

What Is A DP Rating For A Door?

A **Design Pressure or DP Rating** is a numerical value rating that identifies the load – induced by wind and/or static snow – that a door is rated to withstand after installation into a structure, and when the door is closed and fully locked.

Basically, DP Rating measures the strength of a door. This number will tell you how well your door will stand up to high winds or heavy snow, rain and air infiltration. The higher the DP Rating the stronger the door. The DP Rating is a “pounds per square foot” number.

Why Is It Important?

The DP Rating Test is a 3-part test that measures air, water, structural performance. The test determines much about a door's overall performance. Air infiltration is the first phase, water penetration is next, and structural performance is the third part of the test.

To calculate a DP Rating with this test, a door is attached to a door frame and clamped to a specially designed wall. Air pressure is gradually reduced on the inside of the window or door, which increases the pressure on the outside. This reduction of pressure continues until the door breaks. The instant the door breaks, the PSF or Pounds per Square Foot number is recorded and is used for the calculation.

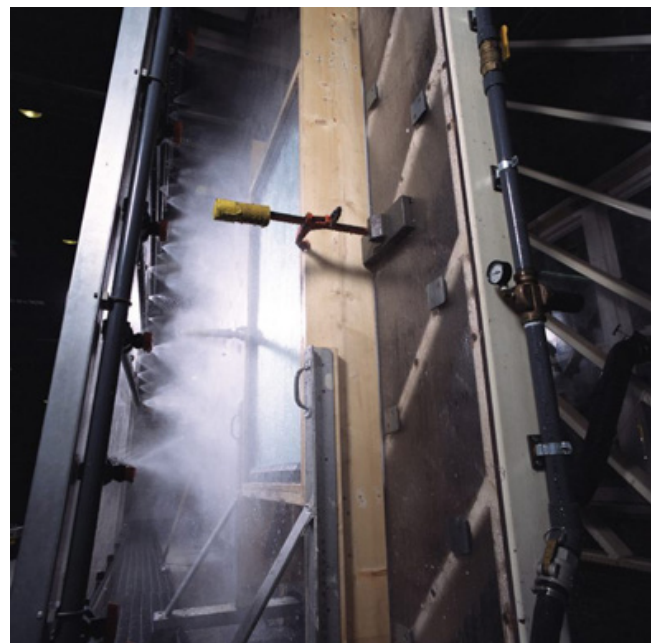
The DP rating test pressure must reach 1.5 times the rated design pressure for 10 seconds without the door suffering permanent damage. In other words, a door with a DP of 35 would have to withstand 50psf. Generally, you'll see residential replacement doors with ratings from 15 to 50.

The DP Rating needed will vary by location and design of your home. You need to focus on the door's DP Rating if your home is located where weather elements are a particular concern. If you live close to the coast or in an area that is exposed to strong winds you should consider using a door with at least a DP 30. **Note, the DP rating does not imply that the door is “impact-resistant”**, which is a different test to determine if a door can withstand a direct and forceful impact without breaking.

The Saffir-Simpson Hurricane Wind Scale classifies hurricanes in the following format:

- Category 1:** 74-95 mph
- Category 2:** 96-110 mph
- Category 3:** 111-129 mph
- Category 4:** 130-156 mph
- Category 5:** 157+ mph

Imagine every 10 points in the DP rating as the equivalent of a hurricane level. A DP rating of 30 should be able to survive a Category 3 hurricane, a DP rating of 40 should withstand a Category 4 hurricane, and so on. Keep in mind that these ratings apply to sustained winds. They do not consider wind gusts, projectiles, or tornadoes that often accompany hurricanes.



(Photo Of DP Rating Testing At Architectural Testing Inc.)