COMMERCIAL & RESIDENTIAL GARAGE DOOR DIVISION

DASMA TECHNICAL DATA SHEET

#155s

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DASMA Garage Door and Commercial Door Wind Load Guide Based on ASCE 7-10

DASMA (the Door & Access Systems Manufacturers Association) has created a ***GARAGE DOOR and COMMERCIAL DOOR WIND LOAD GUIDE*** based on ASCE 7-10 wind load requirements. The guide is intended to be used by code officials, engineers, architects, builders, owners, insurance companies and other interested parties. The Wind Load Guide also references a DASMA test procedure (ANSI/DASMA 108) which may be used by manufacturers to determine structural load performance of a garage door and a commercial door (sectional or rolling).

DASMA represents an estimated 95% of all sectional garage doors sold in the United States. The best technical talent in the vehicular access door industry developed these tables based on the latest civil engineering and building code criteria.

ASCE 7-10 uses basic wind speed[1], exposure categories[2], allowable stress load factor[3], mean roof height[4], door area, door location on the building[5] and wind directionality factor[6] to figure wind loads on vehicular access doors. This guide covers the most common scenarios. Topography factor (Kzt) is taken as 1.0, assuming that site conditions or location of the structure do not warrant a value greater than 1.0.

Wind load for a particular structure is determined by its Risk Category. Three basic wind speed maps are used for Risk Categories I, II and III/IV. Risk Categories are defined as follows:

- I (Buildings and other structures that represent a low hazard to human life in the event of failure. e.g. minor storage facilities)
- II (All buildings and other structures except those listed in Risk Categories I, III, and IV)
- III (Buildings and other structures that represent a substantial hazard to human life in the event of failure, e.g. schools)
- IV (Buildings and other structures designated as essential facilities, e.g. hospitals)

[1] Ref: Figures 26.5.1a, 26.5.1b and 26.5.1c. Basic wind speed maps for Risk Categories I, II and III/IV.
[2] Ref: Section 26.7.3. Exposure Categories.
[3] Ref: Section 2.4.1. Based on Allowable Stress Load Combinations. Worst Case is D + 0.6W. D is taken as zero.
[4] Ref: Section 26.2. Mean Roof Height.
[5] Ref: Figure 30.4-1. External Pressure Coefficients, along with Table 26.11-1, Internal Pressure Coefficients
[6] Ref: Table 26.6-1. Wind Directionality Factor.

Building envelope products that have been tested to air pressure standards are typically rated for an allowable stress design wind pressure rather than a strength design pressure or wind speed. In order to properly select products tested and rated in this manner, the wind loads in this TDS have been adjusted using an allowable stress design load factor of 0.6 as per ASCE 7-10 Section 2.4.1.

The guide shows basic wind speeds from 100 MPH to 200 MPH.

The DASMA members believe the ***DASMA GARAGE DOOR and COMMERCIAL DOOR WIND LOAD GUIDE*** will improve understanding of the issues related to vehicular access doors and wind loads. DASMA continues to monitor developments regarding wind loads and the building codes in general, and continues to develop solutions to problems which affect the vehicular access door industry. Please contact DASMA with any questions or comments.

GARAGE DOOR WIND LOAD GUIDE
BASED ON ASCE 7-10, EXPOSURE B, 100-140 MPH BASIC WIND SPEED

Mean Roof Height	Door Size	Basic Wind Speed (Use ASCE 7-10 Maps), MPH						
		100	**105**	**110**	**115**	**120**	**130**	**140**
15 Feet Single Story	Single	**9.5**	**10.5**	**11.5**	**12.6**	**13.7**	**16.0**	**18.6**
	9' x 7'	-10.7	-11.8	-13.0	-14.2	-15.5	-18.1	-21.0
	Double	**9.1**	**10.0**	**11.0**	**12.0**	**13.1**	**15.4**	**17.8**
	16' x 7'	-10.1	-11.2	-12.3	-13.4	-14.6	-17.1	-19.9
25 Feet Double Story	Single	**9.5**	**10.5**	**11.5**	**12.6**	**13.7**	**16.0**	**18.6**
	9' x 7'	-10.7	-11.8	-13.0	-14.2	-15.5	-18.1	-21.0
	Double	**9.1**	**10.0**	**11.0**	**12.0**	**13.1**	**15.4**	**17.8**
	16' x 7'	-10.1	-11.2	-12.3	-13.4	-14.6	-17.1	-19.9

Design pressures above are in Pounds per Square Foot (PSF)

Testing, if required by local authority, may be performed to ASTM E-330, or preferably ANSI/DASMA 108, with acceptance criteria in accordance with ANSI/DASMA 108.

Test Conditions:

1. Garage doors shall be tested to both negative and positive pressures. Doors shall be installed simulating normal conditions (i.e., top roller in track radius, other rollers in tracks, all hinges in place, reinforcing hardware in place)
2. Test durations for each test direction shall be as follows:
    A. 10 seconds at design pressure.
    B. 10 seconds at 1.5 times the design pressure.

Standard engineering principles may be used to interpolate or extrapolate test results to door sizes not specifically tested. Doors shall include a manufacturer's label certifying compliance to specific load. This guide is provided for reference purposes only. In all cases the local building authority is the sole and final determiner of the structural and safety requirements, and suitability of the garage door.

Notes:

- Basic Wind Speeds above are three second peak-gust values.
- Negative pressures assume door has 2-feet of width in building's end zone.
- Garage doors evaluated as attached to enclosed buildings.
- Interpolation of loads between wind speeds is permitted.
- Doors larger than 112 square feet should use the 16 x7 loads. Doors less than 112 square feet, but greater than 63 square feet should be calculated in accordance with ASCE 7-10.
- Garage doors evaluated as Components and Cladding.
- Topography factor of 1.0 used.
- Installation details vary. Consult manufacturer's instructions.

GARAGE DOOR WIND LOAD GUIDE
Based on ASCE 7-10, Exposure B, 140 - 200 MPH Basic Wind Speed

Mean Roof Height	Door Size	Basic Wind Speed (Use ASCE 7-10 Maps), MPH						
		140	150	160	170	180	190	200
15 Feet Single Story	Single	**18.6**	**21.4**	**24.3**	**27.4**	**30.8**	**34.3**	**38.0**
	9' x 7'	-21.0	-24.1	-27.5	-31.0	-34.8	-38.7	-42.9
	Double	**17.8**	**20.5**	**23.3**	**26.3**	**29.5**	**32.8**	**36.4**
	16' x 7'	-19.9	-22.8	-25.9	-29.3	-32.8	-36.6	-40.5
25 Feet Double Story	Single	**18.6**	**21.4**	**24.3**	**27.4**	**30.8**	**34.3**	**38.0**
	9' x 7'	-21.0	-24.1	-27.5	-31.0	-34.8	-38.7	-42.9
	Double	**17.8**	**20.5**	**23.3**	**26.3**	**29.5**	**32.8**	**36.4**
	16' x 7'	-19.9	-22.8	-25.9	-29.3	-32.8	-36.6	-40.5

Design pressures above are in Pounds per Square Foot (PSF)

Testing, if required by local authority, may be performed to ASTM E-330, or preferably ANSI/DASMA 108, with acceptance criteria in accordance with ANSI/DASMA 108.

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    A. 10 seconds at design pressure.
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Notes:

- Basic Wind Speeds above are three second peak-gust values.
- Negative pressures assume door has 2-feet of width in building's end zone.
- Garage doors evaluated as attached to enclosed buildings.
- Interpolation of loads between wind speeds is permitted.
- Doors larger than 112 square feet are permitted to be interpolated between the 9 x 7 and 16 x7 loads. Loads on doors that are less than 63 square feet should be calculated in accordance with ASCE 7-10.
- Garage doors evaluated as Components and cladding.
- Topography factor of 1.0 used.
- Installation details vary. Consult manufacturer's instructions.

GARAGE DOOR WIND LOAD GUIDE

BASED ON ASCE 7-10, EXPOSURE C, 100 - 140 MPH BASIC WIND SPEED

Mean Roof Height	Door Size	Basic Wind Speed (Use ASCE 7-10 Maps), MPH						
		100	105	110	115	120	130	140
15 Feet Single Story	Single	**11.5**	**12.7**	**13.9**	**15.2**	**16.6**	**19.5**	**22.6**
	9' x 7'	-13.0	-14.4	-15.8	-17.2	-18.8	-22.0	-25.5
	Double	**11.0**	**12.2**	**13.4**	**14.6**	**15.9**	**18.7**	**21.6**
	16' x 7'	-12.3	-13.6	-14.9	-16.3	-17.7	-20.8	-24.1
25 Feet Double Story	Single	**12.7**	**14.1**	**15.4**	**16.9**	**18.4**	**21.5**	**25.0**
	9' x 7'	-14.4	-15.9	-17.4	-19.1	-20.8	-24.4	-28.2
	Double	**12.2**	**13.5**	**14.8**	**16.2**	**17.6**	**20.6**	**23.9**
	16' x 7'	-13.6	-15.0	-16.5	-18.1	-19.6	-23.0	-26.7

Design pressures above are in Pounds per Square Foot (PSF)

Testing, if required by local authority, may be performed to ASTM E-330, or preferably ANSI/DASMA 108, with acceptance criteria in accordance with ANSI/DASMA 108.

Test Conditions:

1. Garage doors shall be tested to both negative and positive pressures. Doors shall be installed simulating normal conditions (i.e., top roller in track radius, other rollers in tracks, all hinges in place, reinforcing hardware in place)
2. Test durations for each test direction shall be as follows:
   A. 10 seconds at design pressure.
   B. 10 seconds at 1.5 times the design pressure.

Standard engineering principles may be used to interpolate or extrapolate test results to door sizes not specifically tested. Doors shall include a manufacturer's label certifying compliance to specific load. This guide is provided for reference purposes only. In all cases the local building authority is the sole and final determiner of the structural and safety requirements, and suitability of the garage door

Notes:

- Basic Wind Speeds above are three second peak-gust values.
- Negative pressures assume door has 2-feet of width in building's end zone.
- Garage doors evaluated as attached to enclosed buildings.
- Interpolation of loads between wind speeds is permitted.
- Doors larger than 112 square feet are permitted to be interpolated between the 9 x 7 and 16 x7 loads. Loads on doors that are less than 63 square feet should be calculated in accordance with ASCE 7-10.
- Garage doors evaluated as Components and cladding.
- Topography factor of 1.0 used.
- Installation details vary. Consult manufacturer's instructions.

GARAGE DOOR WIND LOAD GUIDE
BASED ON ASCE 7-10, EXPOSURE C-140 - 200 MPH BASIC WIND SPEED

Mean Roof Height	Door Size	Basic Wind Speed (Use ASCE 7-10 Maps), MPH						
		140	150	160	170	180	190	200
15 Feet Single Story	Single	**22.6**	**25.9**	**29.5**	**33.3**	**37.4**	**41.6**	**46.1**
	9' x 7'	-25.5	-29.3	-33.4	-37.7	-42.2	-47.0	-52.1
	Double	**21.6**	**24.8**	**28.3**	**31.9**	**35.8**	**39.9**	**44.2**
	16' x 7'	-24.1	-27.7	-31.5	-35.6	-39.9	-44.4	-49.2
25 Feet Double Story	Single	**25.0**	**28.7**	**32.6**	**36.8**	**41.3**	**46.0**	**51.0**
	9' x 7'	-28.2	-32.4	-36.9	-41.6	-46.7	-52.0	-57.6
	Double	**23.9**	**27.5**	**31.3**	**35.3**	**39.6**	**44.1**	**48.8**
	16' x 7'	-26.7	-30.6	-34.8	-39.3	-44.1	-49.1	-54.4

Design Pressures above are in Pounds per Square Foot (PSF)

Testing, if required by local authority, may be performed to ASTM E-330, or preferably ANSI/DASMA 108, with acceptance criteria in accordance with ANSI/DASMA 108.

Test Conditions:

1. Garage doors shall be tested to both negative and positive pressures. Doors shall be installed simulating normal conditions (i.e., top roller in track radius, other rollers in tracks, all hinges in place, reinforcing hardware in place)
2. Test durations for each test direction shall be as follows:
    A. 10 seconds at design pressure.
    B. 10 seconds at 1.5 times the design pressure.

Standard engineering principles may be used to interpolate or extrapolate test results to door sizes not specifically tested. Doors shall include a manufacturer's label certifying compliance to specific load. This guide is provided for reference purposes only. In all cases the local building authority is the sole and final determiner of the structural and safety requirements, and suitability of the garage door.

Notes:

- Basic Wind Speeds above are three second peak-gust values.
- Negative pressures assume door has 2-feet of width in building's end zone.
- Garage doors evaluated as attached to enclosed buildings.
- Interpolation of loads between wind speeds is permitted.
- Doors larger than 112 square feet are permitted to be interpolated between the 9 x 7 and 16 x7 loads. Loads on doors that are less than 63 square feet should be calculated in accordance with ASCE 7-10.
- Garage doors evaluated as Components and cladding.
- Topography factor of 1.0 used.
- Installation details vary. Consult manufacturer's instructions.

GARAGE DOOR WIND LOAD GUIDE

BASED ON ASCE 7-10, EXPOSURE D, 100 - 140 MPH BASIC WIND SPEED

Mean Roof Heights	Door Size	Basic Wind Speed (Use ASCE 7-10 Maps), MPH						
		100	105	110	115	120	130	140
15 Feet Single Story	Single	**14.0**	**15.4**	**16.9**	**18.5**	**20.1**	**23.6**	**27.4**
	9' x 7'	-15.8	-17.4	-19.1	-20.9	-22.7	-26.7	-30.9
	Double	**13.4**	**14.7**	**16.2**	**17.7**	**19.3**	**22.6**	**26.2**
	16' x 7'	-14.9	-16.4	-18.0	-19.7	-21.5	-25.2	-29.2
25 Feet Double Story	Single	**15.2**	**16.7**	**18.4**	**20.1**	**21.9**	**25.7**	**29.8**
	9' x 7'	-17.2	-18.9	-20.8	-22.7	-24.7	-29.0	-33.7
	Double	**14.5**	**16.0**	**17.6**	**19.2**	**20.9**	**24.6**	**28.5**
	16' x 7'	-16.2	-17.9	-19.6	-21.4	-23.4	-27.4	-31.8

Design pressures above are in Pounds per Square Foot (PSF)

Testing, if required by local authority, may be performed to ASTM E-330, or preferably ANSI/DASMA 108, with acceptance criteria in accordance with ANSI/DASMA 108.

Test Conditions:

1. Garage doors shall be tested to both negative and positive pressures. Doors shall be installed simulating normal conditions (i.e., top roller in track radius, other rollers in tracks, all hinges in place, reinforcing hardware in place)
2. Test durations for each test direction shall be as follows:
    A. 10 seconds at design pressure.
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Notes:

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- Doors larger than 112 square feet are permitted to be interpolated between the 9 x 7 and 16 x7 loads. Loads on doors that are less than 63 square feet should be calculated in accordance with ASCE 7-10.
- Garage doors evaluated as Components and cladding.
- Topography factor of 1.0 used.
- Installation details vary. Consult manufacturer's instructions.

GARAGE DOOR WIND LOAD GUIDE
BASED ON ASCE 7-10, EXPOSURE D, 140 - 200- MPH BASIC WIND SPEED

Mean Roof Heights	Door Size	Basic Wind Speed (Use ASCE 7-10 Maps), MPH						
		140	150	160	170	180	190	200
15 Feet Single Story	Single	**27.4**	**31.4**	**35.8**	**40.4**	**45.3**	**50.4**	**55.9**
	9' x 7'	-30.9	-35.5	-40.4	-45.6	-51.2	-57.0	-63.2
	Double	**26.2**	**30.1**	**34.2**	**38.7**	**43.3**	**48.3**	**53.5**
	16' x 7'	-29.2	-33.6	-38.2	-43.1	-48.3	-53.8	-59.7
25 Feet Double Story	Single	**29.8**	**34.2**	**38.9**	**43.9**	**49.2**	**54.8**	**60.8**
	9' x 7'	-33.7	-38.6	-44.0	-49.6	-55.6	-62.0	-68.7
	Double	**28.5**	**32.7**	**37.2**	**42.0**	**47.1**	**52.5**	**58.2**
	16' x 7'	-31.8	-36.5	-41.5	-46.9	-52.5	-58.5	-64.9

Design pressures above are in Pounds per Square Foot (PSF)

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Standard engineering principles may be used to interpolate or extrapolate test results to door sizes not specifically tested. Doors shall include a manufacturer's label certifying compliance to specific load. This guide is provided for reference purposes only. In all cases the local building authority is the sole and final determiner of the structural and safety requirements, and suitability of the garage door.

Notes:

- Basic Wind Speeds above are three second peak-gust values.
- Negative pressures assume door has 2-feet of width in building's end zone.
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- Interpolation of loads between wind speeds is permitted.
- Doors larger than 112 square feet are permitted to be interpolated between the 9 x 7 and 16 x7 loads. Loads on doors that are less than 63 square feet should be calculated in accordance with ASCE 7-10.
- Garage doors evaluated as Components and cladding.
- Topography factor of 1.0 used.
- Installation details vary. Consult manufacturer's instructions.

COMMERCIAL DOOR WIND LOAD GUIDE
BASED ON ASCE 7-10, EXPOSURE B, 100 - 140 MPH BASIC WIND SPEED

Mean Roof Height	Door Size	Basic Wind Speed (Use ASCE 7-10 Maps), MPH						
		100	105	110	115	120	130	140
15 Feet	*8′ x 8′*	**8.7**	**9.6**	**10.5**	**11.5**	**12.5**	**14.7**	**17.1**
		-9.8	-10.9	-11.9	-13.0	-14.2	-16.6	-19.3
	10′ x 10′	**8.4**	**9.3**	**10.2**	**11.1**	**12.1**	**14.2**	**16.5**
		-9.4	-10.4	-11.4	-12.5	-13.6	-16.0	-18.5
	14′ x 14′	**8.0**	**8.8**	**9.7**	**10.6**	**11.5**	**13.5**	**15.7**
		-8.9	-9.8	-10.8	-11.8	-12.8	-15.0	-17.4
25 Feet	*8′ x 8′*	**8.7**	**9.6**	**10.5**	**11.5**	**12.5**	**14.7**	**17.1**
		-9.8	-10.9	-11.9	-13.0	-14.2	-16.6	-19.3
	10’ x 10’	**8.4**	**9.3**	**10.2**	**11.1**	**12.1**	**14.2**	**16.5**
		-9.4	-10.4	-11.4	-12.5	-13.6	-16.0	-18.5
	14′ x 14′	**8.0**	**8.8**	**9.7**	**10.6**	**11.5**	**13.5**	**15.7**
		-8.9	-9.8	-10.8	-11.8	-12.8	-15.0	-17.4

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1. Doors shall be tested to both negative and positive pressures. Doors shall be installed simulating normal conditions.
2. Test durations for each test direction shall be as follows:
   A. 10 seconds at design pressure.
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Notes:

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- Negative pressures assume door has 2-feet of width in building’s end zone.
- Garage doors evaluated as attached to enclosed buildings.
- Interpolation of loads between wind speeds is permitted.
- Doors larger than 112 square feet are permitted to be interpolated between the 9 x 7 and 16 x7 loads. Loads on doors that are less than 63 square feet should be calculated in accordance with ASCE 7-10.
- Garage doors evaluated as Components and cladding.
- Topography factor of 1.0 used.
- Installation details vary. Consult manufacturer’s instructions.

COMMERCIAL DOOR WIND LOAD GUIDE
BASED ON ASCE 7-10, EXPOSURE B, 140 - 200 MPH BASIC WIND SPEED

Mean Roof Height	Door Size	Basic Wind Speed (Use ASCE 7-10 Maps), MPH						
		140	150	160	170	180	190	200
15 Feet	*8′ x 8′*	**17.1**	**19.6**	**22.3**	**25.1**	**28.2**	**31.4**	**34.8**
		-19.3	-22.2	-25.2	-28.5	-31.9	-35.5	-39.4
	10′ x 10′	**16.5**	**18.9**	**21.5**	**24.3**	**27.3**	**30.4**	**33.7**
		-18.5	-21.2	-24.2	-27.3	-30.6	-34.1	-37.8
	14′ x 14′	**15.7**	**18.0**	**20.5**	**23.1**	**25.9**	**28.9**	**32.0**
		-17.4	-20.0	-22.8	-25.7	-28.8	-32.1	-35.6
25 Feet	*8′ x 8′*	**17.1**	**19.6**	**22.3**	**25.1**	**28.2**	**31.4**	**34.8**
		-19.3	-22.2	-25.2	-28.5	-31.9	-35.5	-39.4
	10’ x 10’	**16.5**	**18.9**	**21.5**	**24.3**	**27.3**	**30.4**	**33.7**
		-18.5	-21.2	-24.2	-27.3	-30.6	-34.1	-37.8
	14′ x 14′	**15.7**	**18.0**	**20.5**	**23.1**	**25.9**	**28.9**	**32.0**
		-17.4	-20.0	-22.8	-25.7	-28.8	-32.1	-35.6

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1. Doors shall be tested to both negative and positive pressures. Doors shall be installed simulating normal conditions.
2. Test durations for each test direction shall be as follows:
   A. 10 seconds at design pressure.
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Notes:

- Basic Wind Speeds above are three second peak-gust values.
- Negative pressures assume door has 2-feet of width in building’s end zone.
- Garage doors evaluated as attached to enclosed buildings.
- Interpolation of loads between wind speeds is permitted.
- Doors larger than 112 square feet are permitted to be interpolated between the 9 x 7 and 16 x7 loads. Loads on doors that are less than 63 square feet should be calculated in accordance with ASCE 7-10.
- Garage doors evaluated as Components and cladding.
- Topography factor of 1.0 used.
- Installation details vary. Consult manufacturer’s instructions.

COMMERCIAL DOOR WIND LOAD GUIDE

BASED ON ASCE 7-10, EXPOSURE C, 100 - 140 MPH BASIC WIND SPEED

Mean Roof Heights	Door Size	Basic Wind Speed (Use ASCE 7-10 Maps), MPH						
		100	105	110	115	120	130	140
15 Feet	*8' x 8'*	**10.6**	**11.6**	**12.8**	**14.0**	**15.2**	**17.9**	**20.7**
		-12.0	-13.2	-14.5	-15.8	-17.2	-20.2	-23.4
	10' x 10'	**10.2**	**11.3**	**12.4**	**13.5**	**14.7**	**17.3**	**20.0**
		-11.5	-12.6	-13.9	-15.2	-16.5	-19.4	-22.5
	14' x 14'	**9.7**	**10.7**	**11.7**	**12.8**	**14.0**	**16.4**	**19.0**
		-10.8	-11.9	-13.1	-14.3	-15.6	-18.3	-21.2
25 Feet	*8' x 8'*	**11.7**	**12.9**	**14.1**	**15.4**	**16.8**	**19.7**	**22.9**
		-13.2	-14.6	-16.0	-17.5	-19.0	-22.3	-25.9
	10' x 10'	**11.3**	**12.5**	**13.7**	**14.9**	**16.3**	**19.1**	**22.2**
		-12.7	-14.0	-15.3	-16.8	-18.3	-21.4	-24.9
	14' x 14'	**10.7**	**11.8**	**13.0**	**14.2**	**15.5**	**18.1**	**21.0**
		-12.0	-13.2	-14.5	-15.8	-17.2	-20.2	-23.4

Design pressures above are in Pounds per Square Foot (PSF)

Testing, if required by local authority, may be performed to ASTM E-330, or preferably ANSI/DASMA 108, with acceptance criteria in accordance with ANSI/DASMA 108.

Test Conditions:

1. Doors shall be tested to both negative and positive pressures. Doors shall be installed simulating normal conditions.
2. Test durations for each test direction shall be as follows:
   A. 10 seconds at design pressure.
   B. 10 seconds at 1.5 times the design pressure.

Standard engineering principles may be used to interpolate or extrapolate test results to door sizes not specifically tested. Doors shall include a manufacturer's label certifying compliance to specific load. This guide is provided for reference purposes only. In all cases the local building authority is the sole and final determiner of the structural and safety requirements, and suitability of the door.

Notes:

- Basic Wind Speeds above are three second peak-gust values.
- Negative pressures assume door has 2-feet of width in building's end zone.
- Interpolation of loads between wind speeds is permitted.
- Doors larger than 196 square feet should use the 14 x 14 loads. Doors less than 196 square feet but greater than 64 square feet are permitted to be interpolated between the tabulated loads. Loads on doors that are less than 64 square feet should be calculated in accordance with ASCE 7-10.
- Doors evaluated as Components and Cladding.
- Topography factor of 1.0 used.

COMMERCIAL DOOR WIND LOAD GUIDE

BASED ON ASCE 7-10, EXPOSURE C, 140 - 200 MPH BASIC WIND SPEED

Mean Roof Heights	Door Size	Basic Wind Speed (Use ASCE 7-10 Maps), MPH						
		140	150	160	170	180	190	200
15 Feet	*8' x 8'*	**20.7**	**23.8**	**27.0**	**30.5**	**34.2**	**38.1**	**42.3**
		-23.4	-26.9	-30.6	-34.6	-38.7	-43.2	-47.8
	10' x 10'	**20.0**	**23.0**	**26.2**	**29.5**	**33.1**	**36.9**	**40.9**
		-22.5	-25.8	-29.4	-33.1	-37.2	-41.4	-45.9
	14' x 14'	**19.0**	**21.8**	**24.8**	**28.1**	**31.4**	**35.0**	**38.8**
		-21.2	-24.3	-27.7	-31.2	-35.0	-39.0	-43.2
25 Feet	*8' x 8'*	**22.9**	**26.3**	**29.9**	**33.8**	**37.8**	**42.2**	**46.7**
		-25.9	-29.7	-33.8	-38.2	-42.8	-47.7	-52.9
	10' x 10'	**22.2**	**25.4**	**28.9**	**32.7**	**36.6**	**40.8**	**45.2**
		-24.9	-28.5	-32.5	-36.6	-41.1	-45.8	-50.7
	14' x 14'	**21.0**	**24.2**	**27.5**	**31.0**	**34.8**	**38.7**	**42.9**
		-23.7	-26.9	-30.6	-34.5	-38.7	-43.1	-47.8

Design pressures above are in Pounds per Square Foot (PSF)

Testing, if required by local authority, may be performed to ASTM E-330, or preferably ANSI/DASMA 108, with acceptance criteria in accordance with ANSI/DASMA 108.

Test Conditions:

1. Doors shall be tested to both negative and positive pressures. Doors shall be installed simulating normal conditions.
2. Test durations for each test direction shall be as follows:
   A. 10 seconds at design pressure.
   B. 10 seconds at 1.5 times the design pressure.

Standard engineering principles may be used to interpolate or extrapolate test results to door sizes not specifically tested. Doors shall include a manufacturer's label certifying compliance to specific load. This guide is provided for reference purposes only. In all cases the local building authority is the sole and final determiner of the structural and safety requirements, and suitability of the door.

Notes:

- Basic wind speeds are above are three-second peak-gust values.
- Negative pressures assume door has 2-feet of width in building's end zone.
- Interpolation of loads between wind speeds is permitted.
- Doors larger than 196 square feet should use the 14 x 14 loads. Doors less than 196 square feet but greater than 64 square feet are permitted to be interpolated between the tabulated loads. Loads on doors that are less than 64 square feet should be calculated in accordance with ASCE 7-10.
- Doors evaluated as Components and Cladding.
- Topography factor of 1.0 used.

COMMERCIAL DOOR WIND LOAD GUIDE

BASED ON ASCE 7-10, EXPOSURE D, 100 - 140 MPH BASIC WIND SPEED

Mean Roof Heights	Door Size	Basic Wind Speed (Use ASCE 7-10 Maps), MPH						
		100	105	110	115	120	130	140
15 Feet	*8' x 8'*	**12.8**	**14.1**	**15.5**	**16.9**	**18.4**	**21.6**	**25.1**
		-14.5	-16.0	-17.5	-19.2	-20.9	-24.5	-28.4
	10' x 10'	**12.4**	**13.7**	**15.0**	**16.4**	**17.8**	**20.9**	**24.3**
		-13.9	-15.3	-16.8	-18.4	-20.0	-23.5	-27.2
	14' x 14'	**11.8**	**13.0**	**14.2**	**15.6**	**16.9**	**19.9**	**23.1**
		-13.1	-14.4	-15.8	-17.3	-18.9	-22.1	-25.7
25 Feet	*8' x 8'*	**13.9**	**15.3**	**16.8**	**18.4**	**20.0**	**23.5**	**27.3**
		-15.8	-17.4	-19.1	-20.8	-22.7	-26.6	-30.9
	10' x 10'	**13.5**	**14.8**	**16.3**	**17.8**	**19.4**	**22.8**	**26.4**
		-15.1	-16.7	-18.3	-20.0	-21.8	-25.5	-29.6
	14' x 14'	**12.8**	**14.1**	**15.5**	**16.9**	**18.4**	**21.6**	**25.1**
		-14.2	-15.7	-17.2	-18.8	-20.5	-24.1	-27.9

Design pressures above are in Pounds per Square Foot (PSF)

Testing, if required by local authority, may be performed to ASTM E-330, or preferably ANSI/DASMA 108, with acceptance criteria in accordance with ANSI/DASMA 108.

Test Conditions:

1. Doors shall be tested to both negative and positive pressures. Doors shall be installed simulating normal conditions.
2. Test durations for each test direction shall be as follows:
   A. 10 seconds at design pressure.
   B. 10 seconds at 1.5 times the design pressure.

Standard engineering principles may be used to interpolate or extrapolate test results to door sizes not specifically tested. Doors shall include a manufacturer's label certifying compliance to specific load. This guide is provided for reference purposes only. In all cases the local building authority is the sole and final determiner of the structural and safety requirements, and suitability of the door.

Notes:

- Basic Wind Speeds above are three second peak-gust values.
- Negative pressures assume door has 2-feet of width in building's end zone.
- Door evaluated as attached to enclosed buildings.
- Buildings evaluated as having roof slopes less than 10 degrees.
- Interpolation of loads between wind speeds is permitted.
- Doors larger than 196 square feet should use the 14 x 14 loads. Doors less than 196 square feet but greater than 64 square feet are permitted to be interpolated between the tabulated loads. Loads on doors that are less than 64 square feet should be calculated in accordance with ASCE 7-10.
- Doors evaluated as Components and Cladding.
- Topography factor of 1.0 used.
- Installation details vary. Consult Manufacturer's instructions.

COMMERCIAL DOOR WIND LOAD GUIDE
BASED ON ASCE 7-10, EXPOSURE D, 140 - 200 MPH BASIC WIND SPEED

Mean Roof Heights	Door Size	Basic Wind Speed (Use ASCE 7-10 Maps), MPH						
		140	150	160	170	180	190	200
15 Feet	*8' x 8'*	**25.1**	**28.8**	**32.8**	**37.0**	**41.5**	**46.2**	**51.2**
		-28.4	-32.6	-37.1	-41.9	-46.9	-52.3	-58.0
	10' x 10'	**24.3**	**27.9**	**31.7**	**35.8**	**40.1**	**44.7**	**49.5**
		-27.2	-31.3	-35.6	-40.2	-45.0	-50.2	-55.6
	14' x 14'	**23.1**	**26.5**	**30.1**	**34.0**	**38.1**	**42.5**	**47.0**
		-25.7	-29.5	-33.5	-37.8	-42.4	-47.3	-52.4
25 Feet	*8' x 8'*	**27.3**	**31.3**	**35.6**	**40.2**	**45.1**	**50.2**	**55.7**
		-30.9	-35.4	-40.3	-45.5	-51.0	-56.9	-63.0
	10' x 10'	**26.4**	**30.3**	**34.5**	**38.9**	**43.6**	**48.6**	**53.9**
		-29.6	-34.0	-38.7	-43.7	-49.0	-54.5	-60.4
	14' x 14'	**25.1**	**28.8**	**32.7**	**37.0**	**41.4**	**46.2**	**51.2**
		-27.9	-32.0	-36.5	-41.2	-46.1	-51.4	-57.2

Design pressures above are in Pounds per Square Foot (PSF)

Testing, if required by local authority, may be performed to ASTM E-330, or preferably ANSI/DASMA 108, with acceptance criteria in accordance with ANSI/DASMA 108.

Test Conditions:

1. Doors shall be tested to both negative and positive pressures. Doors shall be installed simulating normal conditions.
2. Test durations for each test direction shall be as follows:
    A. 10 seconds at design pressure.
    B. 10 seconds at 1.5 times the design pressure.

Standard engineering principles may be used to interpolate or extrapolate test results to door sizes not specifically tested. Doors shall include a manufacturer's label certifying compliance to specific load. This guide is provided for reference purposes only. In all cases the local building authority is the sole and final determiner of the structural and safety requirements, and suitability of the door.

Notes:

- Basic Wind Speeds above are three second peak-gust values.
- Negative pressures assume door has 2-feet of width in building's end zone.
- Door evaluated as attached to enclosed buildings.
- Buildings evaluated as having roof slopes less than 10 degrees.
- Interpolation of loads between wind speeds is permitted.
- Doors larger than 196 square feet should use the 14 x 14 loads. Doors less than 196 square feet but greater than 64 square feet are permitted to be interpolated between the tabulated loads. Loads on doors that are less than 64 square feet should be calculated in accordance with ASCE 7-10.
- Doors evaluated as Components and Cladding.
- Topography factor of 1.0 used.
- Installation details vary. Consult Manufacturer's instructions.