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# ICU 2400 Automatic Sliding 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 Entrances trained technician. Failure to follow these practices may result in serious consequences.
  - NEVER leave a Door operating without all Safety detection systems operational.

## Table of Contents

<b>CHAPTER 1: WARNING LABELS</b> .....	<b>2</b>
<b>CHAPTER 2: GENERAL SAFETY RECOMMENDATIONS</b> .....	<b>2</b>
<b>CHAPTER 3: SCOPE</b> .....	<b>2</b>
SECTION 3.1: To the Customer .....	2
SECTION 3.2: Objective .....	2
<b>CHAPTER 4: GETTING STARTED</b> .....	<b>2</b>
SECTION 4.1: Service Availability .....	3
SECTION 4.2: Safety Standard Compliance .....	3
SECTION 4.3: Limited Warranty .....	3
SECTION 4.4: Information Provided by Door Supplier .....	3
<b>CHAPTER 5: GENERAL SAFETY</b> .....	<b>3</b>
<b>CHAPTER 6: OPERATION</b> .....	<b>4</b>
<b>CHAPTER 7: DAILY SAFETY CHECKS</b> .....	<b>4</b>
Section 7.1: Presence Sensor .....	4
Section 7.2: Knowing Act Activation .....	5
Section 7.3: Slide Door .....	6
Section 7.4: Breakout .....	6
<b>CHAPTER 8: SAFETY DECALS</b> .....	<b>7</b>

## 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.

**Attention:** A situation where material could be damaged or the function repaired.

*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 Slide Door Unit without fully understanding how a Slide 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 ICU 2400 Automatic Slide Doors.

### SECTION 3.2: Objective

This manual provides operation and maintenance requirements, and instructions for a daily safety checklist.

**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 A156.38 (Low Energy Power Operated Sliding and Folding Doors).

## CHAPTER 4: GETTING STARTED

ICU 2400 Automatic Slide Doors are available in a single slide configuration only. As a rule, the ICU 2400 Automatic is furnished as a complete package. This package typically includes: an Operator, Controller, Header, Track, Carrier Wheels, (1) Slide Door, (1) Sidelite, (2) Jamb Tubes, (1) Lock and an Activation/Safety System. Automatic Slide 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.

## 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 156.38 (Low Energy Power Operated Sliding and Folding Doors) applies.

## SECTION 4.3: Limited Warranty

NABCO Entrances Inc. 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 Entrances or 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/daily-safety-check/index.html>*

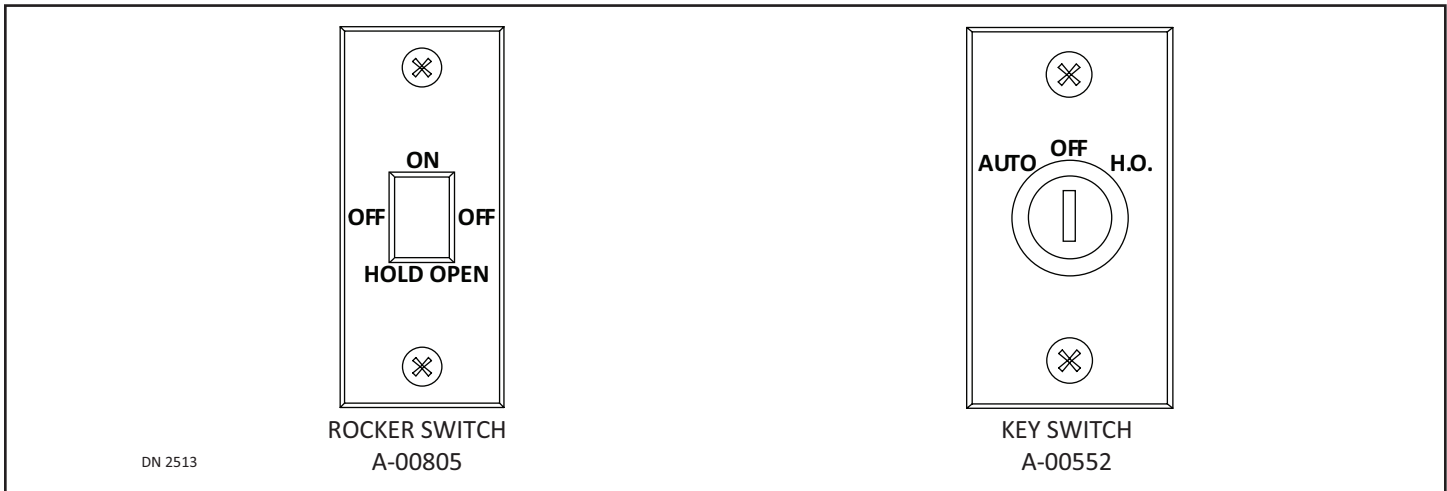
- ▶ Instruction on how to conduct the Daily Safety Check.
- ▶ Location of activation Switches and Sensors with instruction of their use.
- ▶ Circuit breaker or main power disconnect location for each door system.
- ▶ Contact number to call for service, or inquiries about the Door system, and/or to report 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: GENERAL SAFETY

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

- ▶ Force:
  - Force to prevent the door from closing.
  - If the door is equipped, force to Breakout the door.
  - Force to open door in the event of a power failure.
- ▶ If equipped, Breakout Mode:
  - 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 6: OPERATION



Rocker Switch	
Switch	Description
ON	When the switch is in ON position, the Door is operational.
OFF	When the switch is in the OFF position, the Door is not operational. The OFF position does not shut off the main power to the Door unit.
HOLD OPEN	<ul style="list-style-type: none"> <li>▶ Door is held Open as long as the Switch remains in the Hold Open position.</li> <li>▶ Doors should be held Open in this manner. Do Not prop open the doors with any object.</li> </ul>
Key Switch	
AUTO	When the switch is in AUTO position, the Door is operational.
OFF	When the switch is in the OFF position, the Door is not operational. The OFF position does not shut off the main power to the Door unit.
H.O. (Hold Open)	<ul style="list-style-type: none"> <li>▶ Door is held Open as long as the Switch remains in the Hold Open position.</li> <li>▶ Doors should be held Open in this manner. Do Not prop open the doors with any object.</li> </ul>

## CHAPTER 7: DAILY SAFETY CHECKS

### Section 7.1: Presence Sensor

The ICU 2400 Automatic Slide Door System utilizes a Presence Sensor that activates the Slide Door with Infrared technology. Infrared Technology is used to scan backwards to detect pedestrians in the threshold until the Slide door is fully closed.

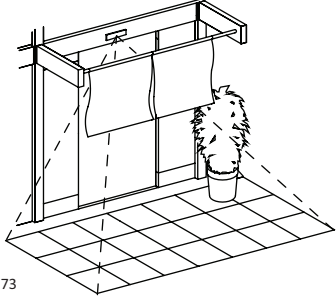
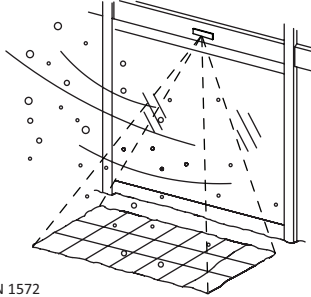
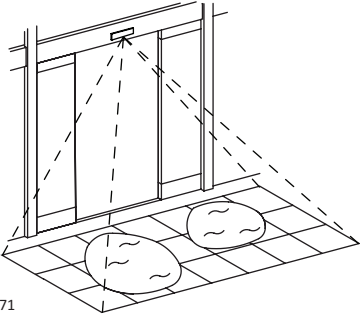
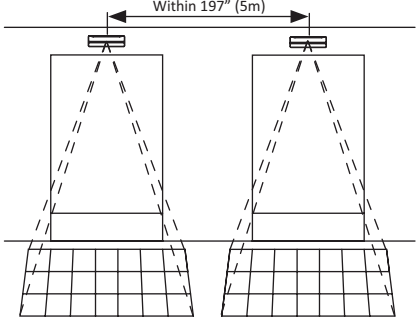
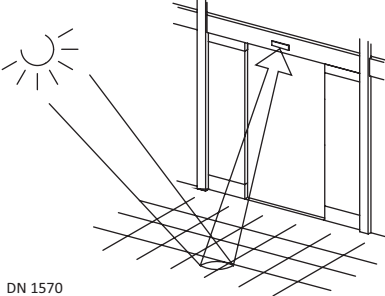
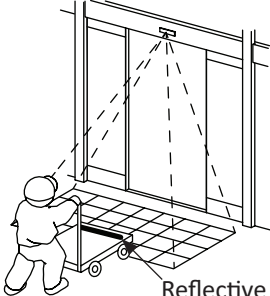
The NABCO Entrances recommendation is for Presence Sensors to detect both moving and non-moving objects in the path of the door and signal the Control Unit accordingly. ICU 2400 Automatic Slide Doors are typically installed with (1) Sensor on each side of the Header. In the event a Slide door is still in the process of closing, and an object is detected within a minimum of (24) inches from the door, the Inactive Sensor will fully re-open the door.

#### 7.1.1 Sensor Detection Zone

1. Observe traffic pattern to the Slide door.
  - a. Plan traffic pattern so pedestrians approach the door straight on (not from an angle).
2. At about (12) inches away from the door face, walk parallel towards the center of the door opening.
  - a. Ensure the Detection Zone is at least as wide as the door opening.
3. Fully open the Slide door. Crouch motionless in the Threshold for at least (10) seconds. The door should not contact the pedestrian.
4. If Holding Beams are installed, open the Door and block the Beam with your Hand.
  - a. The Door should not be able to close.

### 7.1.2 Types of Sensor Malfunctions

**Attention:** Examples shown only illustrate some types of causes for Sensor Malfunctions (not all).

 <p>DN 1573</p> <p>An object placed within the Presence Detection Zone that may be moving within the detection zone (like due to wind).</p>	 <p>DN 1572</p> <p>Sensor is exposed to: Steam, Exhaust Fume, Insects, Heavy Rain, Heavy Snow.</p>
 <p>DN 1571</p> <p>Pool of water located within Presence Detection Zone.</p>	 <p>Within 197" (5m)</p> <p>DN 1569</p> <p>Multiple Sensors installed close together, or facing each other.</p>
 <p>DN 1570</p> <p>Presence Detection Zone is flooded with:</p> <ul style="list-style-type: none"> <li>▶ Strong direct Sunlight</li> <li>▶ Sunlight reflecting from floor (such as marble, or aluminum floors)</li> <li>▶ Strong direct artificial light</li> <li>▶ Artificial light reflecting from floor (such as marble, or aluminum floors)</li> <li>▶ Lighting fixtures placed too close to the Sensor</li> </ul>	 <p>DN 1568</p> <p>Reflective Sticker</p> <p>The bed of a trolley:</p> <ul style="list-style-type: none"> <li>▶ Is too low to the floor</li> <li>▶ Surface of cart or trolley is not reflective enough to be detected. (Reflective tape or stickers can help)</li> </ul>

### Section 7.2: Knowing Act Activation

1. Go to the Slide door. Use a Knowing Act Activation.
2. Opening speed shall be adjusted to open at a speed of (12) inches per second maximum, from fully closed to fully open.
  - a. Slide door shall remain at the fully open position for not less than (5) seconds before starting the closing cycle.
3. Closing speed shall be adjusted to close at a speed of (6) inches per second maximum per Door Panel, from fully open to Latch Check.
  - a. Latch Check speed shall occur no less than (2) inches from the closed position.

4. Walk slowly through the door opening. The door should not contact a pedestrian.
5. Walk out of the Detection Zone.
  - a. After a brief time delay (at least 5 seconds), the door should fully close without impact.
6. Go to the Interior side of Door. Repeat steps.



### Section 7.3: Slide Door

**CAUTION** If the Slide 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 Entrances trained technician, or service provider. In order to guarantee reliability of the installation, any components showing signs of wear must be replaced as a preventive measure.

**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.

1. Ensure the Power Breaker is switched ON.
  - a. Do not switch Power Breaker ON and OFF too quickly.
2. Ensure the Rocker Switch or Key Switch is set to “ON”.
3. Check the motion of the Slide door. Slide door should slide freely.
4. Ensure Full Open Sidelite doors are fully closed.
  - a. Failure to do so, will disrupt proper door operation.
5. Inspect the floor area. It should be clean with no loose parts that might cause user to trip or fall.
  - a. Keep traffic path clear.
6. Inspect door’s overall condition.
  - a. The appropriate signage should be present and hardware should be in good condition.
7. Ensure the Header Cover, and all other hardware are properly secured.
8. Check for damaged or missing Weathering.
9. Ensure Door Latches operate smoothly.
10. Check all glass for cracks or damage.

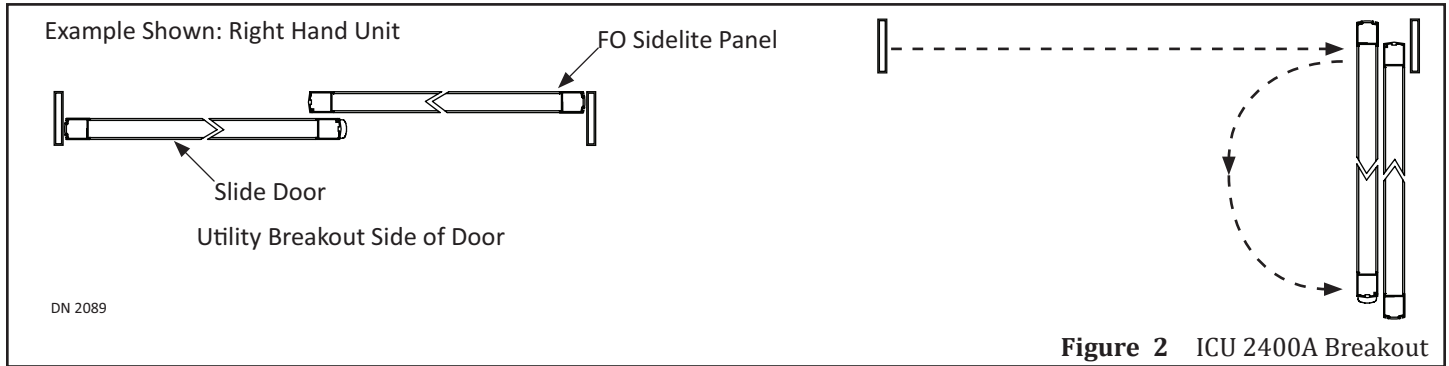
### Section 7.4: Breakout

**CAUTION**

- During Breakout, keep fingers clear of pinch points between the Slide doors.
- Damage can be caused if the Slide Door is not fully open before breakout.

1. Fully Open the Slide Door.
  - a. Breakout cannot occur unless the Slide Door is fully open.
2. From the side of the Slide Door, Breakout both doors.
  - a. In Break Out mode, the door must not activate.

3. Fully Close both Doors.
4. Call your supplier if detailed information is needed.



### CHAPTER 8: 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.

Description		
Caution Stand Clear	Affixed on an adjacent Sidelite or Wall, (36 to 60) inches from the floor.	
Automatic Sliding Door	Two Sided. Affixed on the Lead Door so the signage is visible from both sides of the door. Same is true for Telescopic Slide Door Units. Do Not affix the Decal on the Trail door.	
Activate Switch to Operate	▶ (2) Activate Switch signs, shall be adhered to both sides of door, with the words "Automatic Caution Door and Activate Switch to Operate" to be clearly visible.	
AAADM Safety Information Label	Affixed to Door Frame in a visible, protected location.	