

## John E. Scates, Professional Engineer

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October 17, 2022

Janus International  
135 Janus International Blvd  
Temple, GA 30179

Re: FL 21450-R8 (850/1850/3100)  
**Evaluation Report for Janus Series 850 & 1850 & 3100 Rolling Doors**

To Whom It May Concern:

At the request of Janus International, I have reviewed the drawings and tests listed below. The pressure listed on the drawings are the direct result of these tests or conservative engineering rational analysis from the actual tests. I have concluded that the construction shown on these drawings comply with the structural requirements of the 7th Edition (2020) Florida Building Code. I certify that I meet the requirements of "independence" as detailed in Florida Statutes.

Drawing T1006 is rated for HVHZ. This product is listed as NOA 20-1106.06.

### Drawings

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#### Static Only

T1004-RevI	26 GA Series 3100/1850 Door Assembly,	up to 20' wide
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#### Static and Impact

T1006-S RevF	Series 850 & 850-S (26 ga)	+46.0 / -54.0 PSF @8'8"
T1017-Rev-	Series 1850/1850-IM & 3100/3100-IM Door Assembly,	+42.5 / -45.0 PSF @16'

#### Static and Impact HVHZ

T1006 RevD	Series 850 (24 ga)	mirrors NOA 20-1106.06	+46.0 / -54.0 PSF @8'8"
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**Test Reports**

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**Test Reports**

<b>Drawing</b>	<b>CTLA Test Report</b>	<b>Test Date</b>
T1004	CTLA 1024W (12x8)	02-20-2003
T1004	CTLA 1194W (12x8)	12-02-2003
T1004	Intertek n7120.01-550-44-r0 (16x10)	07/15/2022

The CTLA test facility was located at:

Certified Testing Laboratories  
 7252 Narcoossee Rd  
 Orlando, FL

The CTLA test reports were signed by a Florida P.E.

The Intertek test facility was located at:

1701 Westfork Dr, Ste 106  
 Lithia Springs, GA

<b>Drawing</b>	<b>UL Test Report</b>	<b>Test Date</b>
T1015	SV30743-20180723 (14x8)	07-23-2018
T1016	SV30743-20190716 (16x10)	07-16-2019

The UL test facility was located at:

UL LLC  
 750 Anthony Trail  
 Northbrook, IL 60062

The UL test reports were signed by an authorized representative of UL LLC, and a Florida P.E.

<b>Drawing</b>	<b>ESP Test Report</b>	<b>Test Date</b>
T1006	ESP013417P (TAS 201/202/203)	08-26-2013

The ESP test facility was located at:

Element Materials Technology  
 115 South 84th Ave  
 Wausau, WI 54401

The ESP test reports were signed by a Florida P.E.

## Test Methods

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### **Static Pressure:**

T1004 was tested for Static pressure per ASTM E330.

T1015 was tested for Static pressure per ANSI/DASMA 108-2012.

T1016 was tested for Static pressure per ANSI/DASMA 108-2017.

All tests were conducted in a manner that was compatible/equivalent to DASMA 108-2017.

### **Impact and Cycling:**

T1015 was tested for Impact and Cycling per ANSI/DASMA 115-2012.

T1016 was tested for Impact and Cycling per ANSI/DASMA 115-2017.

All tests were conducted in a manner that was compatible/equivalent to DASMA 115-2017.

### **HVHZ Testing**

T1006 and T1006-S: The doors were tested per TAS 201/202/203-94

Drawing T1006-S is the non-HVHZ version using 26ga curtain.

## Calculations

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The loads applied to the jambs by the door via direct pressure and end-tension catenary forces were computed using industry standard methods. These results are shown as "Vx" and "Vy" on sheet 2 of each drawing.

For locations requiring Impact:

- Doors less than the tested width are allowed but carry the same psf rating as the tested product.
- Doors wider than tested width (14' for T1015, 16' for T1016) are not approved in locations requiring impact.

For locations *not* requiring Impact:

- Doors other than tested width may have a higher or lower psf rating based on rational analysis using industry-standard calculation methods. The psf rating was determined wherein the end tension, jamb loads, and curtain bending stress are limited to the values computed for the tested width and pressure. A table on the drawing lists these additional widths.

## Installation Instructions

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### **Anchorage Requirements:**

The door drawing includes means to attach the door to the building structure as detailed on Sheet 2. Mounting to steel, concrete, filled-CMU, and wood were all tested.

This Evaluation Report does not address design of the wall/jambs themselves, but provides the anticipated jamb loads that will be generated by this product, Vx and Vy, also illustrated on Sheet 2.

## Model Descriptions

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This Evaluation is for Series 1850/1850-IM and 3100/3100-IM Rolling Doors by Janus International.

Series **1850-IM** is **Impact-rated**, wherein no rational analysis was allowed.

Series **1850** is the same construction, but for **non-impact** applications.

The 1850 utilizes a 9-1/2" Drum/Pipe counterbalance for lower headroom requirements.

Series **3100-IM** is **Impact-rated**, wherein no rational analysis was allowed.

Series **3100** is the same construction, but for **non-impact** applications.

The 3100 utilizes a 12" Drum/Pipe counterbalance for standard headroom requirements.

Series **850** is **Impact-rated for HVHZ**, wherein no rational analysis was allowed.

Series **850-S** is same construction with 26ga curtain, **not for HVHZ** applications.

All doors consist of a corrugated steel sheet curtain suspended from a drum roller. The curtain is suspended from a drum roller. Coiling around the drum raises the curtain. The sides of the curtain are constrained from lateral movement along their vertical edges by steel guides that are attached to the door jambs. This constraint provides resistance to wind forces. The wind forces are transferred from the curtain to the guides and then through the attachment elements to the door jamb.

Door curtains have a thickness of 26 gage (min. 0.016 in.) (except 850 is 24 gage) and are made of ASTM A653 structural steel, grade 80, pre-painted, galvanized steel with a full coat of primer and baked siliconized polyester finish coat. The corrugated sheets are interlocked mechanically to form the curtain. Lap splices are at approximately 20 inches on center vertically in the installed door. The corrugation height is approximately 5/8 inches, and the corrugation pitch is 3.25 inches. Style variations include door width, windlocks, and wind load rating.

Windlocks are attached with three rivets at every other corrugation of the sheet at approximately 6-1/2" spacing. Exception: Drawing T1006 uses windlocks at every corrugation (not including the seam).

## Additional Limitations

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The drawings cited above are an explicit part of this evaluation report. The text of this report does not attempt to address all design details but relies upon the illustrations and text of these drawings and instructions as well.

Each door should be chosen based on the "psf" requirement determined for a specific installation or locale.

Available door sizes for the 1850 family may be limited by Janus at their discretion, without affecting the windload approval rating.

*The user of this product is reminded that rolling doors can generate substantial catenary forces at the jambs ("Vx"). The building jambs must be designed to withstand these loads in combinations of Vx with Vy(+), and Vx with Vy(-) shown on sheet 2 of the drawings.*

Model 850 (Drawing T1006) is for use in HVHZ (NOA 20-1106.06).

All other doors are not being offered for use in the Florida High Velocity Hurricane Zone (HVHZ).

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John E. Scates, P.E.  
**Florida PE # 51737**

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