



# Strengthen Your Garage Door



## Why does it matter?

Decades of post-storm damage investigations after hurricanes, tornadoes, and severe thunderstorms reveal that more than 90% of house damage in severe wind events begins when garage doors separate from their mounting, collapse, or cave in due to windborne debris impacts. The doors are vulnerable because they are your home's largest and weakest openings.

However, the National Institute of Standards and Technology (NIST) analysis indicates that strong, reinforced garage doors can serve a vital and protective role in severe winds. NIST found that homes with intact garage doors following a severe wind event are likelier to retain their roofs and the walls adjacent to the garage. The correlation between intact garage doors and undamaged roofs remained effective in windspeeds up to 135 mph.

## What do I need to know?

### What makes one garage door stronger than another?

- Metal thickness (gauge) of the door to resist pressure and impact of windborne debris.
- Number and strength of mounting brackets and connectors holding the door and track to the wall and the ceiling.
- Horizontal strengthening to reinforce the door against buckling.

### What type of doors are best for high-wind locations?

- Wind-rated and impact-resistant doors that are tested and approved for use in your location. Wind-rated is good. Impact-resistant is better.
- Single-car garage doors usually resist wind forces better than two-car garage doors.
- Doors without glass or glazing are better than those with glass or windows unless the glass is impact-resistant.



### How do you know if your garage door is impact-rated or wind-rated?

Determining whether garage doors are wind-rated or impact-resistant can be challenging without proof of compliance labeling (typically a yellow or white sticker listing pounds per square foot or PSF.)

If your door does not have a sticker, contact the manufacturer or a local distributor.



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## Where do I start?

### Strengthen and brace your existing garage door

- Check the mounting brackets and connectors and make sure the screws are tight, and the track is not loose.
- Add mounting brackets and connectors if you only have three or four on each side.
- Replace rusted pins or worn-out rollers, and make sure they are balanced.

### Brace Your Garage Door

You have three basic options for preparing your garage door to withstand high winds.

- Replace and upgrade your garage door with a wind-rated or impact-resistant version. The costs will vary depending on the type of doors you choose and the installation cost where you live. However, you can expect to spend approximately \$2,000 to \$9,000.
- If you aren't ready to replace, consider having a professional install a ready-to-install garage door storm kit with purpose-built garage door struts and braces. You can expect to spend approximately \$200 to \$750 for this solution, and you can save money if you are handy and have the necessary tools for the job.
- Build temporary, Do-It-Yourself 2-by-4 wood braces to reinforce your non-wind-rated door before a storm arrives. This is the lowest-cost solution and will cost approximately \$150 for materials plus more for installation unless you are handy and have the necessary tools for the job.

### More resources:

[How to Install a Garage Door Brace Kit](#) (video)

[How To Install Wood Garage Door Storm Braces](#) (video)