

John E. Scates, Professional Engineer

March 31, 2023

Janus International
135 Janus International Blvd
Temple, GA 30179

Re: FL 21450-R10 (850/1850/3100/3400)
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
Drawing T1011 is rated for HVHZ. This product is listed as NOA 22-1215.03

Drawings

Static and Impact

| | | | |
|--------------|------------------------------------|-------|-------------------------|
| T1006-S RevG | Series 850-S (26 ga) | up to | +46.0 / -54.0 PSF @8'8" |
| T1017-RevB | Series 1850/1850-IM & 3100/3100-IM | | (See drawing) |

Static and Impact HVHZ

| | | |
|------------|--------------------|-------------------------|
| T1006 RevG | Series 850 (24 ga) | +46.0 / -54.0 PSF @8'8" |
| T1011 RevC | Series 3400 (24ga) | +43.0 / -49.0 PSF @12' |

Test Reports

Test Reports

| Drawing | Type | Test Report | Test Date |
|---------|-----------------|-------------------------------------|------------|
| T1017 | Static | Intertek n7120.01-550-44-r0 (16x10) | 07/15/2022 |
| | Static | Intertek p5933.01-550-44-r0 (16x10) | 01/18/2023 |
| | Static & Impact | UL SV30743-20180723-Report (14x8) | 07/17/2018 |
| | Static & Impact | UL SV30743-20190716-Report (16x8) | 08/16/2019 |

| Drawing | | Test Report | Test Date |
|----------------|-------------------|-----------------------------|------------|
| T1006 (and -S) | (TAS 201/202/203) | Intertek n2991.01-550-18 R0 | 02-04-2022 |
| T1006 (and -S) | (TAS 201/202/203) | Element ESP013417P | 08-06-2013 |

(Tested product was T1006-S w/26ga curtain. Dade version upgrades to 24ga)

| | | | |
|-------|-----------------------|-----------------------------|------------|
| T1011 | (TAS 201/202/203) | Intertek n2291.01-550-18 R0 | 02-04-2022 |
| T1011 | (TAS 202 ForcedEntry) | Element ESP01211P-1 | 01-07-2013 |

The Intertek test facility was located at:

1701 Westfork Dr, Ste 106
Lithia Springs, GA

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.

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

Static Pressure:

T1017 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:

T1017 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.

T1011 was tested per TAS 201/202/203-94.

Calculations

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 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

Anchorage Requirements:

The door drawings include means to attach the door to the building. 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 (Vx and Vy) that will be generated by this product. Vx and Vy, are illustrated on the drawings.

Model Descriptions

This Evaluation is for Series 1850/1850-IM, 3100/3100-IM, 850/850-S, 3400 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.

Series **3400** is **Impact-rated for HVHZ**, wherein no rational analysis was allowed.

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 gauge (min. 0.016 in.) (except 850 is 24 gauge) 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.

Additional Limitations

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.

Model 3400 (Drawing T1011) is for use in HVHZ.

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

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

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