



DASMA
Door & Access Systems
Manufacturers Association
International

COMMERCIAL & RESIDENTIAL GARAGE DOOR DIVISION

TECHNICAL DATA SHEET

#153

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Vertically Reinforcing Sectional Garage Doors for Wind Load Conditions

Introduction

According to individual manufacturers' requirements, the panels of a sectional garage door may require horizontal reinforcement to minimize the deflection of the door when in the fully open position. Horizontal reinforcement may also be needed to reinforce the top section of the door for use with a trolley type operator. This reinforcement may not be sufficient to resist the structural requirements of wind loads when the door is in the fully closed position. One alternative to adding additional horizontal structural members to the door for resisting wind loads is the vertical post concept.

Common Vertical Post Concept Options

Common scenarios of the vertical post concept include:

1. **A post system integrated into the door design.** Here the homeowner is required to secure the post in accordance with the manufacturer's instruction, usually by some mechanical means such as the turning of a crank or movement of a lever.
2. **A post system supplied with the door by the manufacturer.** The door manufacturer supplies the homeowner with instructions, and the homeowner must secure the post by an established assembly procedure.
3. **A post system that a homeowner may purchase as an aftermarket product.** Homeowners should also fully investigate whether or not the existing garage door is acceptable per the reinforcement system manufacturer's requirements, and should ensure that the reinforcement system is installed per the manufacturer's instructions. Homeowners are encouraged to contact the garage door manufacturer if they have any question regarding whether the warranty of the existing garage door may be affected.

Note: A post system purchased aftermarket and installed on a certified or state-approved product may constitute a "component substitution". Any component substitution must be in accordance with written guidelines established in the applicable program governing the certification or state approval, as administered by the independent agency. The agency may invalidate the door certification/approval if a component is substituted contrary to program guidelines. More details on component substitution can be found in DASMA TDS-183.

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.

Compliance With Relevant Standards

Doors using vertical reinforcement posts as a component of a new door system should comply with industry standards such as ANSI/DASMA 102. This standard contains specifications for garage doors. Doors using posts should have been tested in accordance with a nationally recognized uniform static air pressure testing standard and meet the acceptance criteria. DASMA has published ANSI/DASMA 108, which contains a uniform static air pressure testing method and acceptance criteria relevant to garage doors.

Support From Existing Building Structure

Garage door reinforcement in the form of vertical posts transmits wind load forces to the garage door-opening header and to the garage floor. When vertical posts are installed in a garage door, the door still transmits forces to the entire surrounding structural support, including the header and the vertical support members where the track attaches. Because the use of vertical reinforcement may increase the force applied to the garage opening header, it is recommended that a qualified design professional perform an assessment of the building structure prior to the installation of any vertical reinforcement. It is strongly advised that the garage door manufacturer be contacted in regard to any questions or concerns related to sectional garage doors and vertical reinforcement.

Homeowner Responsibility

In all cases the homeowner must accept responsibility for properly securing the vertical post in position in anticipation of a hurricane or other high wind event. For retrofitted doors, the door installer should explain the installation instructions. For new construction, the building contractor should explain these instructions.

Building Department Involvement

If a building inspector is required to inspect a vertically reinforced door, as part of a door permitting process, such reinforcement should be installed and fully engaged at the time of the inspection.

Labeling

Manufacturers may also choose to create labels. One label could be a general instructions-oriented label advising that the post system be installed/engaged when hurricane or other high wind warnings are issued. Another label could contain product-specific instructions for preparing the garage door and for installing/engaging the post system.

Conclusion

Homeowner education is the key to successful use of vertical reinforcement for sectional garage doors to resist high winds. Effective education should result in the use of such reinforcement being no different than

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homeowners securing doors and windows during such events. Any questions about specific products should be directed to the garage door manufacturer.

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