

John E. Scates, Professional Engineer

October 15, 2021

DBCI
4645 Timber Ridge Rd
Douglasville, GA 30135

Re: FL 06964
Evaluation Report for Rolling Sheet Doors

To Whom It May Concern:

At the request of DBCI, I have reviewed the drawings and tests listed below and 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.

This product has been tested and constructed to meet PSF specifications, not MPH. The conversion of MPH to PSF requires site-specific information that is unknown to the manufacturer.

Drawings

B-400-005-074.02 Rev1
B-K650-14-0001 Rev-

Series 650 Door Assembly
Series K650 Door Assembly

Door Width	+psf	-psf
up to 3'	+35.3	-38.4
4'	+27.8	-30.2
5'	+22.8	-24.8
6'	+19.4	-21.1
7'	+16.8	-18.3
8'	+14.9	-16.2
8'-8"	+13.9	-15.1

B-300-130-0001.01 Rev4
B-K690-14-0001 Rev4

Series 690
Series K690

Door Width	+psf	-psf
up to 4'	+64.2	-75.0
5'	+55.0	-64.2
6'	+46.2	-53.9
7'	+39.8	-46.5
8'	+34.9	-40.8
9'	+31.2	-36.4
10'	+28.2	-32.9

B-2500-08-0001, Rev1
B-K2500-14-0001, Rev-

Series 2500 & 2400
Series K2500 & K2400

Door Width	+psf	-psf
up to 3'	+39.6	-46.2
4'	+31.1	-36.3
5'	+25.6	-29.9
6'	+21.7	-25.4
7'	+18.9	-22.1
8'	+16.7	-19.5
9'	+15.0	-17.5
10'	+13.6	-15.9
11'	+12.4	-14.5
12'	+11.5	-13.4

B-5000-08-0001 Rev1
B-K5000-08-0001 Rev-

Series 5000
Series K5000

Door Width	+psf	-psf
up to 10'	+43.7	-50.0
11'	+39.9	-45.7
12'	+36.8	-42.1
13'	+34.1	-39.0
14'	+31.7	-36.3
15'	+29.7	-34.0
16'	+28.0	-32.0
17'	+25.4	-29.1
18'	+23.2	-26.6
19'	+21.3	-24.4
20'	+19.7	-22.6

B-3000-14-0001 Rev-
B-K3000-14-0001 Rev-

Series 3000
Series K3000

Door Width	+psf	-psf
up to 8'	+40.8	-46.7
9'	+36.6	-41.9
10'	+33.2	-38.0
11'	+30.3	-34.7
12'	+28.0	-32.0
13	+24.4	-27.9
14	+21.5	-24.7
15	+19.2	-22.0
16	+17.3	-19.8

Test Reports

These doors were tested according to ASTM E330-02 in a manner that also complied with ANSI/DASMA 108-05, -2012, and -2017, including the pass/fail criteria.

Testing was conducted by Certified Testing Laboratories, Architectural Division (CTLA) in Orlando, Florida. This facility location was accredited as an independent lab per Texas and Florida's requirements at the time of testing.

All test reports were signed by a Florida P.E.

The test for Series 650 is designated as CTLA 1700W.

The test for Series K650 is designated as CTLA 3024W-2.

The test for Series 690 is designated as CTLA 1534W-1.

The test for Series K690 is designated as CTLA 3024W-1.

The test for Series 2500 is designated as CTLA 1925W-1.

The test for Series K2500 is designated as CTLA 3024W.

The test for Series 5000 is designated as CTLA 1925W.

The test for Series K5000 is designated as CTLA 3007W.

The test for Series K3000 is designated as CTLA 3042W.

Series 3000 was not tested separately, but is equivalent to K3000.

One test was conducted for each of Series 650 and K650 at 8'-8" wide. Design wind loads for other door widths were calculated by comparative analysis based on the 8'-8" wide door for calibration of the calculations.

One test was conducted for each of Series 690 and K690 at 10' wide. Design wind loads for other door widths were calculated by comparative analysis based on the 10' wide door for calibration of the calculations.

One test was conducted for each of Series 2500 and K2500 at 12' wide. Design wind loads for other door widths were calculated by comparative analysis based on the 12' wide door for calibration of the calculations.

Series 2400 and K2400 doors are the same as 2500/K2500 but use a thicker door curtain. Thus, the 2400/K2400 products are approved as "equivalent or better" and use the 2500/K2500 drawing.

One test was conducted for each of Series 5000 and K5000 at 16' wide. Design wind loads for other door widths were calculated by comparative analysis based on the 16' wide door for calibration of the calculations.

One test was conducted for Series K3000 at 12' wide. Design wind loads for other door widths were calculated by comparative analysis based on the 12' wide door for calibration of the calculations.

Installation

The drawing provides installation instructions peculiar to windload reinforcement. Anchorage details are also shown on this drawing.

The doors are attached directly to the building structure, as per the tests. No "2x6 wood buck" is used. Tested wall construction included filled-CMU on one side and Steel C-channel on the other jamb. In the jamb attachment details on the door drawings herein, concrete walls are additionally listed as equivalent to filled-CMU.

Model Description

All doors consist of a corrugated steel sheet curtain suspended from a drum roller. 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 lateral wind forces. The lateral wind forces are transferred from the curtain to the guides and then through the attachment elements to the door jamb.

Door curtains have a minimum thickness of 26 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.

Series 650 / K650 doors have no windlocks.

Series 690 / K690 doors have windlocks.

Series 2400 / K2400 doors have windlocks.

Series 2500 / K2500 doors have windlocks.

Series 5000 / K5000 doors have windlocks.

Series 3000 / K3000 doors have windlocks.

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 detail 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.

The architect/engineer of record is reminded that some curtain doors may generate substantial catenary loads at the jambs when windlocks are present. The anticipated jamb loads are illustrated on sheet 2 of the drawing.

Maximum door height is limited to 12'-0" for 650/K650

Maximum door height is limited to 12'-0" for 690/K690

Maximum door height is limited to 20'-0" for 2400/K2400

Maximum door height is limited to 20'-0" for 2500/K2500

Maximum door height is limited to 20'-0" for 5000/K5000

Maximum door height is limited to 20'-0" for 3000/K3000

This product has not been evaluated for use in the High Velocity Hurricane Zone (HVHZ).

John E. Scates, P.E.

Florida PE # 51737

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