



Door & Access Systems  
Manufacturers Association  
International

DOOR OPERATOR & ELECTRONICS DIVISION

# DASMA TECHNICAL DATA SHEET

## #369

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## Frequently Asked Questions Regarding Automated Residential Garage Door Systems

**Q:** *Can a height other than 2" above the floor be used to test a door operator reversing mechanism?*

**A:** The door must be tested to reverse off a 2 x 4 block of wood laid flat on the floor centered under where the door closes. However, testing may also be conducted at additional heights to verify that the door reverses properly.

**Q:** *Why is a 2 x 4 wood block recommended as the material to use to test a door operator reversing mechanism?*

**A:** Federal regulations and ANSI/CAN/UL 325 both require that for both installation and monthly reversal testing, a 2 x 4 is laid flat under the door to ensure that the door reverses properly close to the floor of the garage. A 2 x 4 wood block is very common in a garage and is the recommended means of testing since it is 1½ inches in height when laid flat. Other items have been used by homeowners, but are not recommended by manufacturers or testing agencies as they are not a reliable means of testing the reversing mechanism.

**Q:** *What is the maximum allowable force to reverse a door?*

**A:** All residential garage door operators are tested to meet the requirements of Underwriters Laboratories standard ANSI/CAN/UL 325 as required by federal law, taking into consideration factory settings and/or user adjustable settings, especially forces. It is important to ensure that for operators with manually adjustable forces, the forces generated by the operator are adjusted to the minimum level necessary to operate the door reliably. Follow the manufacturer's instructions for installation, test and maintenance of the operator.

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**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 Operator & Electronics 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.

**Q:** *At what height above the garage floor should a photoelectric sensor be mounted?*

**A:** Photoelectric sensors should never be installed higher than six inches off the floor. This ensures that a small child cannot crawl under the sensor's invisible beam.

**Q:** *Can a device other than a photoelectric sensor be used?*

**A:** ANSI/CAN/UL 325 allows for devices other than a photoelectric sensor. One example is a door edge sensor. The garage door operator must monitor the proper operation of any external sensor at least once during each cycle of operation. If an external sensor is not operating properly, the door is not allowed to close except for a constant pressure switch but not a portable transmitter. There are provisions for a secondary inherent entrapment protection system that limit the closing force of the door and do not require any external sensors. Refer to your owner's manual, or contact the garage door operator manufacturer for the types of devices that have been properly tested with your operator.

**Q:** *Can a residential door operator be installed with a timer-to-close or some operating features from a remote device such as a "smart phone", tablet, or other portable device?*

**A:** ANSI/CAN/UL 325 was revised in 2009 allowing unattended operation features such as these. The same requirements were also included in the Federal regulations. Whether such features are included with the operator, or sold separately as an accessory, several key provisions must be met for such operation:

1. The feature must be utilized only on an operator equipped with a secondary entrapment protection system such as a photoelectric sensor.
2. The feature must be activated only when the operator is installed on a sectional door.
3. The operator must be equipped with audible and visual alerts indicating a pending motion for 5 seconds before the door starts moving.

**Q:** *I live in California. Does my residential door operator require battery backup?*

**A:** Legislation was signed into law and requires that, after July 1, 2019, all residential garage door operators sold or installed in California must have battery backup functionality.

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**Q:** *Before installing a garage door operator, what care should be taken concerning the garage door?*

**A:** There are several items that should be checked before installing a garage door operator on a door. Refer to TDS-167 for details.

1. Door panels are free of any signs of fatigue, cracking or separation of material.
2. Door warning labels are present.
3. All springs and hardware parts are securely and appropriately attached.
4. Handles or suitable gripping points are present on both the inside and outside of the door. The door moves freely, without difficulty, and does not open more quickly than the force applied. The rollers stay in the track during operation.
5. Counterbalance springs and their attachment components are restrained by a cable or shaft.

In addition:

6. **Remove all ropes and remove or make inoperative all locks connected to the garage door before installing the operator.** This is necessary to help ensure smooth operation of the door and to prevent damaging the door or operator.
7. **The top section of the door must be properly reinforced to prevent damage.** The top section should be reinforced both horizontally and vertically. Consult the door manufacturer or a trained door systems technician if there is any doubt about door reinforcement.
8. **The door must be level to the floor.** Gaps between the door and the floor will prevent the reversal systems from working properly across the width of the door.

**Q:** *What are some key considerations when installing a residential door operator?*

**A:** The checklist in TDS-167 provides detailed considerations for a residential door and operator system.

1. Locate the door control wall station/push button:
  - a. In clear view of the door;
  - b. At a minimum height of 5 feet above the standing surface, so small children are not able to reach it, and;
  - c. Safely away from all moving parts of the door.
2. Permanently install the entrapment warning label next to the door control wall station/push button in a prominent location.
3. Install the emergency release tag on or next to the emergency release.
4. Leave the operator owner's manual in the homeowner's possession.

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