	9'-4"	24'-1"	Yes	Yes	+15.90, -18.20
411778; 2062 Rev A; 4/27/2021 Sealed: 5/03/2021	9'-4"	24'-1"	Yes	Yes	+17.00, -19.40
411779; 2063 Rev A; 4/27/2021 Sealed: 5/03/2021	9'-4"	24'-1"	Yes	Yes	+20.90, -23.60
411780; 2064 Rev A; 4/27/2021 Sealed: 5/03/2021	9'-4"	24'-1"	Yes	Yes	+28.40, -32.20
411781; 2065 Rev A; 4/27/2021 Sealed: 5/03/2021	9'-4"	24'-1"	Yes	Yes	+37.50, -42.50
411782; 2066 Rev A; 4/27/2021 Sealed: 5/03/2021	9'-4'	24'-1"	Yes	Yes	+44.00, -49.80
411784; 2071 Rev A; 4/27/2021 Sealed: 5/03/2021	10'-4"	24'-1"	Yes	Yes	+15.90, -18.20
411785; 2072 Rev A; 4/27/2021 Sealed: 5/03/2021	10'-4"	24'-1"	Yes	Yes	+17.00, -19.40
411786; 2073 Rev A; 4/27/2021 Sealed: 5/03/2021	10'-4"	24'-1"	Yes	Yes	+20.90, -23.60
411787; 2074 Rev A; 4/27/2021 Sealed: 5/03/2021	10'-4"	24'-1"	Yes	Yes	+37.50, -42.50
411788; 2075 Rev A; 4/27/2021 Sealed: 5/03/2021	10'-4"	24'-1"	Yes	Yes	+44.00, -49.80
411790; 2024 Rev A; 4/27/2021 Sealed: 5/03/2021	12'-2"	24'-1"	Yes	Yes	+20.90, -23.60
411791; 2021 Rev E; 4/27/2021 Sealed: 5/03/2021	12'-2"	24'-1"	Yes	Yes	+23.70, -26.60

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**Windload Specification Option Code, Allowable Door Dimensions,**  
**Glazing Options and Design Pressure Rating**

<b>Windload Specification Option Code</b>	<b>Maximum Door Width</b>	<b>Maximum Door Height</b>	<b>Glass Option</b>	<b>Aluminum Full View Available</b>	<b>Design Pressure (psf)</b>
411792; 2025 Rev A; 4/27/2021 Sealed: 5/03/2021	12'-2"	24'-1"	Yes	Yes	+31.60, -35.40
411793; 2026 Rev A; 4/27/2021 Sealed: 5/03/2021	12'-2"	24'-1"	Yes	Yes	+44.00, -49.80
411795; 2032 Rev A; 4/27/2021 Sealed: 5/03/2021	14'-2"	24'-1"	Yes	Yes	+15.90, -18.20
411796; 2031 Rev E; 4/27/2021 Sealed: 5/03/2021	14'-2"	24'-1"	Yes	Yes	+20.20, -22.70
411798; 2041 Rev F; 4/28/2021 Sealed: 5/03/2021	16'-2"	24'-1"	Yes	Yes	+20.20, -22.70
411800; 2046 Rev A; 4/27/2021 Sealed: 5/03/2021	16'-2"	24'-1"	Yes	Yes	+31.60, -35.40
411801; 2047 Rev A; 4/27/2021 Sealed: 5/03/2021	16'-2"	24'-1"	Yes	Yes	+44.00, -49.80
411802; 2050 Rev A; 5/21/2021 Sealed: 6/02/2021	24'-2"	24'-1"	Yes	No	+20.20; -22.70
411803; 2052 Rev A; 5/25/2021 Sealed: 6/02/2021	24'-2"	24'-1"	Yes	No	+31.60, -35.40

### Impact Resistant Doors

**Design drawings (Windload Specification Option Code):** Specified in Table 2.

**Allowable Dimensions:** Specified in Table 2.

**Design Pressures:** Table 2.

**Glazing (Optional):** Impact resistant glazed window frame assemblies are shipped to the distributor as assembled units with the polycarbonate glazing installed in the door window section

panel under quality assurance guidelines audited by the Intertek Group, PLC. The glazing is minimum 1/4" polycarbonate. The dimensions of the glazing and the attachment of the glazing to the door panels is specified on the drawings.

**Impact Protection:** These door assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris. The door assembly passed the equivalent of Missile Level D as specified in ANSI/DASMA 115-17. Doors with impact resistant glazing may be installed in areas where windborne debris protection is required without the installation of an impact protective system as long as the design pressure rating for the assembly is not exceeded. These doors may not be installed on essential facilities as defined in ASCE 7-16.

**Table 2**  
**Windload Specification Option Code, Allowable Door Dimensions,**  
**Glazing Options and Design Pressure Rating**

<b>Windload Specification Option Code</b>	<b>Maximum Door Width</b>	<b>Maximum Door Height</b>	<b>Glass Option</b>	<b>Aluminum Full View Available</b>	<b>Design Pressure (psf)</b>
411780; 2064 Rev A; 4/27/2021 Sealed: 5/03/2021	9'-4"	24'-1"	Yes	Yes	+28.40, -32.20
411781; 2065 Rev A; 4/27/2021 Sealed: 5/03/2021	9'-4"	24'-1"	Yes	Yes	+37.50, -42.50
411782; 2066 Rev A; 4/27/2021 Sealed: 5/03/2021	9'-4"	24'-1"	Yes	Yes	+44.00, -49.80
411787; 2074 Rev A; 4/27/2021 Sealed: 5/03/2021	10'-4"	24'-1"	Yes	Yes	+37.50, -42.50
411788; 2075 Rev A; 4/27/2021 Sealed: 5/03/2021	10'-4"	24'-1"	Yes	Yes	+44.00, -49.80
411792; 2025 Rev A; 4/27/2021 Sealed: 5/03/2021	12'-2"	24'-1"	Yes	Yes	+31.60, -35.40
411793; 2026 Rev A; 4/27/2021 Sealed: 5/03/2021	12'-2"	24'-1"	Yes	Yes	+44.00, -49.80
411796; 2031 Rev E; 4/27/2021 Sealed: 5/03/2021	14'-2"	24'-1"	Yes	Yes	+20.20, -22.70
411800; 2046 Rev A; 4/27/2021 Sealed: 5/03/2021	16'-2"	24'-1"	Yes	Yes	+31.60, -35.40

**Table 2**  
**Windload Specification Option Code, Allowable Door Dimensions,**  
**Glazing Options and Design Pressure Rating**

<b>Windload Specification Option Code</b>	<b>Maximum Door Width</b>	<b>Maximum Door Height</b>	<b>Glass Option</b>	<b>Aluminum Full View Available</b>	<b>Design Pressure (psf)</b>
411801; 2047 Rev A; 4/27/2021 Sealed: 5/03/2021	16'-2"	24'-1"	Yes	Yes	+44.00, -49.80
411803; 2052 Rev A; 5/25/2021 Sealed: 6/02/2021	24'-2"	24'-1"	Yes	No	+31.60, -35.40

**Installation:**

**Design Drawings:** The doors must be installed as specified on the design drawings. Refer to the Limitations section of this evaluation report for specific requirements for the design drawings.

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

**Attachment of Door Components to Wood-Framed Walls Using a Wood Jamb:** The vertical mounting wall angles must be attached directly to wood jambs with the fasteners specified on the design drawings. The wood jambs and the attachment of the to the wood-framed walls must be as specified in the Jamb Connection Supplement, Drawing Number 411526, Rev. P01, signed and sealed on April 26, 2021 by John Scates, P.E.

**Attachment of Door Components to Concrete/Masonry Block Walls Using a Wood Jamb:** The vertical mounting wall angles must be attached directly to wood jambs with the fasteners specified on the design drawings. The wood jambs and the attachment of the to the wood-framed walls must be as specified in the Jamb Connection Supplement, Drawing Number 411526, Rev. P01, signed and sealed on April 26, 2021 by John 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 411526, Rev P01, signed and sealed on April 26, 2021, by John E. Scates, P.E.

**Note:** Keep the manufacturer's installation instructions, the appropriate approved design drawings, and the Jamb Connection Supplement available on the job site during installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.