1500A Series Automatic Revolving Door

Owner's Operation & Inspection Manual

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If you have any questions or comments regarding this manual, please contact your authorized area service representative or C J Rush at the number below.

1-888-301-5407

To Our Customers

Thank you for choosing a C J Rush Series 1500A automatic revolving door. With proper maintenance and service, these high-quality doors will give you many years of trouble-free service.

The purpose of this manual is to familiarize you with your automatic door system. It is essential that you know your door and that you recognize the importance of maintaining your door system in compliance with all applicable local and national building codes including ANSI A156.27–2019. Your local C J Rush service representative will be familiar these codes and recommendations for automatic revolving doors. Maintenance and adjustments performed by an authorized service representative/technician will ensure safe and proper operation of the automatic door unit.

What You Should Know

Your local C J Rush representative should provide you with the following for each door after installation:

- Safe operation door Instructions
- Location of power cut-off switch
- Warnings not listed in these instructions
- Walk-through example of “Daily Safety Check”
- This Owner’s Manual with the following items filled in:

C J Rush Technical Support	**1-888-301-5407**
Date equipment shipped from C J Rush Rush plant	
Date equipment placed in service	
Equipment type (door series)	
Activation/Accessories	

If additional product information is required, please contact one of our C J Rush representatives at the toll free number indicated on the previous page. Product demonstration can also be arranged at your convenience.

Regular Maintenance

It is required that an authorized C J Rush representative be called on a minimum of a yearly basis to lubricate and test the support arms, bearing, motor and brake assemblies, and check proper of the safety and motion sensor detectors on the door. This service should **only be performed by an authorized C J Rush technical representative.**

Recommended Daily Inspection

The C J Rush Rush Series 1500A automatic revolving door is designed to require a minimal amount of maintenance. It is, however, recommended that the door is inspected on a daily basis to ensure performance and safety.

Please perform the safety check before the beginning of each day:

General Appearance

Inspect weather-stripping for repairs or replacements. Make sure weather-stripping does not "hang-off" door wing. This could create tripping or slipping hazard.

1) Check for general cleanliness in and around door. Remove debris that may have accumulated under door wings or around enclosure.

2) Maintain traffic path so that approach is straight on and not from angle or sideways. Remove items that could impede flow or vision of pedestrian traffic through revolver.

3) Check all push bars (if provided) for looseness (tighten fasteners as required).

4) Inspect all glass surfaces for chips or cracks (replace as required by an authorized C J Rush service company).

Activation

1) Activate motion sensors by stepping into the sensor zone. The door should begin to rotate at the pre-programmed speed.
2) Step out of sensor zone. After 3 revolutions, the door should slow and stop at the parked-position.
3) Verify detection area is at least as wide as entry by walking parallel to entry about 2 1/2 feet (762mm) from door face.
4) Repeat steps 1 through 3 on opposite side of door.
5) Press the Handicap Button. Reduced speed should be approximately ½ normal door speed RPM. Repeat on opposite side of door.
6) Press the Emergency Button; door should stop its rotation. Press (release) the emergency button again. The door should resume its rotation. Repeat on opposite side of door.
7) Test corner posts and heel guard safety sensors by applying light pressure to the safety edges. Operator activation should stop for unintentional bumping with luggage, etc. (less than 1/4 of a second will not stop door).

8) Check collapsing mechanism by applying pressure to each wing to ensure it does not break out unintentionally. (**Note:** The collapsing mechanism should be checked occasionally, not daily.)

Note: If the door fails to perform as described in ANY of the above tests, please contact your authorized area service representative or C J Rush Service Department at **1-888-301-5407.**

General Safety

Adjacent Power Operated Swing Doors - These are recommended for safety and code reasons in situations where a pedestrian is significantly physically impaired and no assistance is readily available; or, when pedestrian is wary of revolving door.

CAUTION

- Failure to follow instructions can result in improperly adjusted door and can, consequently, cause injury and damage to equipment and property.
- Should the door fail to operate as prescribed in the "Daily Safety Check" of this Owner's Manual or if a potentially hazardous situation is suspected, the door should be taken out of service until an inspection by a C J Rush factory trained technician is made and the problem corrected.

Do not attempt to repair or adjust the door yourself.

DAILY SAFETY CHECKLIST

Test the door for proper functioning by performing the daily safety checklist

LOCATION: _____

DATE									
Emergency Stop Button	Int								
	Ext								
Handicap Button	Int								
	Ext								
Entry Point Sensor	Int								
	Ext								
End Wall (Corner Post) Sensors	Int								
	Ext								
Overhead Wing Safety Sensors	Door Wings	1							
		2							
		3							
		4							
Bottom Rail (Heel Guard) Sensors	Door Wings	1							
		2							
		3							
		4							
Leading Edge (Vertical Stile) Safety Sensors	Door Wings	1							
		2							
		3							
		4							
Signature / Initials									

Product Description

The C J Rush Series 1500A is an automatic revolving door with a full frame and narrow stile construction and hair line joints. It is available in 3- or 4-wing configuration. . With the door wing, breakaway release mechanism concealed below the floor and within the canopy ceiling, the stile to rail connection is crisp and clean. It has full perimeter weather seals for energy efficiency and is equipped with a PLC controller with on-board diagnostics for easy, rapid service.

Features

- Narrow line flush glazing door and enclosure sections
- Concealed collapsing mechanism and speed controller
- Concealed fasteners snap-on glass stops throughout
- Book fold wing position factory set for emergency egress
- Conforms to all North American building codes
- Conforms to ASTM E283 for air tightness
- Standard and custom models available
- Easy-to-remove door wings to provide fast and efficient service.
- Curved laminated or tempered glass in enclosure
- Tempered glass in door wings

Safety

- Motion sensor activation
- Entrance point ceiling mount safety sensors
- Corner post safety touch sensors
- Heel guard sensors
- Safety sensor on leading stile of each door wing
- Top rail light curtain sensor
- PLC programmable controller
- Emergency stop button
- Slow speed handicap button
- Self-diagnostic monitoring of all sensors.
- Phone App for use by service Technicians to troubleshoot and diagnose operation problems.

Options

- Canopy lighting (LED)
- Maintenance and Service contracts available (some limitations apply)
- Rushclad – adhesive applied wrap-around design cladding for high-quality, long lasting finish

Overhead Electric Model

A complete Automatic door package includes:

- Motor and brake assembly.
- PLC programmable Control Box with switching indicators

Operating Instructions

Door speeds are factory set to comply with ANSI 156.27 standards. A key switch located on the corner posts on the secure side of the revolving door. The key switch has 3 functions.

Automatic

This will set the door in motion for a predetermined number of revolutions when a signal is received from the sensors or a slight push from the door wings. The door will stop when it has reached the “Home” or parked position.

Off

Door will not rotate and sensors are turned off.

Continuous

Door rotates continuously at normal, preset, and speed. All safety sensors are active.

Emergency Egress Position

The door wings are mounted on pivot bearings and are held in position by spring force. In case of emergency, the wings can be collapsed to the “book folded” position towards the outside to allow unimpeded flow for emergency egress. The system halts when the door wings are broken away.

Code Conformity

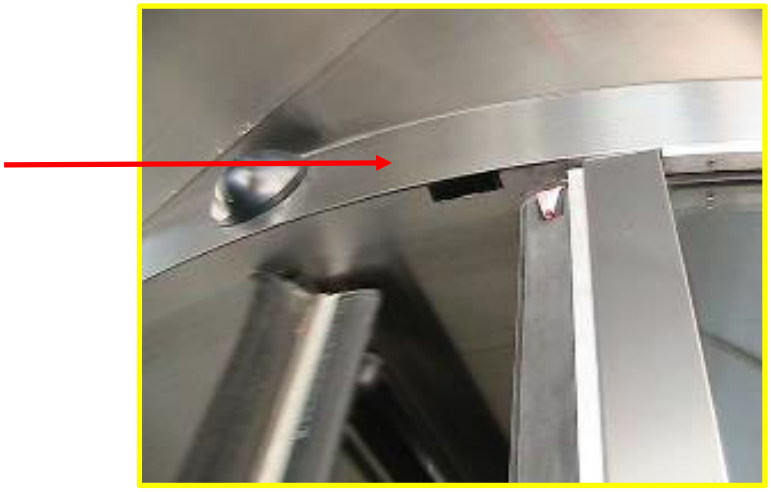
American National Standard for power and manual operated revolving pedestrian doors ANSI/BHMA A156.27-2019. Air tightness performance testing ASTM E283-84

Safety Features

Emergency Stop Button –
The revolving door can be stopped at any time by pressing the Emergency Button located on the corner posts. By pulling out (releasing) the emergency stop button, the door will start to rotate again and work in normal mode.

Push To Slow (Handicap) Button
Unsure or handicapped persons, for whom the walking speed appears too fast, can operate the handicap button. The door then revolves for a separate preset time at a reduced speed of ½ the normal door run speed and then returns to normal operating speed.

Entry Point Sensors –
The safety sensors are mounted in the ceiling by the entry and exit. They are activated when the revolving door wings are approximately 6" (15cm) from the corner post. If the beam is broken by a late entering pedestrian, the rotation will stop immediately.



Bottom Rail (Heel) Guard Sensors –

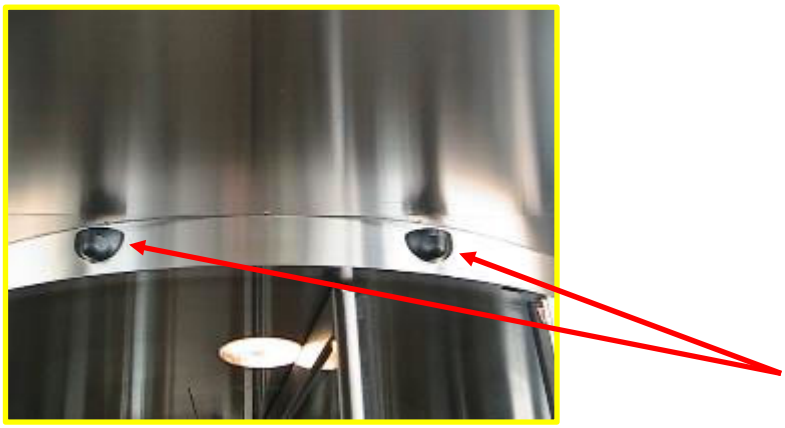
A safety sensor is mounted on the trailing door leaf approximately 2" (5cm) above the floor. If one of these sensors responds due to a slow moving person, the system is immediately switched to "stop function". When clear, the door rotation will revert to normal speed.

Overhead Wing Safety Sensors

The safety sensor strips are mounted on the top door rail (leading edge) of all door wings. The sensor module is set at a 5° angle and scans a safety zone in front of the revolving door wing. If a person is 'caught' in this safety zone, e.g. when walking slowly, the revolving door changes back from walking speed to the idling speed or a "stop function" is initiated. This can be specified when ordering.

Overhead Motion Sensors

Motion Sensors shall detect a 28" (710mm) minimum high person or equivalent at a rate of 6" (150mm) per second toward the center of the throat opening within the detection area as described. Electronic presence sensors shall detect a stationary 28" (710mm) minimum high person or equivalent within the detection area described. Activating detection areas shall have a minimum width equal to the width of the throat opening. The length shall be 43" (1092mm) minimum measured at the center of the throat opening. One or two motion sensors can be used depending on door size and traffic pattern.



End Wall (Corner Post) Sensors

Apply light pressure to all safety edges (rubber bumpers). Operator activation should stop for unintentional bumping with luggage, etc. (less than 1/4 of a second will not stop door).

Leading Edge (Vertical Stile) Safety Sensors

Compression safety edge sensors, on each wing, when depressed will stop the wings from rotating. When the obstruction is removed, the door will rotate again.

Installing Door Safety Decal Set

Door decals are a requirement for ANSI/BMHA 156.27 - 2019 Standard.

Automatic revolving doors shall be marked with signage visible from both sides of each wing. Make sure the revolving door stickers are aligned consistently on each door wing.

1. Thoroughly clean glass surface of the revolving door wings.
2. Locate center line of decal 50” +/- 12” from finished floor.
3. Peel back a small section of the decal backing.
4. Hold decal up to door in the desired location, making sure the decal is straight. Install the ‘Automatic door’ sticker closest to the outside edge of the revolving door wing, allowing approx. 8” clearance to the interior of the vertical stile of the wing. Install the ‘IN’ sticker towards the inside of the revolving door wing, allowing approx. 4” between the stickers.
5. Apply sticky surface of decal to the door wing glass.
6. Smooth decal to door with wooden ruler or any flat rigid tool, being careful not to use a sharp object that could cut the decal.
7. Slowly remove remainder of decal backing at the same time using straight edge tool as a squeegee. This will force out the air bubbles.

Cleaning & Care Instructions

Cleaning Instructions

1) Glass – Clean with water and a cotton cloth or use Windex*** or other like-product with a detergent and alcohol-based cleaner.

2) Aluminum or Stainless Steel – Clean with a mixture of equal parts Windex***or other like-product and Simple Green*** All Purpose Cleaner and a cotton cloth.

3) DO NOT USE any product with alkaline or other sodium-based product as it could deteriorate the finish.

4) During winter months, avoid using excessive ice-melting chemicals; also clean frequently to remove accumulated salt and slush.

Care and Maintenance of Stainless Steel in Architectural Applications

Architectural applications for stainless generally specify the use of T304 stainless steels. This grade is an austenitic stainless steel.

It is specified in the following common architectural finishes:

Imperial Finish	-	a matte gray textured finish similar to a shot blasted pattern
Ezeform Finish	-	a rolled pattern finish available in both a bright and dull lustre
#8 Mirror	-	a highly polished reflective finish (mirror type finish)
#4 Satin	-	a general purpose finish produced by abrasive belt polishing of cold rolled sheet
XL Blend S	-	a finish similar to #4 but finer in texture, handling marks, scratches, and minor surface damage are readily masked by localized re-grinding on this finish

All stainless architectural materials are supplied in the passivated or corrosion resistant condition. They do require periodic cleaning just as other materials do when in service. Exterior components for example are subjected to road salt spray at ground level and deposits from polluted urban air at higher levels, Finger marks, deposits from tobacco smoke, and other stains can detract from the original, attractive appearance of interior stainless applications.

One of the outstanding features of stainless steels is the ease with which its fine appearance can be maintained. There are some important considerations that should be understood by those charged with the responsibility to care and maintain these architectural products.

General Precautions:

1) Wash all stainless areas regularly with warm water and mild soap or detergent using a clean cloth or soft brushes.

2) The frequency of regular maintenance cleaning will depend on the degree of contamination and the aesthetic needs of the individual user, in the case of exterior panels, once a year is the minimum recommended practice. Interior areas may need frequent attention at ground level due to finger marks etc. with higher levels receiving yearly or twice yearly attention.

3) Do not allow dirt to accumulate. Remove any stubborn grime using recommended cleansers and methods, do not use ordinary steel wool or other metal scrapers to remove stubborn dirt as these will contaminate the stainless and mar the architectural finishes. Do not use harsh, abrasive untested cleaners in stubborn areas.

4) Do not allow the cleaning agent to come in contact with cement on all glass door wings as this will cause cement to deteriorate

5) As tapes, resins and finishes react differently to certain cleaning agents, it is recommended to test the cleaning agent on a low visibility area to check for surface discolouration before proceeding. It is advisable to work on reasonably small sections at a time, e.g. 4’ x 4’.

6) Always clean in the direction of original polish or grit lines.

7) Always rinse after cleaning and blow dry or wipe dry.

Routine Cleaning:

1) Rinse with water to remove as much soil as possible.

2) For normal stains, air born dirt, etc., apply a soap or liquid detergent product or 5% ammonia solution in water (preferably warm) to the panels.

3) Rinse well with water.

4) Remove excess water ensuring that all strokes are in the same direction (following the polish lines) preferably top to bottom and overlapping and let dry. The use of a “squeegee” is helpful in facilitating this drying process.

SPV Adhesive Tape Residue:

Surface protective materials when peeled off the stainless can leave minor amounts of tape residue on the surface which can facilitate the adherence of airborne dirt particles. Proper removal is desirable to maintain good overall appearance.

1) Rinse with water to remove superficial dirt.

2) Apply a stainless cleaner and polisher or organic solvents (e.g. methyl hydrate or rubbing alcohol) or paint or lacquer thinners with a rag, sponge or fiber brush with a soft nylon or natural bristle using long, light strokes.

3) Rinse well with water.

4) If necessary, repeat the above steps until all tape residue is removed.

5) Remove excess water ensuring that all strokes are in the same direction (following the polish lines) preferably top to bottom and overlapping and let dry. The use of a "squeegee" is helpful in facilitating this drying process.

Oil or Grease Marks:

1) Rinse with water to remove as much deposits as possible.

2) Where grime contains significant amounts of oil or grease, apply an organic solvent such as acetone, ether, alcohol, toluol, xylol, benzol, benzine, naptha or a 5 to 15% caustic soda solution (hot or cold) with a sponge or rag.

3) Rinse well with water.

4) Remove excess water ensuring that all strokes are in the same direction (following the polish lines) preferably top to bottom and overlapping and let dry. The use of a "squeegee" is helpful in facilitating this drying process.

Rust Discoloration:

1) Rinse with water to remove superficial dirt.

2) To remove rust spots from carbon steel contamination or high temperature discoloration marks, apply a nitric acid solution (one part of nitric acid to nine parts of warm water) and let it stand for 30 to 60 minutes before rinsing. Wear rubber gloves and always follow manufacturer's dilution instructions. It is recommended that the minimum concentration and resident time to accomplish the job be employed.

3) Rinse well with water.

4) Remove excess water ensuring that all strokes are in the same direction (following the polish lines) preferably top to bottom and overlapping and let dry. The use of a "squeegee" is helpful in facilitating this drying process.

Finger Marks:

1) Rinse with water to remove superficial dirt.

2) To remove finger marks and smears, and suppress their appearance in heavy traffic areas, apply a soap or liquid detergent product or organic solvent (e.g. acetone, alcohol, methylated spirits) to the panels.

3) Rinse well with water. Remove excess water ensuring that all strokes are in the same direction (following the polish lines) preferably top to bottom and overlapping and let dry. The use of a "squeegee" is helpful in facilitating this drying process.

Special Precautions on Polished Finishes:

1) **#8 Mirror** - because of the highly reflective nature of this finish, it is necessary to take extra precautions to minimize scratching and marring of this finish. In some cases it may be necessary to remove the contaminant and re-buff the surface to restore to the original lustre.

2) **#4 Satin and XL Blend S** - because these finishes have a grit line pattern always rub following the polish lines using sufficient pressure to remove adherent dirt particles and stains. For stubborn cases, abrasive cleaners may be used. Household cleaning powders such as Ajax, Comet, Dutch Cleanser*** may be applied using a damp cloth following the polishing lines.

   Note: Experimentation in a low visibility area to check for surface discoloration is advised, in some cases, it may be necessary to remove the contaminant and re-polish the surface to restore to the original appearance. This re-polishing is easily done with Scotchbrite*** pads or grinders in the case of XL Blend S.

*** Proprietary cleansers listed are not an endorsement of a specific product and is only intended to serve as examples of the type of cleaning agents that are commercially available. All products should be tested prior to usage and always follow the manufacturer's instructions and directions of use.

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