

TECH
CORNER

DAVE MONSOUR

Picking up the pieces

The tangled web of wind-load specs

Even a cursory scan of DASMA Technical Data Sheets (TDS) will show that DASMA is serious about wind-load education and has been for decades. Yet when it comes to doors and wind load, a topic which encompasses contractors, architects, engineers, plans examiners, building officials, inspectors, door manufacturers, door dealers, and consumers, confusion is not uncommon on any given jobsite. As a result, doors are over-specified or under-specified for real-world wind conditions. Manufacturers and dealers lose business and margin and undergo unnecessary stress and busywork.

DASMA staff was recently asked by a home builder in the Midwest: "How can I get the 115 mph DASMA sticker the inspector is looking for?" Now, let's address the many issues and misunderstandings packed into that ten-word question.

1. The inspector and the home builder are not on the same page

The situation is obviously unfortunate. Far too often I hear "Wind load is clear cut when it comes to windows, walls, and roofs, but with garage doors, it's not." Oftentimes inspectors are looking for (1) a wind speed, (2) the wrong wind pressure, or (3) no wind load at all. In the case of this particular home builder's question, it's a combination of all three mistakes (and more).

2. The inspector is looking for a wind speed rating

We in DASMA are going to sound like a stuck record. Wind speed is only one of the many important factors in determining wind load design pressure. Inspectors should also be looking for design pressure ratings. That has been clear in building codes for many years. See DASMA TDS 155, 168, and 194: <https://www.dasma.com/technical-data-sheets/#commercial-residential-garage-doors>.

For an example of how one wind speed can correspond to two vastly different pressures, try the two DASMA wind-load calculators on our website. You will find that results can vary by 67% or more. Knowing which of the two calculators to use is just one of many critical elements in specifying the right design pressure, and hence the right door.

3. The inspector doesn't know the design pressure

Even if the inspector was looking for verification of the design pressure (as he or she should be), they would still be stuck because they do not know what design pressure to look for. Obviously, this information has not been passed on by the architect, plans examiner, or AHJ (Authority Having Jurisdiction) — another shortcoming in the process that affects our industry.

4. The home builder bought a non-wind-loaded door

Garage doors come with a large variety of wind-load ratings, including non-rated. It's too late in the building inspection process to learn that the inspector will be looking for a wind-load-rated garage door.

Also, a wind-load rating should be specified as a matter of course by the home builder because he builds residential homes in a state that has adopted the 2018 International Residential Code. The code requires residential garage doors to be rated for wind load. That has been the case in the most prominent building codes for many years. See DASMA TDS 1502.

5. The inspector is looking for a DASMA sticker

It is nice to know that DASMA is looked to as the authority, but there is no such thing as a DASMA wind-load sticker. And if there was a sticker, it would not have a wind speed on it like 115 MPH; it would have a pressure (PSF).

But again, there is no DASMA wind load label. Each manufacturer has their own label. Building codes that require labeling, such as the Florida Building Code and the 2021 International Residential Code, call for the door manufacturer to provide the wind load label.

6. The sticker does not make the door wind load rated

The home builder seems to think he can fix his problem by obtaining and applying a wind-load label to the door. But the label is only one important element of a wind-load rating.

Many other door components are involved as well — e.g., struts, sections, hinges, rollers, fasteners, track — and may be different than for a non-wind-load-rated door.

Wind speed is only one of the many important factors in determining wind load design pressure.

"How can I get the 115 mph DASMA sticker the inspector is looking for?"

That simple question captures many common flaws in the wind-load process for garage doors. With upstream breakdowns in understanding or communication, door manufacturers, installers, home builders, and consumers are often left picking up the pieces.

Clearly, we have a long way to go to get all stakeholders on the same page. But I hope we can agree that it is worth the effort. The result will be greater operational efficiency for our businesses, less stress for all concerned, and better protection against wind storms for doors and buildings. ■