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# **Product Evaluation**

GDR62 | 0622

**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-62

# Effective Date:June 1, 2022Re-evaluation Date:September 2025

Product Name: Residential Sectional Steel Garage Doors, Impact Resistant

Manufacturer: Amarr Garage Door 165 Carriage Ct. Winston-Salem, NC 27105 (336) 744-5100

#### Brand Names: Amarr

Reliabilt Pella Thermastar Encompass Sears Champion Precision Home Depot Orchard Supply

Will be accepted for use in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with this product evaluation. Installation instructions and the appropriate design drawings for the particular model, as shown in Tables 4 through 17, must be provided and available on the job site during installation

#### **General Description:**

**Amarr Garage Doors** are sectional overhead doors constructed from galvanized steel with a baked on polyester finish. Doors may be raised panel or flush and have a smooth or embossed wood grain texture. Doors may be single skin model 600, 650, 950, 500, 2000, 2400, and 2500, 2" thick, with or without insulation. Doors may be insulated models P500, C500, D500, 1200, 1500, 1550, 1600, 3100, 3150, 1480, 1000, 1350, 1380, 2700, and 2720 with an interior skin and 1-3/8" or 2" polystyrene insulation between the skins. Doors may be insulated sectional model 3000, 2" thick, with an interior skin and polyurethane insulation. Model dimensions, drawing number, glazing option, and vertical reinforcement are shown in Tables 4 through 17.

**Product Identification:** The garage doors are marketed under several retail names. Refer to the "Retailing Branding Product Cross Reference Chart" in Table 3 to determine the appropriate Amarr model number. An Amarr label will be affixed to each garage door. The Amarr label must include the manufacturer's name (**Amarr**), the model number, test standards, allowable design pressure rating, and the design drawing number.

**Product Brand Names:** Product brand names for individual retailers are shown in Table 3. The brand names are cross referenced to the Amarr model number.

#### Limitations:

This evaluation report includes impact resistant sectional garage doors.

Doors include optional impact resistant glazing. Refer to Tables 4 through 17 for glazing options for a particular door model. Refer to the design drawings for the glazing construction.

The maximum height of each door section is specified on the design drawings.

The doors must have a maximum allowable width of 18' 2". Refer to Tables 4 through 17 for the allowable width of the door for a particular door model.

The doors must have a maximum allowable height of 24' 1". Refer to Tables 4 through 17 for the allowable height of the door for a particular door model.

The design pressure rating for a particular model door is specified in Tables 4 through 17.

Each model door may have multiple design pressure ratings based upon the type of horizontal, vertical, and end reinforcing that is utilized. To attain the specified design pressure ratings, doors must be installed and reinforced according to the appropriate design drawing shown in Tables 4 through 17. Doors using the Vertical Post system must have the system activated in order to achieve the allowable design pressure rating as noted in this evaluation report and on the design drawings.

**Impact Resistance:** The garage door assemblies are impact resistant. These garage door assemblies will not need to be protected with an impact protective system.

# Installation:

**Design Drawings:** The doors must be installed as specified on the design drawings. The design drawings must be provided with the door. Each page of the design drawings must be sealed, signed, and dated by Thomas Shelmerdine, PE. The following information, as a minimum, must be provided within boxes located on each page of the design drawings:

- Model Number
- Amarr Brand Names
- Drawing Number
- Drawing Revision Number
- Design Pressure Rating
- Maximum Door Size (Width and Height)

**Door Installation:** Doors must be installed according to the appropriate design drawing specified for the particular model and design pressure shown in Tables 4 through 17. Wall framing members and 2x6 wood jambs must be minimum Spruce-Pine-Fir dimension lumber unless otherwise specified on the approved drawings or in this evaluation report.

**Attachment of Doors to Wall Framing:** The door track brackets must be attached either directly to the wall framing or to minimum 2x6 wood jambs that are secured to the wall framing with fasteners.

**Track Bracket Spacing:** Fastener requirements for track brackets must be as specified on the design drawings. Wood jambs must be minimum Spruce-Pine-Fir dimension lumber. Wall framing for the direct attachment of track brackets must be minimum Spruce-Pine-Fir dimension lumber. Track bracket spacing must not exceed either the spacing specified on the design drawings for the door to be installed or the spacing specified in Table 1, whichever is closer.

Table 1
Track Bracket Spacing (1)
Direct Attachment of Brackets to Wall Framing
Attachment of Track Brackets to Wood Jambs

Door Width	Maximum Positive Design Load	Track Bracket Spacing
9'	+45.5	24"
9'	+60.6	18"
9'	+68.3	16"
9'	+91.0	12"
16'	+25.6	24"
16'	+34.1	18"
16'	+38.4	16"
16'	+51.2	12"
18'	+22.7	24"
18'	+30.3	18"
18'	+34.1	16"
18'	+45.5	12"

1) Wood framing members must be Spruce-Pine-Fir Pine lumber (SG≥0.42).

**Methods of Door Attachment:** The allowable methods of attachment of the doors to the wall framing and illustrations of the allowable methods of attachment are specified below (Use one of the following options):

- 1. **Direct attachment of track to wood-framed walls**: Brackets for the vertical tracks and flag angles of the door may be attached directly to the wall framing with the fasteners specified on the design drawings, therefore eliminating the need for the 2x6 wood jamb called for on the design drawings. The attachment of the vertical tracks must be as shown in Figure 1. Track bracket spacing must be as specified in the Installation section of this evaluation report.
- 2. Attachment of track to concrete, masonry block or wood-framed walls using a wood jamb: For drawings beginning with the prefix "IRC" or "IBC," if 2x6 wood jambs are used, attach using the type, number and minimum embedment for fasteners shown on each drawing. The attachment of the vertical tracks must be as shown in Figure 2. Track bracket spacing must be as specified in the Installation section of this evaluation report. For the attachment of wood jambs to Spruce-Pine-Fir wall framing, attach using the type, number, and minimum embedment for fasteners shown on Table 2.
- 3. Attachment of garage door brackets directly to structure through wood jamb: Brackets for the vertical tracks and flag angles of the door may be attached directly to the wall framing through the wood back jamb with 5/16" x 3-1/2" lag screws as shown in Figure 3. This configuration will eliminate the need for the back jamb to have additional fastenings to the

structure due to the load being transferred from the door directly to the wood framed structure. Track bracket spacing must be as specified in the Installation section of this evaluation report.

- 4. Attachment of garage door brackets directly to structure through wood jamb with finishing material behind jamb: Brackets for the vertical tracks and flag angles of the door may be attached directly to the wall framing through a wood back jamb and wall finishing material with 5/16" x 4" lag screws as shown in Figure 4. This configuration will eliminate the need for the back jamb to have additional fastenings to the structure due to the load being transferred from the door directly to the wood framed structure. Track bracket spacing must be as specified in the Installation section of this evaluation report.
- 5. **Overlap of jamb trim boards:** Doors that are not required to overlap the jamb may overlap jamb trim boards shown in Figures 3 and 4. Jamb trim boards may also be installed on construction types shown in Figures 1 and 2. Doors requiring 1" overlap must have 1" of overlap extending over the framing studs and (or) the wood back jamb when installed over the framing studs. Framing "studs" may also be concrete or steel.
- **Note**: Keep the manufacturer's installation instructions and the design drawings available on the job site during installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.



Figure 1: Attachment of garage door brackets directly to wood wall framing (Option 1)



Figure 2: Attachment of garage door brackets directly 2 x 6 wood jamb (Option 2)







Figure 4: Attachment of garage door brackets directly to structure through wood jamb with finishing material behind jamb (Option 4)

		Rolt	Anchor	Holo	Embedment	I	Bolt Spacing Fo	r
Wall Type	Bolt Type	Diameter	Diameter Diameter Diame		Diameter Length		16' wide (10)	18' wide (11)
	Hilti Kwik Bolt	3/8″	3/8″	3/8″	2-1/2″	24" O.C. (2)	24" O.C. (2)	24" O.C. (2)
Concrete	ITW/Ramset Red Head	3/8″	3/8″	3/8″	2-1/2″	24″ O.C. (2)	24" O.C. (2)	24" O.C. (2)
	Hilti Sleeve Anchor	3/8″	5/16″	3/8″	1-1/4″	24″ O.C. (2)	24" O.C. (2)	16″ O.C. (2)
Hollow	ITW/Ramset Tapcon	1/4″	1/4″	3/16″	1-1/4″	Pair at 16" O.C. (2)(3)	Pair at 16" O.C. (2)(3)	Pair at 12" O.C. (2)(3)
Block	Hilti Sleeve Anchor	3/8″	5/16″	3/8″	1-1/4″	24″ O.C. (2)	16″ O.C. (2)	16″ O.C. (2)
Wood (5)	Lag Bolts	5/16″	5/16″	3/16″	1-1/2″	24″ O.C. (2)	16″ O.C. (2)	16″ O.C. (2)
Wood (6)	Lag Bolts	5/16″	5/16″	3/16″	1-1/2″	18″ O.C. (2)	16″ O.C. (2)	12″ O.C. (2)
Steel (12 Ga. Min)	Hilti Kwik- Pro	1/4″-14 x #	3/4″ HWH 3	Self- Drilling	N/A	12″ O.C. (2)	16″ O.C. (2)	16″ O.C. (2)

Table 2Jamb Attachment to Structure

Notes:

- 1) Chart used only when 2 x 6 or 2 x 8 jambs are attached to structure for attachment of track.
- 2) Install first anchor a maximum of 6" from each end of jamb.
- 3) Pair of anchors must be approximately 3" center to center.
- 4) For 9' wide doors maximum allowable design load to jamb is +274 PLF; 16' wide doors maximum allowable design load to jamb is +300 PLF; 18' wide doors maximum allowable design load to jamb is +396 PLF.
- 5) Wood framing members must be Southern Yellow Pine lumber (SG $\geq$ 0.55).
- 6) Wood framing members must be Spruce-Pine-Fir Pine lumber (SG $\geq$ 0.42).
- 7) Concrete must have minimum f'c = 2000 psi.
- 8) Steel structure members must be minimum 12 gauge (0.1046").
- 9) This chart applies to openings up to 9' wide with maximum design pressures of +60.9 psf.
- 10) This chart applies to openings up to 16' wide with maximum design pressures of +37.5 psf.
- 11) This chart applies to openings up to 18' wide with maximum design pressures of +44.0 psf.

	Product Brand Name								
Amarr Model	Amarr	Reliabilt	Pella	Sears	Champion				
600	Stratford 1000	Model 300	Sutherland	Sears Traditional 1000	Medallion 1000				
600i	Stratford 2000	Model 500	Sutherland	Sears Traditional 2000	Medallion 2000				
650	Oak Summit 1000	Model 800	Onslow	Steel CH 1000	Triumph 1000				
650i	Oak Summit 2000	Model 850	Onslow	Steel CH 2000	Triumph 2000				
950	Heritage 1000	Heritage 1000	Hillsboro	Traditional Plus 1000	Heritage 1000				
950i	Heritage 2000	Heritage 2000	Hillsboro	Traditional Plus 1000	Heritage 2000				
1200 / 1200D	Heritage 3000 / Oak Summit 3000	Model 700 / Model 800	Hillsboro / Onslow	Traditional Plus 3000 / Steel CH 3000	Heritage 3000 / Triumph 3000				
1500 / 1550	Stratford 3000 / Oak Summit 3000	Model 700 / Model 800	Sutherland / Onslow	Sears Traditional 3000 / Steel CH 3000	Medallion 3000 /Triumph 3000				
3100	Lincoln 3138	N/A	N/A	N/A	N/A				
1600	Lincoln 3000	Lincoln 3000	Ladora	Sears Traditional 3500	Lincoln 3000				
3150	Hillcrest 3138	N/A	N/A	N/A	N/A				
1650	Hillcrest 3000	Hillcrest 3000	Hamilton	Steel Carriage House 3500	Hillcrest 3000				
500	Classica 1000	890 Series	Colesburg	Premier 1000	Winner's Circle 1000				
500i	Classica 2000	900 Series	Colesburg	Premier 2000	Winner's Circle 2000				
3000	Classica 3000	950 Series	Colesburg	Premier 3000	Winner's Circle 3000				
P500, C500, D500	Olympus / Designers Choice	N/A	Otteson / Dansbury	Traditional Max 4000, 5000 / Steel Carriage House 4000, 5000	Victory Lane 500				

Table 3Retail Branding Product Cross Reference Chart

	Product Brand Name								
Amarr Model	Amarr	Precision	Home Depot	Orchard Supply					
600	Stratford 1000	Distinct Precision 100	Home Depot Traditional 1000	Vintage Oaks 1000					
600i	Stratford 2000	Distinct Precision 200	Home Depot Traditional 2000	Vintage Oaks 2000					
650	Oak Summit 1000	Oak Ridge Precision 100	Home Depot Carriage House 1000	Vintage Oaks 1000					
650i	Oak Summit 2000	Oak Ridge Precision 200	Home Depot Carriage House 1000	Turtle Creek 2000					
950	Heritage 1000	Enduring Precision 100	N/A	Heritage 1000					
950i	Heritage 2000	Enduring Precision 200	N/A	Heritage 2000					
1200 & 1200D	Heritage 3000 / Oak Summit 3000	Enduring Precision 300 / Oak Ridge Precision 300	Home Depot Carriage House 3000	Heritage 3000 / Turtle Creek 3000					
1500 / 1550	Stratford 3000 / Oak Summit 3000	Distinct Precision 300 / Oak Ridge Precision 300	Home Depot Traditional 3000 / Carriage House 3000	Vintage Oaks 3000 / Turtle Creek 3000					
3100	Lincoln 3138	N/A	N/A	N/A					
1600	Lincoln 3000	Lincoln 3000	N/A	N/A					
3150	Hillcrest 3138	N/A	N/A	N/A					
1650	Hillcrest 3000	Hillcrest 3000	N/A	N/A					
500	Classica 1000	Cambridge Precision 100	N/A	Echo Canyon 1000					
500i	Classica 2000	Cambridge Precision 200	N/A	Echo Canyon 2000					
3000	Classica 3000	Cambridge Precision 300	The Home Depot Carriage House 4000	Echo Canyon 3000					
P500, C500, D500	Olympus / Designers Choice	Olympus / Designers Choice	N/A	N/A					

# Table 3 (Continued)Retail Branding Product Cross Reference Chart

Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)		
9'-0"	14'-0"	IRC-6009-130-15-I Rev B, 12-20-12 Sealed 1-05-22	+26.7; -31.6	Yes	None	Ext 25 or 24 ga.		
9'-0"	14'-0"	IRC-6009-150-15-I Rev. B, 12-19-12 Sealed 1-05-22	+35.6; -42.1	Yes	None	Ext 25 or 24 ga.		
9'-0"	14'-0"	IRC-6009-169-15-I Rev. B, 12-19-12 Sealed 1-05-22	+45.3; -51.2	Yes	None	Ext 25 or 24 ga.		
16'-0"	14'-0"	IRC-6016-130-15-I Rev. B, 12-20-12 Sealed 1-05-22	+25.6; -29.1	Yes	None	Ext 25 or 24 ga.		
16'-0"	14'-0"	IRC-6016-133-17-I 3-03-14 Sealed 1-05-22	+27.4; -30.5	Yes	None	Ext 25 or 24 ga.		
16'-0"	14'-0"	IRC-6016-140-24-I Rev. B, 4-20-12 Sealed 1-05-22	+29.7; -33.1	No	None	Ext 25 or 24 ga.		
16'-0"	14'-0"	IRC-6016-140-24-G Rev. B, 12-19-12 Sealed 1-05-22	+29.7; -33.9	Yes	None	Ext 25 or 24 ga.		
16'-0"	14'-0"	IRC-6016-156-26-I 2-05-14 Sealed 1-05-22	+38.0; -42.0	Yes	None	Ext 25 or 24 ga		
18'-0"	14'-0"	IRC-6018-130-24-I Rev. A, 5-1-12 Sealed 1-05-22	+25.4; -28.7	Yes	None	Ext 25 or 24 ga.		
18'-0"	14'-0"	IRC-6018-155-26-I Rev. A, 5-1-12 Sealed 1-05-22	+37.0; -40.6	Yes	None	Ext 25 or 24 ga.		

Table 4 Model 600, 650, and 950

Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)
9'-0″	14'-0″	IRC-6209-130-15-I Rev. A 3-01-22 Sealed 3-11-22	+26.7 -31.6	Yes	None	25 ga.
9'-0″	14'-0″	IRC-6209-150-15-I Rev. A 3-01-22 Sealed 3-11-22	+35.6 -42.1	Yes	None	25 ga.
9'-0"	14'-0"	IRC-6209-169-15-I 11-9-17 Sealed 1-05-22	+45.2; -53.4	Yes	None	25 ga.
10'-0"	14'-0"	IRC-6210-175-21-I Rev. A 3-01-22 Sealed 3-11-22	+48.0; -56.1	Yes	None	25 ga.
12'-0"	14'-0"	IRC-6212-175-24-I Rev A. 3-01-22 Sealed 3-11-22	+47.4; -54.8	Yes	None	25 ga.
16'-0"	14'-0"	IRC-6216-130-15-I Rev A. 3-01-22 Sealed 3-11-22	+25.6 -29.1	Yes	None	25 ga.
16'-0″	14'-0"	IRC-6216-140-24-I Rev. A 3-01-22 Sealed 3-11-22	+29.7 -33.8	Yes	None	25 ga.
16'-0″	14'-0″	IRC-6216-156-26-I Rev. A 3-01-22 Sealed 3-11-22	+38.0 -42.0	Yes	None	25 ga.
18'-0″	14'-0"	IRC-6218-130-24-I Rev. A 3-01-22 Sealed 3-11-22	+25.4 -28.7	Yes	None	25 ga.
18'-0"	14'-0"	IRC-6218-155-26-I Rev. A 3-01-22 Sealed 3-11-22	+37.0 -40.6	Yes	None	25 ga.

Table 5 Model 625 and 675

#### Table 6 Model 950

-	initiaci 550						
Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)	
9'-0"	14'-0"	IRC-9509-169-15-G 2-24-22 Sealed 4-12-22	+45.3; -51.2	Yes	Yes	24 ga.	
9'-0"	14'-0"	IRC-9509-180-21-G 2-26-22 Sealed 4-12-22	+51.1; -60.3	Yes	Yes	24 ga.	
9'-0"	14'-0"	IRC-9509-189-21-I 2-10-22 Sealed 4-12-22	+57.0; -67.0	Yes	None	24 ga.	
16'-0"	14'-0"	IRC-9516-169-26-G 3-03-22 Sealed 4-12-22	+45.8; -49.3	Yes	None	24 ga.	
16'-0"	14'-0"	IRC-9516-185-26-I 3-14-22 Sealed 4-12-22	+51.9; -58.9	Yes	None	24 ga.	
18'-0"	14'-0"	IRC-9518-165-26-G 3-15-22 Sealed 4-12-22	+42.0; -46.0	Yes	None	24 ga.	
18'-0"	14'-0"	IRC-9518-180-26-I 3-02-22 Sealed 4-12-22	+48.6; -55.0	Yes	None	24 ga.	

#### Table 7 Model 500

Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)
9'-0"	14'-0"	IRC-5309-150-15-I 1-13-21 Sealed 3-25-21	+35.6; -41.9	No	None	24 ga.
9'-0"	14'-0"	IRC-5309-185-21-I 1-18-21 Sealed 3-25-21	+54.4; -62.0	No	None	24 ga.
16'-0"	8'-0"	IRC-5316-150-26-I 11-13-20 Sealed 3-22-21	+34.0; -38.6	No	None	24 ga.
16'-0"	8'-0"	IRC-5316-169-26-I 11-05-20 Sealed 3-25-21	+43.4; -49.3	No	None	24 ga.
16'-0"	8'-0"	IRC-5316-175-45 Rev. F, 6-09-21 Sealed 1-05-22	+45.9; -52.1	No	Yes; Vertical Post (1)	Ext - 24 ga.

# Table 7 (Continued) Model 500

wodel 500							
Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)	
18'-0"	8'-0"	IRC-5318-130-24-I 11-20-20 Sealed 3-24-21	+25.1; -28.4	No	None	Ext - 24 ga.	
18'-0"	8'-0"	IRC-5318-140-26-I 7-07-20 Sealed 3-24-21	+29.4; -33.3	No	None	Ext - 24 ga.	
18'-0"	8'-0"	IRC-5318-150-26-I 11-20-20 Sealed 3-25-21	+33.7; -36.1	No	None	Ext - 24 ga.	

#### Table 8 Model 1380

Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)
9'-2"	24'-0"	IRC-1809-136-15-I 11-25-14 Sealed 6-22-21	+26.4; -31.1	No	No	Ext 27 ga. Int 27 ga.
12'-2"	24'-0"	IRC-1812-130-15-I 2-16-15 Sealed 6-22-21	+23.8; -27.3	No	No	Ext 27 ga. Int 27 ga.
16'-2"	24'-0"	IRC-1816-136-15-I 11-24-14 Sealed 6-22-21	+25.3; -28.7	No	None	Ext 27 ga. Int 27 ga.
16'-2"	24'-0"	IRC-1818-136-26-I 12-08-14 Sealed 6-22-21	+25.1; -28.4	No	None	Ext 27 ga. Int 27 ga.

Table 9 Model 1200 and 1200D

Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)
9'-0"	14'-0"	IRC-1209-130-11-I Rev. A, 1-13-20 Sealed 1-05-22	+26.7; -31.6	Yes	None	Ext 24 ga. Int 27 ga.
9'-0"	14'-0"	IRC-1209-130-11-F 2-28-22 Sealed 4-12-22	+26.7; -31.6	Yes	None	Ext 24 ga. Int 27 ga.
9'-0"	14'-0"	IRC-1209-155-15-I 7-28-21 Sealed 4-12-22	+38.7; -48.3	Yes	None	Ext 24 ga. Int 27 ga.
9'-0"	14'-0"	IRC-1209-189-21-I Rev. C, 10-28-13 Sealed 1-05-22	+57.0; -67.5	Yes	None	Ext 24 ga. Int 27 ga.

Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)	
9'-0"	14'-0"	IRC-1209-190-15-F 3-11-22 Sealed 4-12-22	+57.0; -67.5	Yes	None	Ext 24 ga. Int 27 ga.	
9'-0"	14'-0"	IRC-1209-190-21-I 3-03-22 Sealed 4-12-22	+57.0; -67.5	Yes	None	Ext 24 ga. Int 27 ga.	
9'-0"	14'-0"	IRC-1216-155-26-I 3-09-22 Sealed 4-12-22	+37.0; -45.0	Yes	None	Ext 24 ga. Int 27 ga.	
16'-0"	14'-0"	IRC-1216-130-15-I 2-16-21 Sealed 4-12-22	+25.6; -29.1	Yes	None	Ext 24 ga. Int 27 ga.	
16'-0"	14'-0"	IRC-1216-130-15-F 3-15-22 Sealed 4-12-22	+25.6; -29.1	Yes	None	Ext 24 ga. Int 27 ga.	
16'-0"	14'-0"	SFC-590-010 Rev. D, 5-2-12 Sealed 1-05-22	+46.0; -56.0	No	None	Ext 24 ga. Int 27 ga.	
16'-0"	14'-0"	IRC-1216-175-26-I Rev. A, 1-07-09 Sealed 1-05-22	+48.0; -52.0	No	None	Ext 24 ga. Int 27 ga.	
16'-0"	14'-0"	IRC-1216-175-26-G 11-11-13 Sealed 1-05-22	+48.0; -52.0	Yes	None	Ext 24 ga. Int 27 ga.	
16'-0"	14'-0"	IRC-1216-175-26-F 3-10-22 Sealed 4-12-22	+48.0; -52.0	Yes	None	Ext 24 ga. Int 27 ga.	
18'-0"	14'-0"	IRC-1218-130-17-F 3-15-22 Sealed 4-12-22	+25.4; -28.7	Yes	None	Ext 24 ga. Int 27 ga.	
18'-0"	14'-0"	IRC-1218-130-24-I 7-10-14 Sealed 1-05-22	+25.4; -28.7	Yes	None	Ext 24 ga. Int 27 ga.	
18'-0"	14'-0"	IRC-1218-155-26-I 3-09-22 Sealed 4-12-22	+37.0; -44.5	Yes	None	Ext 24 ga. Int 27 ga.	
18'-0"	14'-0"	IRC-1218-165-26-I 3-07-22 Sealed 4-12-22	+42.0; -46.0	Yes	None	Ext 24 ga. Int 27 ga.	
18'-0"	14'-0"	IRC-1218-165-26-F 3-07-22 Sealed 4-12-22	+42.0; -46.0	Yes	None	Ext 24 ga. Int 27 ga.	

# Table 9 (Continued) Model 1200 and 1200D

Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)		
9'-0"	14'-0"	IRC-1509-130-15-I 10-16-14 Sealed 6-22-21	+26.7; -30.7	Yes	None	Ext 27 ga. Int 27 ga.		
9'-0"	14'-0"	IRC-1509-155-15-I 10-10-16 Sealed 6-22-21	+38.0; -45.0	Yes	None	Ext 27 ga. Int 27 ga.		
16'-0"	14'-0"	IRC-1516-130-15-I 10-16-14 Sealed 6-22-21	+25.6; -29.1	Yes	None	Ext 27 ga. Int 27 ga.		
18'-0"	14'-0"	IRC-1518-130-24-I 10-16-14 Sealed 6-22-21	+25.4; -28.7	Yes	None	Ext 27 ga. Int 27 ga		

Table 10 Model 1500 and 1550

### Table 11 Model 1480

Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)		
9'-2"	14'-0"	IRC-1409-130-15-I 1-22-15 Sealed 1-05-22	+26.4; -31.1	No	None	Ext 27 ga. Int 27 ga.		
16'-2"	14'-0"	IRC-1416-130-15-I 11-20-14 Sealed 1-05-22	+25.3; -28.7	No	None	Ext 27 ga. Int 27 ga.		
18'-2"	14'-0"	IRC-1418-130-26-I 12-08-14 Sealed 1-05-22	+25.1; -28.4	No	None	Ext 27 ga. Int 27 ga.		

Table 12 Model 1600, 1650, 3100, and 3150

Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)
9'-0"	14'-0"	IRC-3109-130-15-I 3-13-19 Sealed 6-22-21	+26.7; -31.6	Yes	None	Ext 27 ga. Int 27 ga.
9'-0"	14'-0"	IRC-1609-130-15-I Rev A, 10-21-13 Sealed 1-05-22	+26.7; -31.6	Yes	None	Ext 24 ga. Int 27 ga.
9'-0"	14'-0"	IRC-3109-155-15-I 3-14-19 Sealed 6-22-21	+38.0; -45.0	Yes	None	Ext 27 ga. Int 27 ga.
9'-0"	14'-0"	IRC-1609-155-15-I 2-16-14 Sealed 1-05-22	+38; -45.0	Yes	None	Ext 24 ga. Int 27 ga

Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)
16'-0"	14'-0"	IRC-3116-130-15-I 12-20-18 Sealed 6-22-21	+25.6; -29.1	Yes	None	Ext 27 ga. Int 27 ga.
16'-0"	14'-0"	IRC-1616-130-15-I Rev A, 10-28-13 Sealed 1-05-22	+25.6; -29.1	Yes	None	Ext 24 ga. Int 27 ga.
16'-0"	14'-0"	IRC-1616-155-26-I 2-24-14 Sealed 1-05-22	+36.4; -41.4	Yes	None	Ext 24 ga. Int 27 ga.
18'-0"	14'-0"	IRC-3118-130-24-I 1-23-19 Sealed 6-22-21	+25.4; -28.7	Yes	None	Ext 27 ga. Int 27 ga.
18'-0"	14'-0"	IRC-1618-130-24-I Rev B, 2-08-22 Sealed 3-11-22	+25.4; -28.7	Yes	None	Ext 24 ga. Int 27 ga.
18'-0"	14'-0"	IRC-1618-155-26-I 2-24-14 Sealed 1-05-22	+36.1; -40.8	Yes	None	Ext 24 ga. Int 27 ga

Table 12 (Continued) Model 1600, 1650, 3100, and 3150

# Table 13 Model 3000

Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)
9'-0"	14'-0"	IRC-3309-130-15-I 2-23-21 Sealed 4-07-21	+26.7; -31.6	Yes	None	Ext 25 ga. Int 27 ga
9'-0"	14'-0"	IRC-3309-150-15-I 1-18-21 Sealed 3-24-21	+35.6; -41.9	Yes	None	Ext 25 ga. Int 27 ga
9'-0"	14'-0"	IRC-3309-180-15-I 1-25-21 Sealed 3-24-21	+50.8; -59.8	Yes	None	Ext 25 ga. Int 27 ga
16'-0"	8'-0"	IRC-3316-130-24-I 11-05-20 Sealed 3-24-21	+25.3; -28.8	No	None	Ext 25 ga. Int 27 ga
16'-0"	14'-0"	IRC-3316-140-24-I 11-05-20 Sealed 3-24-20	+29.7; -33.8	Yes	None	Ext 25 ga. Int 27 ga
16'-0"	14'-0"	IRC-3316-150-26-I 11-17-20 Sealed 3-24-21	+34.0; -38.6	Yes	None	Ext 25 ga. Int 27 ga
18'-0"	14'-0"	IRC-3318-150-26-I 1-18-21 Sealed 3-25-21	+33.7; -38.1	Yes	None	Ext 25 ga. Int 27 ga

Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)
9'-0"	14'-0"	IRC-P509-155-15-I 2-06-18 Sealed 1-05-22	+38.0; -44.9	Yes	None	27 ga.
9'-0"	14'-0"	IRC-C509-155-15-I 12-22-15 Sealed 1-05-22	+38.0; -44.9	Yes	None	27 ga.
16'-0"	14'-0"	IRC-P516-155-26-I 2-1-18 Sealed 1-05-22	+37.0; -41.4	Yes	None	27 ga.
16'-0"	14'-0"	IRC-C516-155-26-I 1-13-16 Sealed 1-05-22	+36.4; -41.4	Yes	None	27 ga.
18'-0"	14'-0"	IRC-P518-155-26-I 2-06-18 Sealed 1-05-22	+37.0; -40.6	Yes	None	27 ga.
18'-0"	14'-0"	IRC-C518-155-26-I 1-19-16 Sealed 1-05-22	+37.0; -40.6	Yes	None	27 ga.

Table 14 Model P500, C500, and D500

Table 15 Model 1350, 2700 and 2720

Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)
9'-2"	24'-0"	IBC-1309-130-11-I 5-10-12 Sealed 6-21-21	+24.3; -28.5	No	None	27 ga.
9'-2"	24'-0"	IRC-1309-150-15-I Rev. A, 3-03-15 Sealed 6-21-21	+32.6; -38.3	No	None	27 ga.
12'-2"	24'-0"	IRC-1312-130-15-I 5-18-12 Sealed 6-21-21	+23.8; -27.3	No	None	27 ga.
12'-2"	24'-0"	IRC-2712-130-15-I 7-23-18 Sealed 6-21-21	+23.8; -27.3	No	None	Ext. 20 or 27 ga.
12'-2"	24'-0"	IRC-1312-150-15-I 8-06-15 Sealed 6-21-21	+32.0; -36.7	No	None	27 ga.
12'-2"	24'-0"	IRC-2712-150-15-I 7-24-18 Sealed 6-21-21	+32.0; -36.7	No	None	Ext. 20 or 27 ga.
18'-2"	24'-0"	IRC-2718-130-24-I 7-25-13 Sealed 6-21-21	+25.1; -28.4	No	None	Ext. 20 or 27 ga.

Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)		
20'-2"	24'-0"	IRC-2720-130-26-I 5-10-13 Sealed 6-21-21	+22.9; -25.7	No	None	Ext. 20 or 27 ga.		

Table 15 (Continued) Model 1350, 2700 and 2720

Table 16 Model 2000, 2400, and 2500

Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)
9'-2″	24'-1″	IRC-2009-130-11-I 8-01-17 Sealed 6-16-21	+24.2; -28.4	No	None	Ext. 20
9'-2"	24'-0"	IBC-2409-169-15-I 10-12-16 Sealed 6-16-21	+41.0; -48.1	No	None	Ext. 20 or 24 ga.
9'-2"	24'-1"	IBC-2409-177-21-I 07-29-08 Sealed 6-16-21	+50.0; -62.0	No	None	Ext. 20 or 24 ga.
9'-2"	24'-1″	IRC-2509-150-15-I 1-30-15 Sealed 6-16-21	+32.6; -38.3	No	None	Ext. 20, 24 or 25 ga.
10'-2"	24'-0"	IBC-2410-150-15-I 10-02-18 Sealed 6-16-21	+32.1; -37.3	No	None	Ext. 20 or 24 ga.
10'-2"	24'-0"	IBC-2410-169-21-I 12-5-16 Sealed 6-16-21	+40.7; -47.3	No	None	Ext. 20 or 24 ga.
10'-2"	24'-0"	IBC-2410-195-24-I 6-1-16 Sealed 6-16-21	+54.2; -63.0	No	None	Ext. 20 or 24 ga.
12'-2"	24'-0"	IBC-2412-169-24-I 5-31-16 Sealed 6-16-21	+40.2; -46.1	No	None	Ext. 20 or 24 ga.
12'-2"	24'-0"	IBC-2412-188-26-I Rev. B 9-11-08 Sealed 6-16-21	+50.0; -56.0	No	None	Ext. 20 or 24 ga.
16'-2"	24'-1″	IBC-2416-180-26-I 5-30-13 Sealed 6-16-21	+45.0; -52.0	No	None	Ext. 20 or 24 ga.
16'-2"	24'-0"	IBC-2416-150-26-I 5-31-16 Sealed 6-16-21	+31.4; -35.5	No	None	Ext. 20 or 24 ga.
16'-2"	24'-1"	IBC-2516-150-26-I 2-10-15 Sealed 6-16-21	+31.4; -35.5	No	None	Ext. 20, 24, or 25 ga.

Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)		
18'-2"	24'-0"	IBC-2418-150-26-I Rev. A, 5-09-08 Sealed 6-16-21	+34.1; -38.5	No	None	Ext. 20 or 24 ga.		
18'-2"	24'-0"	IBC-2418-170-26-I Rev. D, 1-19-12 Sealed 1-05-22	+39.5; -44.5	No	None	Ext. 20 or 24 ga.		
20'-2"	24'-0"	IBC-2420-130-26-I 4-10-11 Sealed 6-16-21	+22.9; -25.7	No	None	Ext. 20 or 24 ga.		

# Table 16 (Continued) Model 2000, 2400, and 2500

# Table 17 Model 1000

Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)
9'-2"	24'-0"	IBC-1009-130-11-S 02-14-18 Sealed 6-22-21	+24.3; -28.5	Yes	No	Ext. 24 ga. Int 27 ga.
9'-2"	24'-0"	IBC-1009-150-11-I 02-08-17 Sealed 6-22-21	+32.7; -38.4	Yes	No	Ext. 27 ga. Int 27 ga.
9'-2"	24'-0"	IBC-1009-150-15-F 06-05-17 Sealed 6-22-21	+32.7; -38.4	Yes	No	Ext. 27 ga. Int 27 ga.
9'-2"	24'-0"	IBC-1009-150-11-S 03-14-18 Sealed 6-22-21	+32.7; -38.4	Yes	No	Ext. 24 ga. Int 27 ga.
9'-2"	24'-0"	IBC-1009-195-15-I 11-16-16 Sealed 6-22-21	+55.1; -64.5	Yes	No	Ext. 27 ga. Int 27 ga.
9'-2"	24'-0"	IBC-1009-195-15-F 06-05-17 Sealed 6-22-21	+55.1; -64.5	Yes	No	Ext. 27 ga. Int 27 ga.
10'-2"	24'-0"	IBC-1010-130-11-I 03-08-17 Sealed 6-22-21	+24.1; -28.0	Yes	No	Ext. 27 ga. Int 27 ga.
12'-2"	24'-0"	IBC-1012-130-15-I 03-09-17 Sealed 6-22-21	+23.8; -27.3	Yes	No	Ext. 27 ga. Int 27 ga.
12'-2"	24'-0"	IBC-1012-150-15-I 02-08-17 Sealed 6-22-21	+32.0; -36.7	Yes	No	Ext. 27 ga. Int 27 ga.
12'-2"	24'-0"	IBC-1012-195-24-I 03-23-17 Sealed 6-22-21	+54.0; -62.0	Yes	No	Ext. 27 ga. Int 27 ga.

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Door Width (Max.)	Door Height (Max.)	Drawing Number	Design Pressure (PSF)	Glazing Option	Vertical Reinforcing	Skin (Min.)
16'-2"	24'-0"	IBC-1016-150-26-I 11-18-16 Sealed 6-22-21	+31.2; -35.3	Yes	No	Ext 27 ga. Int 27 ga.
16'-2"	24'-0"	IBC-1016-150-26-F 08-02-17 Sealed 6-22-21	+31.2; -35.3	Yes	No	Ext. 27 ga. Int 27 ga.
16'-2"	24'-0"	IBC-1016-185-26-F 01-22-18 Sealed 6-22-21	+47.1; -53.3	Yes	No	Ext. 27 ga. Int 27 ga.
16'-2"	24'-0"	IBC-1016-195-26-I 1-25-17 Sealed 6-22-21	+52.8; -59.7	Yes	No	Ext 27 ga. Int 27 ga.
18'-2"	24'-0"	IBC-1018-130-24-I 06-06-17 Sealed 6-22-21	+23.0; -26.0	Yes	No	Ext. 27 ga. Int 27 ga.

# Table 17 (Continued) Model 1000