



DASMA
Door & Access Systems
Manufacturers Association
International

COMMERCIAL & RESIDENTIAL GARAGE DOOR DIVISION

TECHNICAL DATA SHEET

#155m

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DASMA GARAGE DOOR WIND LOAD GUIDE

BASED ON THE 2000 / 2003 / 2006 INTERNATIONAL RESIDENTIAL CODES (IRC)

DASMA (the Door & Access Systems Manufacturers Association) has created a ***GARAGE DOOR WIND LOAD GUIDE*** based on the 2000, 2003* and 2006 International Residential Codes wind load requirements¹. 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.

The guide is published by the Commercial & Residential Garage Door Division of DASMA, which represents an estimated 95% of all sectional garage doors sold in the United States. The Division's Technical Committee, the best technical talent in the garage door industry, developed these tables based on the latest civil engineering and building code criteria.

The DASMA members believe the ***DASMA GARAGE DOOR WIND LOAD GUIDE*** will improve understanding of the issues related to garage 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 garage door industry. Please contact DASMA for any questions or comments.

¹Wind Loads for the Garage Door Wind Load Guide were calculated using the following variables, and were based on the following referenced sections, found in the 2000, 2003 and 2006 International Residential Codes:

- Basic Wind Speed Map based on 3 Second Peak Gust – Figure R-301.2d
- Equivalent Basic Wind Speeds, i.e. Fastest Mile vs. 3 Second Peak Gust – Table R-301.2.1.3
- Height and Exposure Adjustment Coefficients – Table R-301.2c
- Components and Cladding Loads – Table R-301.2b

* Wind load provisions in the 2003 IRC are technically equivalent to those in the 2000 IRC

Note: Technical Data Sheets are information tools only and should not be used as substitutes for instructions from individual manufacturers. Always consult with individual manufacturers for specific recommendations for their products and check the applicable local regulations.

This Technical Data Sheet was prepared by the members of DASMA's Commercial & Residential Garage Door Division Technical Committee. DASMA is a trade association comprising manufacturers of rolling doors, fire doors, grilles, counter shutters, sheet doors, and related products; upward-acting residential and commercial garage doors; operating devices for garage doors and gates, sensing devices, and electronic remote controls for garage doors and gate operators; as well as companies that manufacture or supply either raw materials or significant components used in the manufacture and installation of the Active Members' products.

GARAGE DOOR WIND LOAD GUIDE
BASED ON THE 2000 / 2003 / 2006 INTERNATIONAL RESIDENTIAL CODES, EXPOSURE B

Mean Roof Height	Door Size	90 MPH	100 MPH	110 MPH	120 MPH	130 MPH	140 MPH	150 MPH
15 Feet Single Story	Single 9' x 7'	12.8	15.9	19.2	22.9	26.9	31.2	35.7
		-14.8	-18.2	-22.0	-26.3	-30.8	-35.8	-41.0
	Double 16' x 7'	12.4	15.3	18.5	22.0	25.9	30.0	34.4
		-13.8	-17.0	-20.7	-24.5	-28.8	-33.5	-38.3
25 Feet Double Story	Single 9' x 7'	12.8	15.9	19.2	22.9	26.9	31.2	35.7
		-14.8	-18.2	-22.0	-26.3	-30.8	-35.8	-41.0
	Double 16' x 7'	12.4	15.3	18.5	22.0	25.9	30.0	34.4
		-13.8	-17.0	-20.7	-24.5	-28.8	-33.5	-38.3

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 with a Use Factor of 1.0.
- Single Story Buildings: Multiply table values by 1.21 to obtain Exposure C values and by 1.47 to obtain Exposure D values
- Double Story Buildings: Multiply table values by 1.35 to obtain Exposure C values and by 1.61 to obtain Exposure D values
- Doors larger than 100 square feet should use the 16 x 7 loads. Doors less than 100 square feet may be interpolated.
- Garage doors evaluated as Components and Cladding
- Installation details vary. Consult manufacturer's instructions.

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