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Automatic Folding Door OWNER'S MANUAL

A Founding Member of: AAADM
(American Association of Automatic Door Manufacturers)

WARNING

- Turn OFF all power to the Automatic Door if a Safety System is not working.
- Instruct the Owner to keep all power turned OFF until corrective action can be achieved by a NABCO trained technician. Failure to follow these practices may result in serious consequences.
- NEVER leave a Door operating without all Safety detection systems operational.

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CHAPTER 1: WARNING LABELS

Please refer to this section in the event a warning label within this manual needs further explanation.

WARNING Indicates a hazardous situation which has some probability of *severe injury*. It should not be considered for property damage unless personal injury risk is present.

CAUTION Indicates a hazardous situation which may result in a *minor injury*. Caution should not be used when there is a possibility of serious injury. Caution should not be considered for property damage accidents unless a personal injury risk is present.

Notice: Indicates a statement of company policy as the message relates to the personal safety or protection of property. Notice should not be used when there is a hazardous situation or personal risk.

Note: Indicates important information that provides further instruction.

CHAPTER 2: GENERAL SAFETY RECOMMENDATIONS

WARNING An improperly adjusted door can cause injury and/or equipment damage.

WARNING Safety devices must be installed correctly and operational.

WARNING Do Not operate any Folding Door Unit without fully understanding how a Folding Door functions. If you do not fully understand, ask a qualified technician. Failure to do so may result in bodily injury, or property damage and will nullify all warranties.

Notice: This manual must be given to and retained by the purchasing facility or end user.

Notice: Inspect door operation daily using the Daily Safety Checklist (within this manual and on door).

Notice: Have door inspected at least annually by an AAADM certified inspector.

CHAPTER 3: SCOPE

SECTION 3.1: To the Customer

The purpose of this manual is to familiarize the Owner with proper operation of the door. It is essential that the Owner recognizes the importance of maintaining a door system in compliance with industry standards for safety.

It is the responsibility of the Owner/Caretaker to inspect operation of the door on a daily basis. Daily inspection must be done to ensure safe door operation for use by pedestrians, including (but not limited to) invitees, customers, or employees. This manual covers all Automatic Folding Doors.

SECTION 3.2: Objective

This manual provides maintenance instruction, and a daily safety checklist, plus a semi-annual maintenance inspection.

WARNING Should the door fail to operate as prescribed in the Daily Safety Check, or at any other time for any other reason, **DO NOT attempt to repair or adjust the door. Call an AAADM Certified technician. These technicians are trained to service automatic door systems in accordance with ANSI/BHMA A156.10 (Full Automatic).**

CHAPTER 4: GETTING STARTED

Automatic folding doors are available in single fold, and bi-part fold configurations and a number of combinations:

- ▶ Doors Fold In - Swing Out in Emergencies
- ▶ Doors Fold Out - Swing Out in Emergencies
- ▶ Single Folding (2-Panel) or Folding Pair (4-Panel)
- ▶ One-Way Traffic or Two-Way Traffic
- ▶ Activated by Floor Mat, Sensors, or Push Switches

Folding doors typically include: an operator, header, track, carrier wheels, folding door panels, jambs, lock and activation/safety system. No matter the configuration or system, automatic Fold Doors:

- ▶ Must include Sensors and Signage for the safety and convenience of the user.
- ▶ Have a Safety Zone to cover the area the door travels.
- ▶ Plan traffic routing so persons will approach the door straight on and not from an angle.
- ▶ Guide Rails on the the Fold side of doors (unless a wall is in the same position).

SECTION 4.1: Service Availability

Door products are distributed through a nationwide network of authorized suppliers for sales, installation, and service. Immediately contact the Door Manufacturer or the Authorized Door Manufacturer Representative, if service must be performed on an automatic door system.

SECTION 4.2: Safety Standard Compliance

The automatic door system was designed to comply with the latest operating and safety standards. To ensure continued, safe operation it is important that:

- ▶ The door system is maintained in compliance with industry standards.
- ▶ Proper decals/labels are applied and maintained on doors.
- ▶ All doors should be checked by an AAADM certified inspector at least annually.

The American Association of Automatic Door Manufacturers, has established a program to certify automatic door inspectors. Through this program, inspectors are trained to check door systems for compliance with the appropriate version of an ANSI standard. In the United States, ANSI Standard 156.10 (Used to cover Full Automatic doors) applies.

SECTION 4.3: Limited Warranty

NABCO Entrances Inc., for its Gyro-Tech product line, provides to its customer a limited warranty, on products. The warranty is:

NABCO ENTRANCES INC. will exchange or repair, F.O.B. the plant, any component found defective in workmanship and/or material, subject to NABCO's inspection, for a period of one (1) year after installation or 18 months after manufacture, whichever comes first. Warranty does not include field service labor. The installing contractor/customer will be responsible for installation and field service. This is NABCO ENTRANCES Inc.'s sole warranty.

This warranty does not cover loss or damages resulting from causes beyond the manufacturer's control, misuse, neglect, accidents, windstorms, or other acts of God, or acts of terrorism. Warranty is for normal use and service. The warranty does not apply to equipment that has been repaired or altered so as to adversely affect conditions of operation. Warranty will not obligate NABCO for damages resulting from such alterations, misuse, or acts of God, or acts of terrorism.

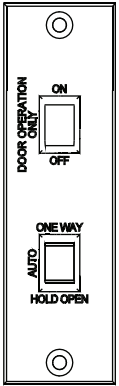
SECTION 4.4: Information Provided by Door Supplier

Note: To obtain an AAADM Daily Safety Check video, please go to <http://www.aaadm.com/doorowners.asp>

- ▶ Instruction on how to conduct the Daily Safety Check.
- ▶ Location of activation Switches and Sensors with instruction of their use.
- ▶ Circuit breaker or main power disconnect location for each door system.
- ▶ Contact number to call for service, or inquiries about the Door system, and/or to report concerns.
- ▶ An AAADM inspection form, or a Work Order signed by an AAADM certified inspector.
- ▶ Affixed to the Door, a completed Annual Compliance Inspection label, at the bottom of the Safety Information label.
- ▶ Warranty information for each door.

CHAPTER 5: OPERATION

Rocker Switch	
Switch	Description
ON	When the switch is in ON position, the window is operational.
OFF	When the switch is in the OFF position, the window is not operational. The OFF position does not shut off the main power to the window unit.
ONE-WAY	<ul style="list-style-type: none"> ▶ The Electric Lock (if installed) will lock the door in the fully closed position. ▶ The signal from the Exterior Sensor will not Open the door. ▶ The Interior Sensor is active and used to allow people to Exit the building. ▶ Both Sensors provide Threshold protection during the door cycle.
HOLD OPEN	<ul style="list-style-type: none"> ▶ Door is held Open as long as the Switch remains in the Hold Open position. ▶ Doors should be held Open in this manner. Do Not prop open the doors with any object.
AUTO	▶ All signals are accepted and the door is ready for operation.



CHAPTER 6: GENERAL SAFETY

Pay attention to the following safety items and perform checks periodically where noted.

- ▶ Force (Force can be measured with a force gauge):
 - Force to prevent the door from closing should not exceed 30 pounds.
 - If the door is equipped, force to Breakout the door should not exceed 50 pounds.
 - Force to open door in the event of a power failure should not exceed 30 pounds.
- ▶ If equipped, Breakout Mode:
 - Center pivoted in-swinging doors may be supplied with an emergency breakout stop or switch that will allow the door to open in the directions of emergency egress. For details, please call customer service at: (877) 622-2694.
 - When the door (or door including a sidelite) is pushed into Breakout mode, check that the door will not activate.
- ▶ Strike Stile:
 - With door open, grasp the Strike Stile of door and attempt to move it vertically and horizontally. There should be very little, if any, looseness between door and glass, and/or connections between door and operator.

CHAPTER 7: SENSORS

The GT1175 Slide Door System can utilize a Sensor that activates the Slide Door with Infrared/Microwave technology, or Infrared technology, depending upon the brand.

- ▶ Sensor with Microwave/Infrared technology: Has a deeper detection zone and accomodates fast traffic conditions.
- ▶ Sensor with Infrared technology: Used to scan backwards to detect pedestrians in the threshold until the Slide door is fully closed.

Section 7.1: Sensor Types

7.1.1 Motion Sensor

Motion Sensors are used to activate the door when it detects a moving object, such as a pedestrian or a shopping cart. Motion sensors can typically distinguish between objects moving toward the door or away from the door. Motion sensors cannot detect still objects such as a person stopped in the Detection Zone.

7.1.2 Presence Sensor

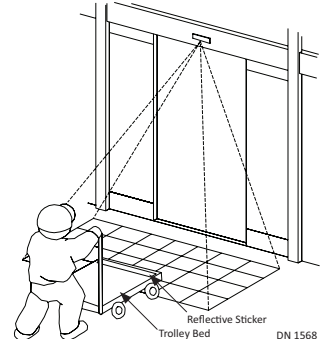
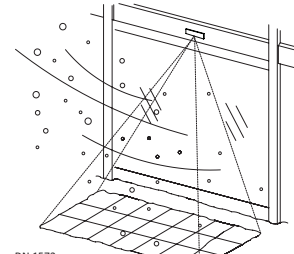
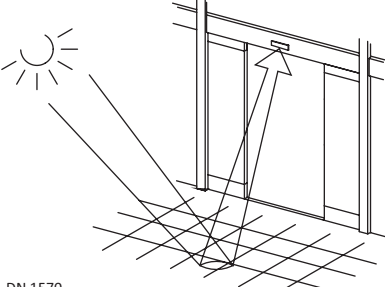
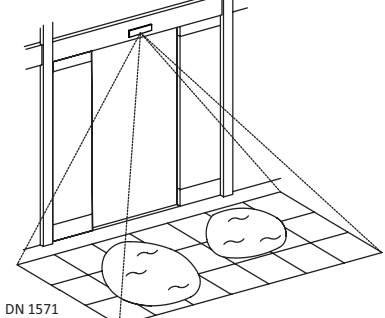
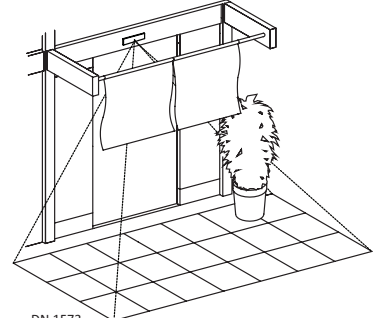
Presence Sensors detect both moving and non-moving objects in the path of the door and signal the Control Unit accordingly. NABCO Entrances utilizes infrared technology in its presence sensors.

7.1.3 Motion/Presence Sensor

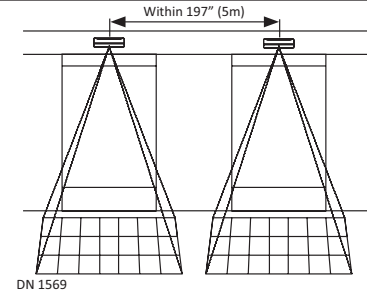
Motion/Presence Sensors provide motion detection, and pedestrain safety.

Section 7.2: Sensor Malfunctions

Table 1 Some (not all) common cause examples for Sensor Malfunctions

<p>The bed of a trolley:</p> <ul style="list-style-type: none"> ▶ Is too low to the floor ▶ Surface of cart or trolley is not reflective enough to be detected. (Reflective tape or stickers can help) 	 <p style="text-align: right;">DN 1568</p>
<p>Sensor is exposed to:</p> <ul style="list-style-type: none"> ▶ Steam ▶ Exhaust fume ▶ Insects ▶ Heavy rain ▶ Heavy snow 	 <p style="text-align: right;">DN 1572</p>
<p>Presence Detection Zone is flooded with:</p> <ul style="list-style-type: none"> ▶ Strong direct Sunlight ▶ Sunlight reflecting from floor (such as marble, or aluminum floors) ▶ Strong direct artificial light ▶ Artificial light reflecting from floor (such as marble, or aluminum floors) ▶ Lighting fixtures placed too close to the Sensor 	 <p style="text-align: right;">DN 1570</p>
<p>Pool of water located within Presence Detection Zone</p>	 <p style="text-align: right;">DN 1571</p>
<p>An object placed within the Presence Detection Zone that may be moving within the detection zone (like due to wind).</p>	 <p style="text-align: right;">DN 1573</p>

Multiple Sensors installed close to each other, or facing each other



CHAPTER 8: DAILY SAFETY CHECK

CAUTION If the Swing Door will not be used for at least (1) month, it is recommended to turn Power OFF to the Unit.

CAUTION As a preventive measure, any components showing signs of wear must be replaced by a qualified, NABCO trained technician, or service provider.

CAUTION If a Sensor is not working, the door may swing toward you without stopping.

Attention: In the event any type of object needs to be removed from the Sensor Detection Zone (vicinity), the Sensor will keep the door open until it “relearns” the zone before resuming normal operation. This may take a minute or two.

The best time to perform a Daily Safety Check is early in the morning while pedestrian traffic is still restricted from Sensor activating zones. The purpose of a Daily Safety Check is to ensure pedestrian safety and Owner protection.

Section 8.1: Slide Door and Floor Area

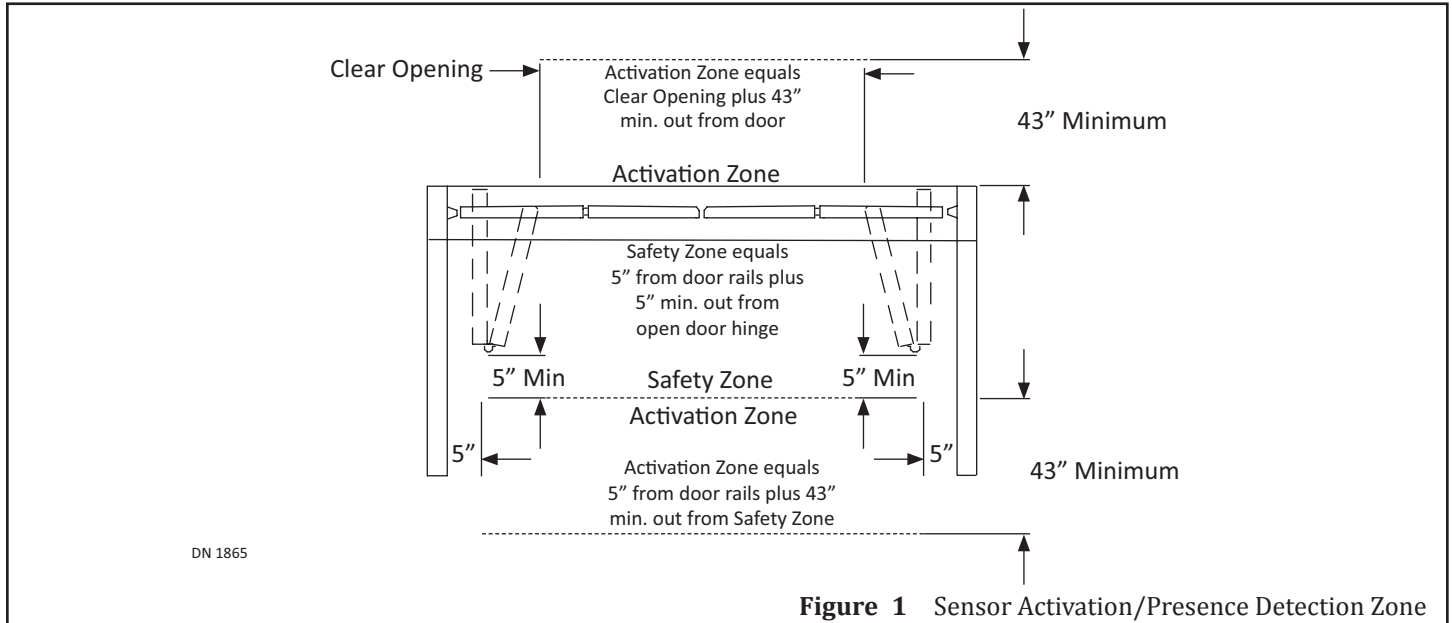
1. Ensure the Power Breaker is switched ON. Do not switch Power Breaker ON and OFF too quickly.
2. Ensure the Rocker Switch is set to “ON”.
3. Check the motion of the Folding door. Folding door should open freely.
4. If Equipped: Test Emergency Break Out. In Break Out mode, the door must not activate. Call your supplier for details.
5. If Equipped: Check that two guide rails or other barriers or separators are present on the fold side and firmly anchored.
6. Inspect the floor area. It should be clean with no loose parts that might cause user to trip or fall. Keep traffic path clear.
7. Inspect door’s overall condition. The appropriate signage should be present and hardware should be in good condition.
8. Ensure the Header Cover, and all other hardware is properly secured.
9. Check for damaged or missing Weathering.
10. Check for damaged or missing Finger Guards.
11. Ensure Door Latches operate smoothly.
12. Check all glass for cracks or damage.
13. Remove tripping or slipping hazards.

Section 8.2: Sensor Check for Activating Side of Swing Door

CAUTION If Sensor is not working, door may open toward the pedestrian without stopping.

1. Walk toward the Swing Door at a normal pace. At about (4) feet away the Swing Door should start to open:
 1. The opening time of a Swing Door to 80 degrees shall not be less than 1.5 seconds.
 2. Door must remain fully open for a minimum of (1.5 seconds) after loss of detection.
 3. Closing time to Latch Check shall be a maximum of (1 foot per second) measured at the leading edge.
 4. Latch Check shall occur at no less than 2 inches from the closed position measured per door panel.
 5. The door panel should not close through the last (2) inches in less than 1.5 seconds for each door panel.
2. Go to the Exterior side of Door. Walk toward the Folding door at a moderate speed. At about (4) feet away, the door should start to open and then stop without impact.

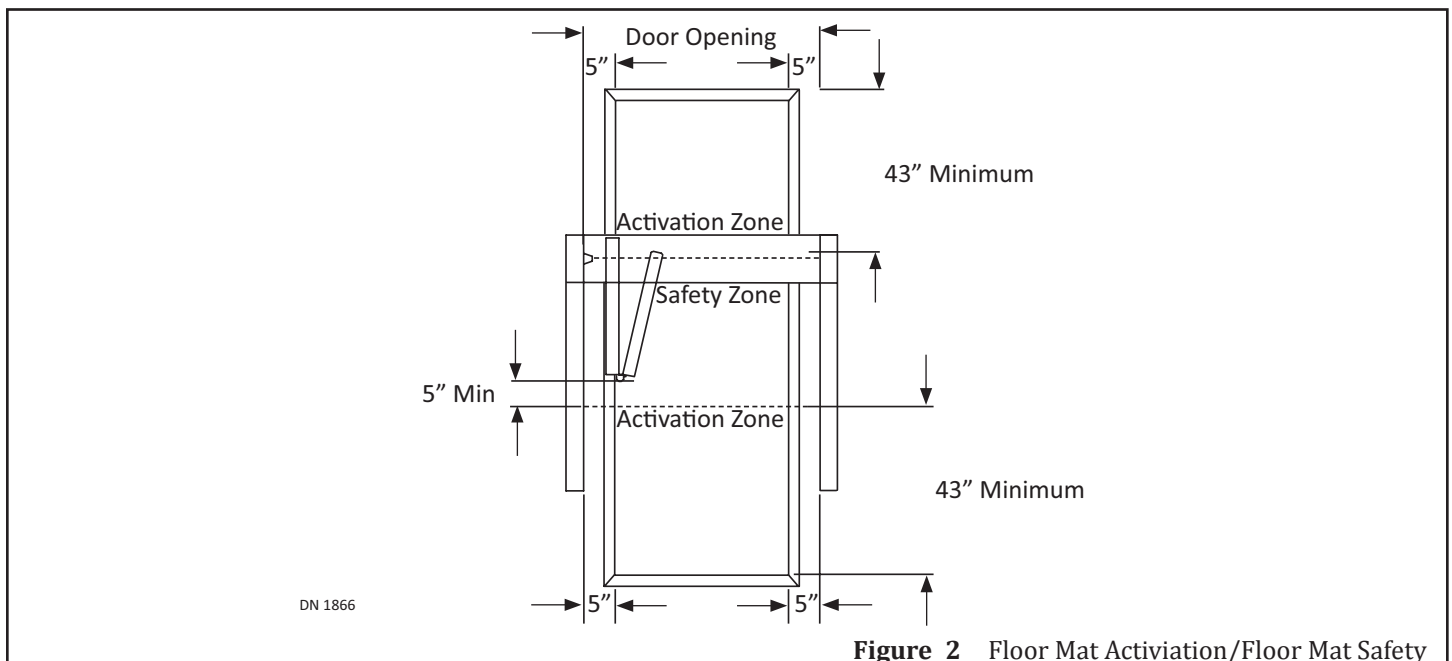
3. Move slowly through the door opening (6 inches per second). The door should remain open.
4. Walk out of the Detection Zone. After a brief time delay (at least 1-1/2 seconds), door should fully close without impact.
5. Approach the Fold side of door first, then have another pedestrian approach the opposite side of the door. As long as a pedestrian is in the Safety area (Fold area) the door should not open.
6. Crouch in the door opening for at least (4) seconds. The Folding door should not close.



Section 8.3: Sensor Check for Safety Side of Swing Door

1. Walk toward the Safety side of Swing door. At the same time, have someone else approach the Activating side of the Swing door.
 - a. If the door is equipped with an overhead mounted presence sensor, as long as you are in the Safety area of the door, it should not open.
 - b. If the door is equipped with a door mounted presence sensor, the door may start to open but should reverse, stop, or slow down.

Section 8.4: Mat Activation Check for Safety Side of Swing Door






CAUTION If the Safety Mat is not working, the door may open toward the pedestrian without stopping.

The purpose of the Safety Mat is to hold the door open, or return the door to the open position when approached by a pedestrian from the other side. Safety Mats can be used for Two-Way Traffic and One-Way Traffic.

1. Ensure Safety Mat is in (1) piece and secured with all screws required.
2. Step on the Activating Mat.
3. Step through the doorway onto the Safety Mat. Remain motionless for (4) seconds. The door should remain open.
4. Repeat steps 1 thru 2 on several locations on the Mats.
5. With the door closed, step on the Safety Mat on the Fold side. Have another pedestrian step on the Activating Mat, As long as a pedestrian remains on the Safety Mat, the door should remain closed.

CHAPTER 9: SAFETY DECALS

Doors shall be equipped with signage visible from either side of the door, instructing the user as to the operation and function of the door. The signs shall be mounted 50" +/- 12" (1270 mm +/- 305 mm) from the floor to the center line of the sign. The letters shall be 5/8 inch (16 mm) high minimum.

Decal	Description	
DO NOT Enter (side one) Directional Arrow (side two)	<ul style="list-style-type: none"> ▶ Directional Signs used to define Traffic Flow. ▶ Adhere to swing door panel. ▶ Must be visible from both sides. 	
Caution Automatic Door	<ul style="list-style-type: none"> ▶ Adhere to both sides of swing door panel. ▶ Must be visible from both sides. 	
In Emergency Push to Open	<ul style="list-style-type: none"> ▶ Affixed adjacent to the Strike Stile on a center line (36 to 60) inches from the floor, applied to the side of door appropriate for egress. 	
AAADM Safety Information Label	<ul style="list-style-type: none"> ▶ (1) Safety Information sign shall be adhered to Jamb Tube on Interior Side of Door Panel. ▶ The sign shall be a minimum of 9 inches tall. Black lettering shall be a minimum of 10 point type on a white background. White lettering shall be a minimum of 10 point type on a blue background. 	