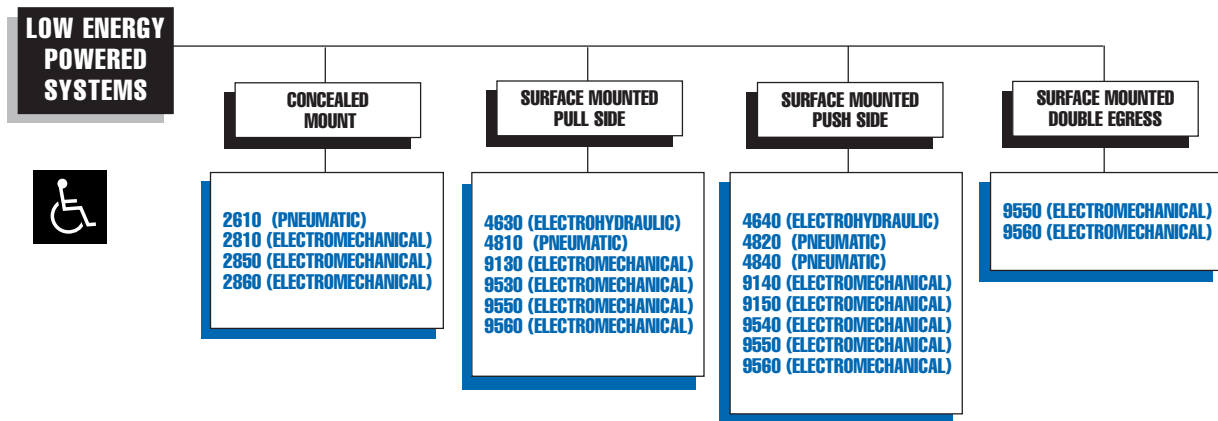


AUTOMATIC OPERATORS

PRODUCT SELECTION GUIDE

LCN automatic operators are the proven standard in schools and health care facilities for over 20 years. They are easily retrofitted into existing doors and frames, as well as new construction. LCN low energy electrohydraulic and pneumatic automatic operators feature a heavy duty closer with a slow opening function. LCN's electromechanical automatic operators utilizes a motor gearbox and control box to perform the opening and closing function.



AUTOMATIC OPERATORS

PRODUCT COMPARISON - ELECTROHYDRAULIC/PNEUMATIC PRODUCT COMPARISON

This chart shows a basic features comparison of the LCN electrohydraulic and pneumatic power operator systems designed to provide easy access without sacrificing closing power. Refer to the specific closer chapter for complete details.

CLOSER SERIES	MOUNTING				FINISH		COVER		CYLINDER			*ARM FUNCTION						
	TOP JAMB (PULL SIDE)	TOP JAMB (PUSH SIDE)	PARALLEL ARM	CONCEALED	POWDER COAT	PLATED	PLASTIC	METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY*	POWER OPERATOR	HOLD-OPEN	STANDARD (SINGLE)	REGULAR (DOUBLE)	EXTRA DUTY ARM	CUSH-IN-STOP	SPRING CUSH
2610	○	○	○	●	●	●	○	●	○	○	♿	●	○	90°	○	○	○	○
4630	●	○	○	○	●	●	○	●	●	●	♿	●	●	90°	○	○	○	○
4630CS	●	○	○	○	●	●	○	●	●	●	♿	●	●	90°	○	○	○	○
4640	○	●	○	○	●	●	○	●	●	●	♿	●	●	○	90°	○	○	○
4640CS	○	●	○	○	●	●	○	●	●	●	♿	●	●	○	90°	○	○	○
4810	●	○	○	○	●	●	○	●	●	●	♿	○	○	90°	○	○	○	○
4820	○	●	○	○	●	●	○	●	●	●	♿	○	○	○	90°	○	○	○
4840	○	○	●	○	●	●	○	●	●	●	♿	○	○	○	○	90°	90°	90°

● AVAILABLE
 ○ NOT AVAILABLE

♿ Meets ADA requirements (power mode).
 * See individual series for maximum manual opening.
 ** Switch provided for continuous Hold Open (4630 & 4640 only).

PRODUCT COMPARISON - ELECTROMECHANICAL PRODUCT COMPARISON

This chart shows a basic features comparison of the LCN electromechanical power operator systems designed to provide easy access without sacrificing closing power. Refer to the specific operator chapter for complete details.

OPERATOR SERIES	MOUNTING						HANDING		FINISH		COVER		ARM FUNCTION	
	SURFACE MOUNT SINGLE DOOR	SURFACE MOUNT SIMULTANEOUS PAIR	SURFACE MOUNT INDEPENDENT PAIR	CONCEALED SINGLE DOOR	CONCEALED SIMULTANEOUS PAIR	CONCEALED INDEPENDENT PAIR	HANDED	NON-HANDED	STANDARD ANODIZED	METAL	STANDARD (SINGLE)	REGULAR (DOUBLE)	DOUBLE EGRESS (PUSH/PULL)	OFFSET PIVOT ARM
2810	○	○	○	●	○	○	●	○	○	○	○	○	●	●
2850	○	○	○	○	○	○	○	○	○	○	○	○	○	○
2860	○	○	○	○	○	○	○	○	○	○	○	○	○	○
9130	●	○	○	○	○	○	○	○	○	○	○	○	○	○
9140	●	○	○	○	○	○	○	○	○	○	○	○	○	○
9150	○	●	○	○	○	○	○	○	○	○	○	○	○	○
9530	●	○	○	○	○	○	○	○	○	○	○	○	○	○
9540	●	○	○	○	○	○	○	○	○	○	○	○	○	○
9550	○	○	○	○	○	○	○	○	○	○	○	○	○	○
9560	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● AVAILABLE
 ○ NOT AVAILABLE

AUTOMATIC OPERATORS

WHAT IS THE ADA?

The ADA is a civil rights law, not a building code. This act is designed to provide protection for people with disabilities. The law is divided into four major titles that prohibit discrimination against the disabled in Employment, Title I, Public Services and Transportation Title II, Public Accommodations Title III, and Telecommunications Title IV. Title III concerns doors and door controls.

WHAT IS THE INTENT OF ADA, TITLE III?

Essentially, owners of certain types of buildings must remove barriers and provide people with disabilities with access equal to, or similar to, that available to the general public. The deadline for compliance was January 26, 1992.

The final rules implementing Title III were published in the Federal Register of July 26, 1991. To obtain a copy or ask questions, contact the U.S. DEPARTMENT OF JUSTICE. Technical information can be obtained from The U.S. ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD.

HOW DOES ADA AFFECT DOORS?

The ADA defines an "accessible" opening which means, among other things, providing a door with a minimum 32" (813 mm) clear opening, easily manipulated handles, a maximum opening force, a minimum closing time, and capable of opening to at least 90°.

ADA criteria, based on OPENING FORCE, are similar to American National Standards Institute (ANSI) Standard A117.1. This is different from ANSI Standard A156.4, which is based on CLOSING FORCE.

WHAT ARE THE OPENING FORCE LIMITS?

DOOR TYPE	OPENING FORCE
Fire Rated	Note 1
Interior Non-Fire-Rated	5.0 lbs. (22.2 N)
Exterior Non-Fire-Rated	"Reserved"

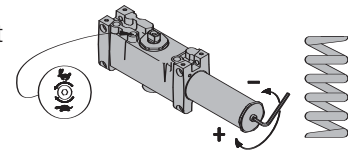
Note 1: All fire rated doors should have the minimum opening force allowable by the appropriate administrative authority, typically the local Fire Marshal. Closing and latching a fire door takes precedence over ADA opening force limits.

HOW IS THE DOOR MEASURED?

Two ADA criteria affect the door closer selection, adjustments, opening force, and time to close. Since the law does not clearly define the method of measurement, this is LCN's recommendation.

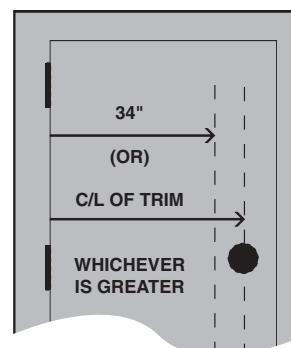
1. On the push side of the door, locate a point at the center line of the push plate/lock trim or 34" (864 mm), from the hinge edge of the door, whichever is greater.
2. Mark the floor at a point where the push side of the doors' latch stile is at 70°. Mark a second point where the push side is 3" (76 mm) from the latch.
3. Open the door so the latch is clear of the strike and the door is slightly off the stop.
4. Using a force gauge on the mark determined in Step #1, push the door open to the 70° mark established in Step #2. Observe the force readings. (Accuracy of the readings varies with the gauge quality.)
5. Adjust the closer spring power to meet the maximum opening force.
6. Hold the door at the 70° mark. Release the door and time the closing sweep between the two marks.
7. Adjust the closer main speed regulation valve to obtain a minimum 3 second "time to close".

NOTE: Delayed action closers are not necessary to meet the ADA 3 second "time to close" requirement but do offer additional time for people to pass through the door.



CAUTION! Any manual door closer, including those certified by BHMA to conform to ANSI Standard 156.4, that is selected, installed, and adjusted based on ADA

requirements may not provide sufficient power to reliably close and latch a door. Auto Equalizer systems offer an alternate solution.



AUTOMATIC OPERATORS

WHAT ARE THE CHOICES FOR ADA COMPLIANT DOOR CONTROLS?

LCN offers both surface and concealed mountings for powered systems or manual closers.

POWERED SYSTEMS

LCN Power Operator Systems offer easy access for the disabled and resolve the problem of obtaining reduced opening force while providing adequate closing force.

MANUAL CLOSERS

Manual closers rely on reduced spring power to meet opening force requirements. Four principle factors affect the performance of manual closers:

1. DOOR WIDTH:

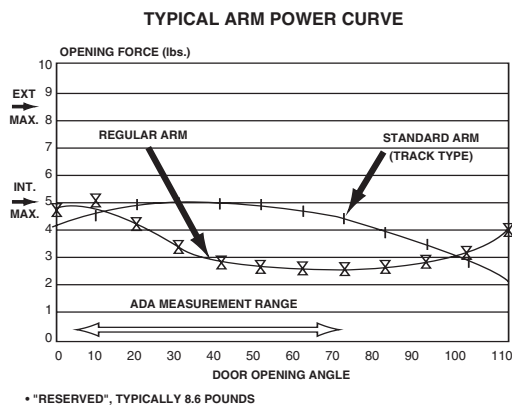
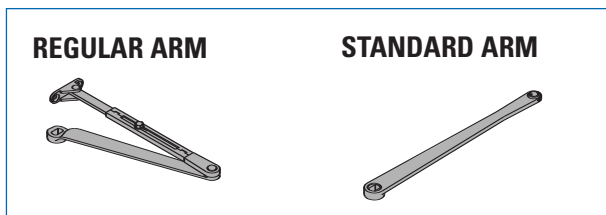
A wider door provides more leverage for the user, thus reducing the opening force required.

2. SPRING POWER:

Adjusting spring power to achieve a lower opening force also reduces the closing force available.

3. ARM SELECTION:

The superior mechanical advantage of a regular arm system offers the user significantly lower average opening forces through the 70° measurement range compared to a standard arm (track type) closer. Regular arms also provide superior latching power.



4. ADDITIONAL FORCES

Improperly hung doors, stiff latches, HVAC or environmental pressures, and other forces acting on the door require increasing the closer spring power to reliably close and latch a door which produces a corresponding increase in opening force.

INFORMATION SOURCES

LCN CLOSERS
121 W. RAILROAD AVE.
P.O. BOX 100
PRINCETON, IL, USA 61356-0100

PHONE 800-526-2400
FAX 800-248-1460
www.lcn.ingersollrand.com

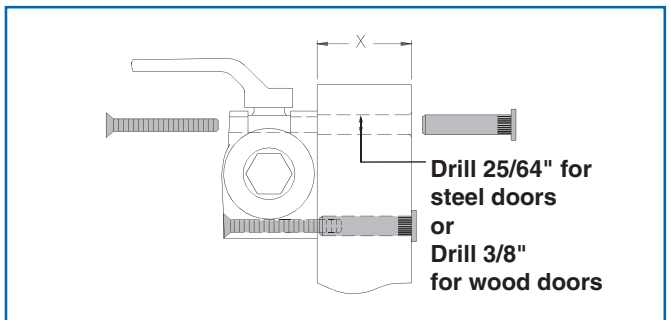
U.S. DEPARTMENT OF JUSTICE
The Office of the Americans with Disabilities Act, Civil Rights Div.,
P.O. Box 66118, Washington, D.C. 20035-6118
(202) 514-0301

THE U.S. ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD
1111 18th Street N.W., Suite 501, Washington, D.C. 20036
(800) 872-2253

AMERICAN NATIONAL STANDARDS INSTITUTE
11 West 42nd Street, New York, N.Y. 10036
(212) 642-4900
- ANSI A117.1 Providing Accessibility and Usability for Physically Handicapped People
- ANSI A156.4 for Door Controls - Closers
- ANSI A156.19 Power Assist and Low Energy Power Operated Doors

ELECTROHYDRAULIC & PNEUMATIC FASTENERS

Standard WOOD and MACHINE SCREW (WMS) pack contains phillips head wood and machine screws to install the closer. Through Bolts (TB) and/or TORX® machine screws are available for all closers, except the 2610 series. LCN through bolts can be installed on 1 3/4" thick doors with either the 1/4-20 machine screws or optional TORX security screws supplied with the closer. Optional sizes are available for 1 5/8" or 1 3/8" door thicknesses, but must be specified when ordering.



Note 1: Phillips head, metric machine screws are available, please specify.

ELECTROMECHANICAL FASTENERS

Typically installed 1/4 - 20 machine screw for aluminum/steel frames. Wood screws included for wood door mounting. Consult factory for additional information.

AUTOMATIC OPERATORS

LOW ENERGY OPERATORS

The basic design concept for all LCN power operator systems is door control of both the opening and closing motion of the door. Our designs allow the system to be easily retrofitted into existing doors and frames as well as new construction.

A basic LCN electrohydraulic/pneumatic system consists of a power operator based on a heavy duty LCN 4040 Series door closer and peripheral actuators.

Our electromechanical automatic operators utilize a motor gearbox and a control box to perform the opening and closing function.

LCN offers a choice of either electrohydraulic, electromechanical or pneumatic low energy automatic operators.

APPLICATIONS

- ▶ Electrohydraulic and pneumatic systems are used primarily for manual opening with available push button automatic opening.
- ▶ Electromechanical systems are used primarily for automatic openings.
- ▶ For dedicated handicap access.
- ▶ Stand alone or integrated into larger multi-door systems.
- ▶ Surface and concealed mountings.
- ▶ Installation accessories available for unusual conditions.
- ▶ **Caution! For exterior doors exceeding 3'0" wide by 7'0" tall, interior doors exceeding 4'0" wide by 8'0" tall, or any door exceeding 225 pounds, consult factory before specifying or installing LCN electrohydraulic or pneumatic automatic operators.**
- ▶ **Caution! For exterior doors exceeding 4'0" wide by 7'0" tall, interior doors exceeding 4'0" wide by 8'0" tall, or any door exceeding 350 pounds, consult factory before specifying or installing LCN Electromechanical automatic operators.**

A156.19 SYSTEM DESIGN PARAMETERS

- ▶ Cycle test standard of 300,000 full load operating cycles.
- ▶ Power opening plus full door control.
- ▶ Open to backcheck no faster than 3 seconds.
- ▶ Opening time to fully open is no faster than 4 seconds.
- ▶ Remain fully open for at least 5 seconds.
- ▶ Closing time from 90° to 10° is no faster than 3 seconds.
- ▶ Less than 15 lbf to stop doors motion.
- ▶ Kinetic energy must not exceed 1.25 lbf-ft.
- ▶ In event of failure, less than 15 lbf to release latch, less than 30 lbf to put door in motion, less than 15 lbf to fully open door system.

COMMON SYSTEM FEATURES

- ▶ Power opening plus full door control.
- ▶ No guide rails or safety devices required due to low energy design.
- ▶ Adjustable opening force.
- ▶ Adjustable closing power.
- ▶ Operators meet ADA reduced manual opening force requirements, this includes 4630 and 4810.
- ▶ Electrohydraulic and pneumatic systems feature adjustable backcheck that slows opening swing at about 70°.
- ▶ Electromechanical systems feature electronic backcheck that slows opening swing at about 70°.
- ▶ Systems allow for separate adjustment of general closing and latch speed.
- ▶ Electrohydraulic and pneumatic systems are available in three standard or a wide selection of optional custom powder coat finishes to blend with door and frame.
- ▶ Electromechanical systems are available in two standard anodized finishes or optional custom anodized and custom paint finishes to blend with door and frame.
- ▶ UL & NEC compliant.
- ▶ Compatible with most security and safety systems.
- ▶ Capable of full integration with high security keypads and card readers.
- ▶ Wiring allows for sequential operation for vestibule applications. Electromechanical systems require additional components.
- ▶ Modular design simplifies installation and maintenance.

WARRANTY

- ▶ 2 year limited warranty. See General Section for complete details.

MAINTENANCE

- ▶ Operators mounted according to the LCN installation instructions require no periodic maintenance or adjustments.
- ▶ Monthly, quarterly and annual visual inspections are recommended.

LCN PNEUMATICALLY POWERED SYSTEMS

PNEUMATICALLY (AIR) POWERED SYSTEMS

LCN Pneumatic Auto Equalizer systems use the power of pressurized air to do the work of automatically opening the door. These systems have exceeded 3 Million full load automatic operating cycles; that's 10 times the industry standard! A basic pneumatic system consists of an automatic operator to provide the door control, a control box that contains the valves and electrical timing circuits, actuators to start the system, and a compressed air source.

UNIQUE FEATURES

► Multi-Door & Single-Door Solutions

The pneumatic automatic operators are ideal for multi-door applications because the cost per door leaf decreases significantly as the number of door leaves increase. A single control box may power up to two pairs of doors simultaneously making it a cost-effective solution for single or multi-door applications. This flexibility results in significant savings in material and installation costs.

► Quiet Operation

Since the pneumatic automatic operators are powered by pressurized air, they are quiet, efficient, and very reliable. Flexible LCN pneumatic tubing is the only connection between the control box and the door frame. There is no need for high-voltage wiring at the door frame since all of the power for operation is generated by pressurized air located away from the door frame. (Note: special fittings are available by special template so 3/16" metal tubing (by others) can be used in fire rated plenums.)

► Pneumatically (Air) Powered

All pneumatic automatic operators require a compressed air source. LCN's pneumatic systems have the flexibility to run as an independent unit (7980 series has a compressor built into the control box) or to run off an existing air supply (7900 series has connections for utilizing existing air supply). Using a self-contained 7980 series control box for single or double door leaf applications eliminates the need for an independent compressor. Existing building air compressors with a storage tank can be used to reduce the cost of multi-door systems and must utilize the 7900 series control boxes.

► Easy Adjustment/Installation

The air pressure and timing cycle are easily adjustable to meet the need of a specific installation. Because the control box can be located anywhere within 100 linear tubing feet from the controlled door for the 7900 series or within 50 linear tubing feet for the 7980 series, they can be placed in easily accessible locations. Convenient features such as sequential operation of vestibule doors are available.

► Multiple Mounting Configurations

Available in three different mounting configurations:

- Concealed in the frame (2610 series).
- Top Jamb Surface Mounted on the pull side of the door (4810 series).
- Top Jamb Surface Mounted on the push side of the door (4820 series).
- Door mounted, parallel arm on the push side of the door (4840 series).

► Hazardous Location Use

Since there is no high-voltage wiring at the door frame, pneumatically powered systems are ideal for use in hazardous areas. The control box, which contain the valves and electrical timing circuits, is remotely located outside the hazardous area.

► Blow-Open (Smoke Evacuations Systems)

An auxiliary "blow-open" box is available and is controlled by the building smoke evacuation system to allow fresh air into the building. When activated, the normal pneumatic power operator functions are not available. The 7949 series "blow-open" box works with or without the 7900 series control boxes.

STANDARDS, LISTINGS & APPROVALS

- UL listed for self-closing doors without hold open under "SWINGING DOOR CLOSERS (GVEV)" file R1943.
- Tested and certified under ANSI Standard A156.19. Refer to Section 2.1 and consult factory for details.
- ANSI Standard A117.1, Section 4.13.13
- ADA law, Section 4.13.12.
- UBC 7.2 (1997) for positive pressure plus UL 10B and UL 10C listing.
- Consult the factory for other listings such as; Department of Labor and Industry of the Commonwealth of Pennsylvania, The Board of Standards and Appeals of the City of New York, Fire and Panic Safety Standards of the California State Fire Marshal.
- UL Listed for Fire Rated Door Operators with Automatic Closers, File No. (GUJY).

WARRANTY

- 2 year limited warranty. See General Section for complete details.

MAINTENANCE

- Operators mounted according to the LCN installation instructions require no periodic maintenance or adjustments.
- Monthly, quarterly and annual visual inspections are recommended.
- Service filter assembly in 7900 Series control boxes as required.
- No service contracts.

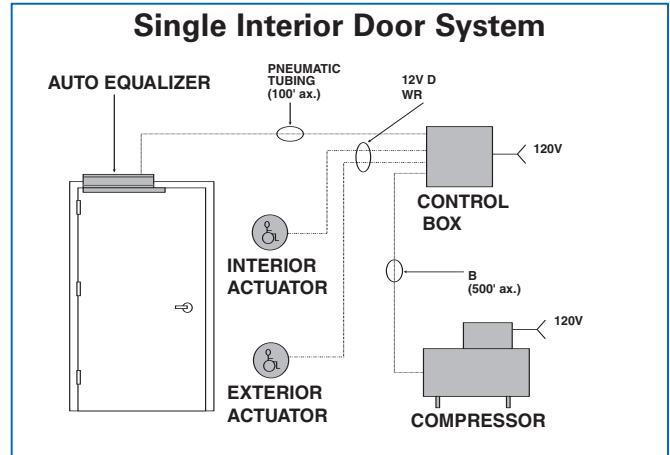
TYPICAL LCN PNEUMATIC POWERED SYSTEMS

These pages illustrate examples of typical Pneumatic LCN systems. Please consult your local SSC representative or LCN for assistance with specific installations and material requirements.

SINGLE INTERIOR DOOR SYSTEM

- ▶ Slow opening interior door leaf.
- ▶ System may be expanded to include an additional simultaneous door.
- ▶ No guide rails or safety devices.

How It Works: A person requiring assistance triggers the system using either actuator. The control box supplies pressurized air to the Auto Equalizer which opens the door slowly to 90°, holds it for up to 30 seconds, then applies full spring power to reliably close and latch the door. If not actuated, the Auto Equalizer functions as a full featured door closer.



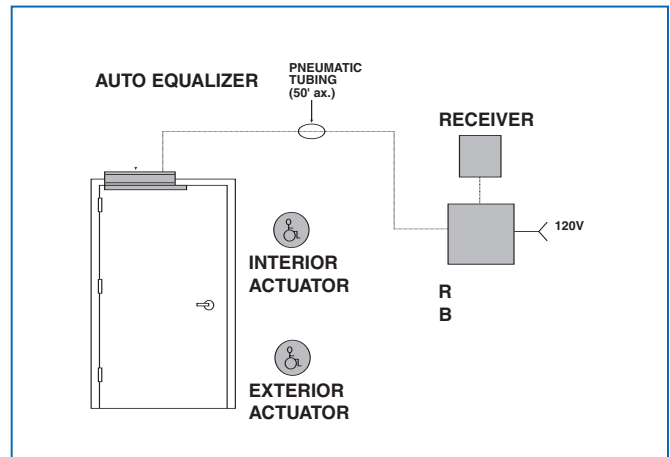
BILL OF MATERIALS

Qty.	Part No.	Description
1	4811	Auto Equalizer
1	8310-856	Actuator (exterior)
1	8310-856	Actuator (interior)
1	7901	Control Box
1	920	Compressor
(as needed)	925	Tubing

SINGLE INTERIOR DOOR SYSTEM

- ▶ Slow opening automatic door on door leaf.
- ▶ Wireless RF actuators.
- ▶ Stand alone system, no planned expansion.
- ▶ No guide rails or safety devices.

How It Works: A person requiring assistance triggers the system using either actuator. The RF transmitter in the actuator sends a signal to the RF receiver which triggers the control box. The control box supplies pressurized air to the Auto Equalizer which slowly swings door to 90°, holds it for up to 30 seconds, then applies full spring power to reliably close and latch the door. If not actuated, the Auto Equalizer functions as a full featured door closer.



BILL OF MATERIALS

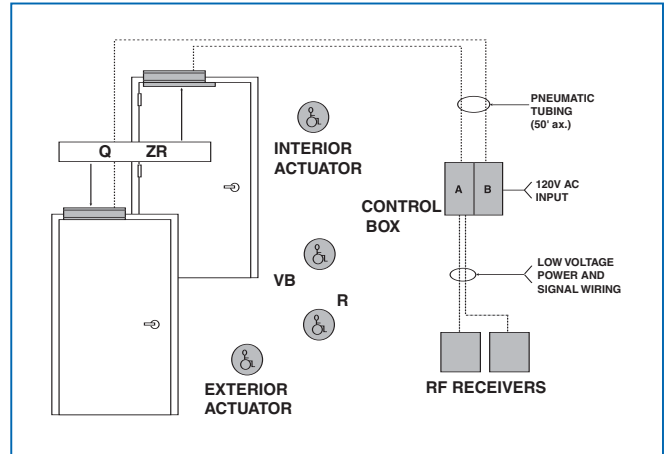
Qty.	Part No.	Description
1	4811	Auto Equalizer
2	8310-3856WS	RF Actuator
1	8310-865	RF Receiver
1	7981	Control Box
(as needed)	925	Tubing

TYPICAL LCN PNEUMATIC POWERED SYSTEMS

VESTIBULE DOOR SYSTEM

- ▶ Slow opening automatic doors with sequential operation for single exterior and vestibule doors.
- ▶ No guide rails or safety devices.

How It Works: People requiring assistance press exterior actuator for entry. The exterior door opens and after a short delay the interior door opens. When the system times out, first the exterior, then the interior door closes. Pressing the interior actuator reverses the process to exit the building. This allows passage through the vestibule without both doors open for the entire cycle. If a person stops in the vestibule and the system times out before they exit, pressing either vestibule actuator opens the appropriate door. Sequential operation is not recommended with scanners or motion sensors. If not actuated, the Auto Equalizer functions as a full featured door closer.



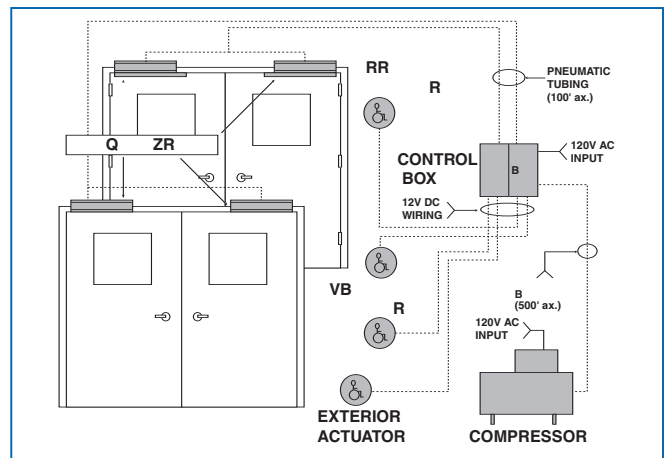
BILL OF MATERIALS

Qty.	Part No.	Description
1	4822	Auto Equalizer (exterior)
1	4811	Auto Equalizer (interior)
1	7982S	Control Box with Sequencer Card
4	8310-3856WS	RF Actuators
2	8310-865	RF Receiver
(as needed)	925	Tubing

ALTERNATE VESTIBULE DOOR SYSTEM

- ▶ Slow opening automatic doors with sequential operation for exterior and vestibule pairs of doors.
- ▶ No guide rails or safety devices.

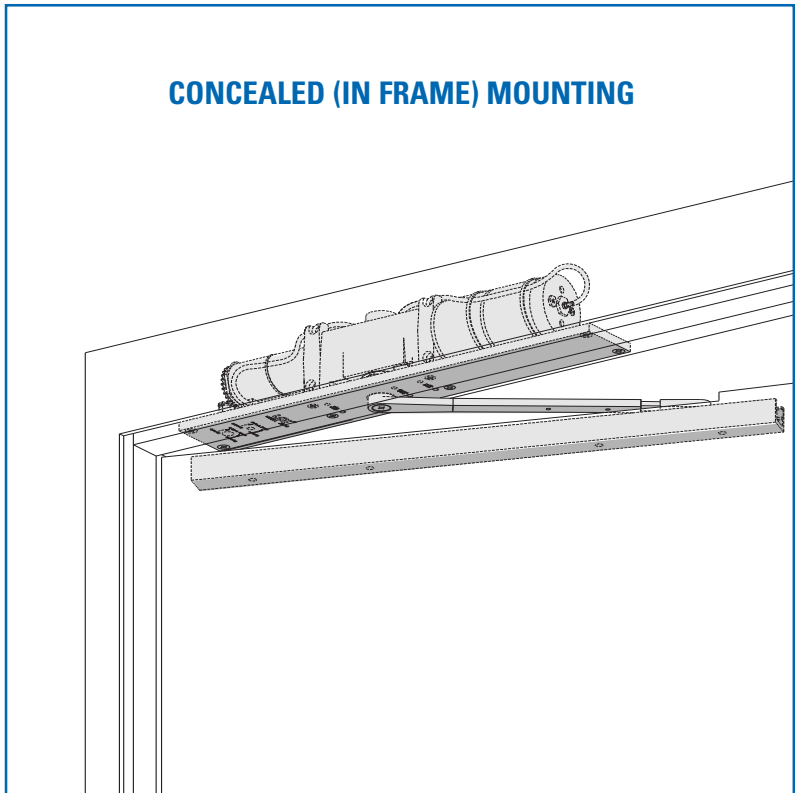
How It Works: People requiring assistance press exterior actuator for entry. The exterior pair opens and after a short sequential delay the interior pair opens. As the system times out, first the exterior, then the interior doors close. Pressing the interior actuator reverses the process to exit the building. This allows passage through the vestibule without all doors open for the entire cycle. If a person stops in the vestibule and the system times out before they exit, pressing either vestibule actuator opens the appropriate doors. Compressor is sized for multiple systems. Sequential operation is not recommended with scanners or motion sensors. If not actuated, the Auto Equalizer functions as a full feature door closer.



BILL OF MATERIALS

Qty.	Part No.	Description
2	4822	Auto Equalizer (exterior)
2	4811	Auto Equalizer (interior)
1	7902S	Control Box with Sequencer Card
1	922	Compressor
4	8310-856	Actuator
(as needed)	925	Tubing

LCN 2610 SERIES



CONCEALED (IN FRAME) MOUNTING

The 2610 AUTO EQUALIZER™ is LCN's pneumatically powered MULTI-DOOR solution. This low-energy power operator provides easy access for people with disabilities, the elderly, or the frail. Designed primarily for manual opening applications that occasionally require automatic opening.

- ▶ **Multi-Door Solution**
- ▶ **Utilizes a 10,000,000 Cycle Heavy Duty Door Closer**
- ▶ **Quiet, Efficient & Reliable**
- ▶ **Requires Control Boxes with integral compressor or control box using auxiliary air supply.**
- ▶ **No Guard Rails/Safety Mats Required**

The 2610 Series is UL228 and meets the provisions of ANSI Standard A117.1, A156.19 and the Americans with Disabilities Act.

- ▶ Ideal for multi-door applications since cost per door leaf decrease significantly as the number of door leaves increases.
- ▶ Standard 2610 series closer shipped with single lever (standard) arm, mounting/finish plate, standard track and wood and machine screw pack. See 2610 Series page 11 for options.
- ▶ Meets ADA requirements (power mode).
- ▶ Sized cylinders for interior doors to 4'0" and exterior doors to 3'0".
- ▶ Handed for right or left swinging doors.
- ▶ Requires additional system components. See CONTROL BOX pages 26-28 and ACTUATORS & ACCESSORIES, page 121.
- ▶ Standard or optional custom powder coated finish.
- ▶ Optional plated finish on arm, fasteners, and mounting/finish plate.

MOUNTING				FINISH		COVER		CYLINDER			*ARM FUNCTION							
TOP JAMB (PULL SIDE)	TOP JAMB (PUSH SIDE)	PARALLEL ARM	CONCEALED	POWDER COAT	PLATED	PLASTIC	METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY*	POWER OPERATOR	HOLD-OPEN	90°	STANDARD (SINGLE)	REGULAR (DOUBLE)	EXTRA DUTY ARM	CUSH-N-STOP	SPRING CUSH
○	○	○	●	●	●	○	●	○	○	♿	●	○	○	○	○	○	○	○

● AVAILABLE ♿ * Meets ADA requirements (power mode).
 ○ NOT AVAILABLE * See individual series for maximum manual opening.

LCN 2610 SERIES

MOUNTING DETAILS

CONCEALED MOUNTING

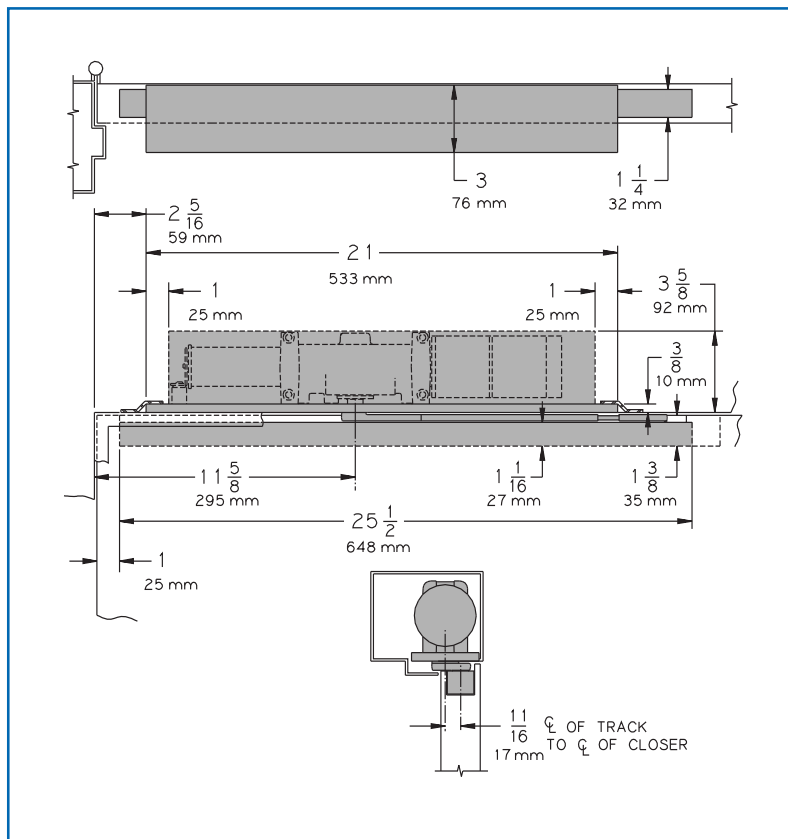
For interior or exterior doors.
Single acting cylinder in head frame.
Concealed arm and track in door top rail.

MAXIMUM OPENING

Butt hinge template allows 90° power opening and 160° manual opening.

Please note that many track style door closers are capable of allowing 180° of door swing. Be aware that the majority of track style closers are at their weakest closing force in the 180 – 130° range. Consult factory for applications where exterior or large/heavy door must swing 180°.

Consult factory for all pivot mounted installations.



- ▶ **Butt Hinges** should not exceed 5" (127 mm) in width.
- ▶ **Auxiliary Stop is recommended.**
- ▶ **Head Frame** minimum 4" (102 mm) x 4" for hollow metal or aluminum tube construction.
- ▶ **Top Rail** 1 3/8" (35 mm) mortise required.
5/16" (8 mm) cutout required at top of the door, push side only.
- ▶ **System Diagram** See "AUTOMATIC OPERATORS" section pages 7-8 for typical system wiring, and page 30 for electrical and pneumatic data for control boxes.

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

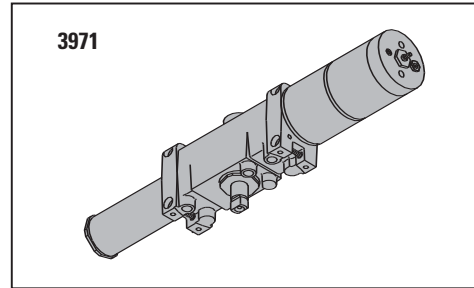
LCN 2610 SERIES

CYLINDERS

CYLINDER ONLY, 2610-3971

Standard, handed, cast iron cylinder.

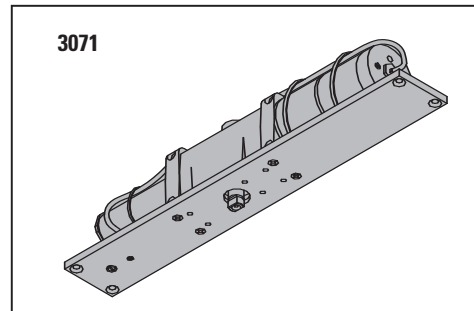
NOTE: For various applications see "Table of Sizes" page 14.



CYLINDER ASSEMBLY, 2610-3071

Standard, handed, cast iron cylinder and mounting plate.

NOTE: For various applications see "Table of Sizes" page 14.

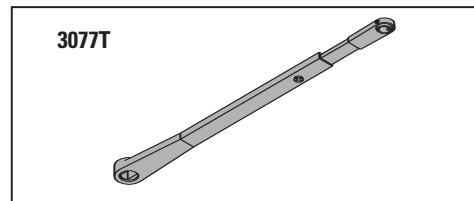


ARMS

STANDARD ARM, 2610-3077T

Handed arm.

Track roller not included with arm.

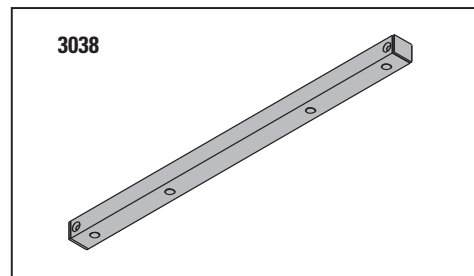


TRACK

STANDARD TRACK, 2610-3038

Standard non-handed track.

Will not accept hold open clip or bumper assembly.

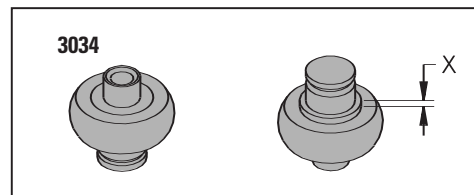


INSTALLATION ACCESSORIES

TRACK ROLLER, 2610-3034

Quiet, low friction roller assembly.

Shoulder dimension "X" = 1/16" (1 mm).



LCN 2610 SERIES

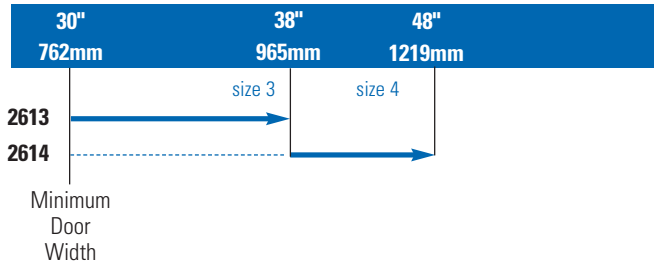
TABLE OF SIZES Select closer based on width of door.
 Sized 2610 series cylinders available in size 3 or 4.
 Closing power of all 2610 Series closers may be increased 15%.

→ Indicates recommended range of door width for closer size.
 NOTE: Minimum door width 30" (762 mm).

EXTERIOR (and VESTIBULE) DOOR WIDTH



INTERIOR DOOR WIDTH



HOW-TO-ORDER 2610 SERIES CLOSERS

1. SELECT CYLINDER SIZE.

- 2613
- 2614

2. SPECIFY HAND.

- RH
- LH

3. SPECIFY FINISH.

- Standard Powder Coat _____
 Aluminum, Dark Bronze, Brass.

Closer will be shipped with:

- STANDARD ARM,
 - TRACK ROLLER,
 - STANDARD TRACK,
 - WOOD and MACHINE SCREW PACK,
- unless options listed below are selected.

CLOSER OPTIONS

FINISH

- Custom Powder Coat (RAL) _____
- Plated Finish, US _____

SCREW PACK

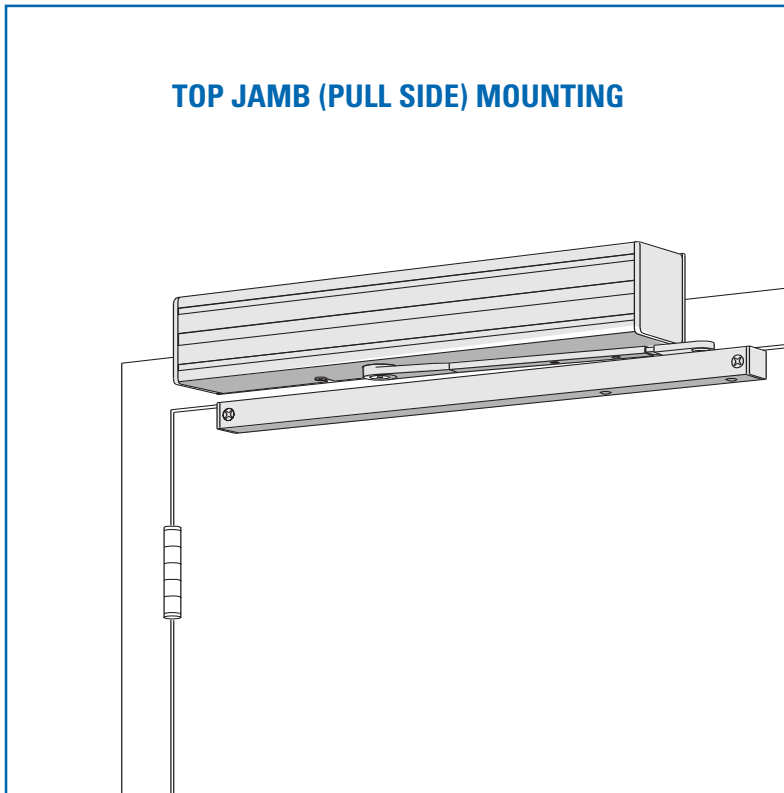
- TB*, Wood & Machine Screw (TBWMS)
- TORX Machine Screw (TORX)
- TB* & TORX Machine Screw (TBTRX)

*Specify door thickness if other than 1 3/4".

SPECIAL TEMPLATE

- ST- _____

LCN 4810 SERIES

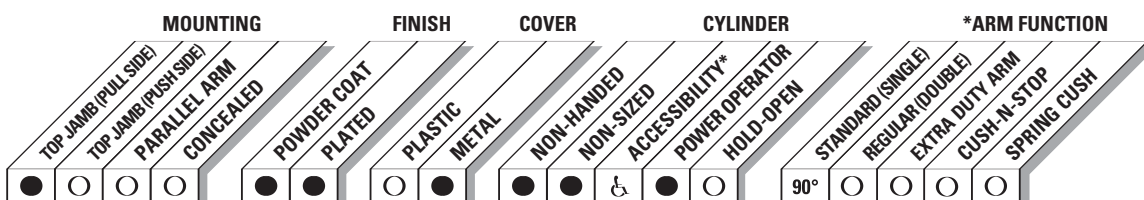


The 4810 AUTO EQUALIZER™ is LCN's pneumatically powered MULTI-DOOR solution. This low-energy automatic operator provides easy access for people with disabilities, the elderly, or the frail. Designed primarily for manual opening applications that occasionally require automatic opening.

- ▶ Ideal for multi-door applications since cost per door leaf decrease significantly as the number of door leaves increases.
- ▶ Standard, plate mounted 4810 series closer shipped with single lever (standard) arm, metal cover, standard track, and wood and machine screw pack. See 4810 Series page 15 for options.
- ▶ Meets ADA requirements (power mode).
- ▶ Non-sized cylinders for interior doors to 4'0" and exterior doors to 3'0".
- ▶ Non-handed.
- ▶ Requires additional system components. See CONTROL BOX pages 26-28 and ACTUATORS & ACCESSORIES, page 121.
- ▶ Standard or optional custom powder coated finish, end caps are black.
- ▶ Optional plated finish on cover, arm, and fasteners.

- ▶ **Multi-Door Solution**
- ▶ **Utilizes a 10,000,000 Cycle Heavy Duty Door Closer**
- ▶ **Quiet, Efficient & Reliable**
- ▶ **Requires Control Boxes with integral compressor or control box using auxiliary air supply.**
- ▶ **No Guard Rails/Safety Mats Required**

The 4810 Series is UL and cUL228 listed and meets the provisions of ANSI Standards A117.1, A156.19, and the Americans with Disabilities Act.



● Available
○ Not available

♿ * Meets ADA requirements (power mode).
See individual series for maximum manual opening.

LCN 4810 SERIES

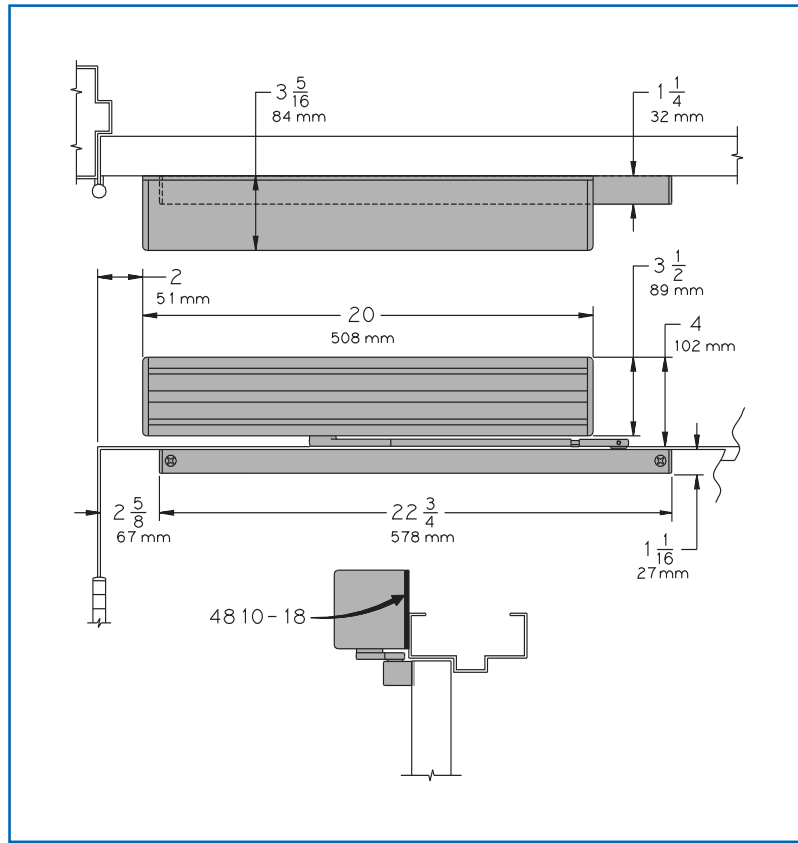
MOUNTING DETAILS

TOP JAMB (PULL SIDE) MOUNTING

MAXIMUM OPENING

Templating allows 90° power opening and 170° manual opening.

Please note that many track style door closers are capable of allowing 180° of door swing. Be aware that the majority of track style closers are at their weakest closing force in the 180 – 130° range. Consult factory for applications where exterior or large/heavy door must swing 180°.



- ▶ **Butt Hinges** should not exceed 5" (127 mm) in width.
- ▶ **Auxiliary Stop is recommended.**
- ▶ **Reveal** should not exceed 1/8" (3 mm).
- ▶ **Head Frame** minimum 2" (51 mm).
- ▶ **Top Rail** minimum 1 1/8" (29 mm).
- ▶ **System Diagram** See "AUTOMATIC OPERATORS" section pages 7-8 for typical system wiring, and page 28 for electrical and pneumatic data for control boxes.

Special Templates

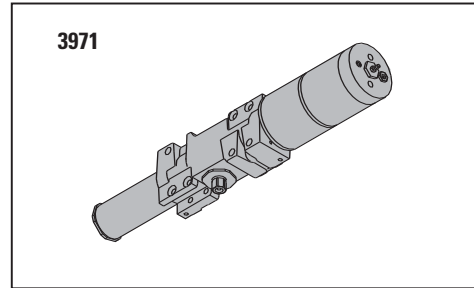
Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

LCN 4810 SERIES

CYLINDERS

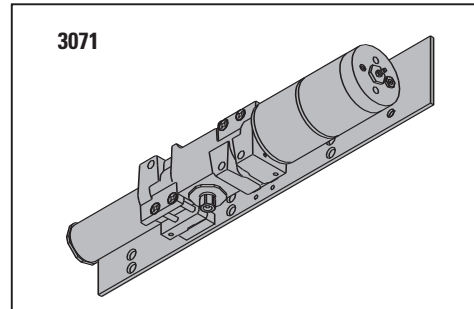
CYLINDER ONLY, 4811-3971

Standard, non-handed, cast iron cylinder.



CYLINDER ASSEMBLY, 4811-3071

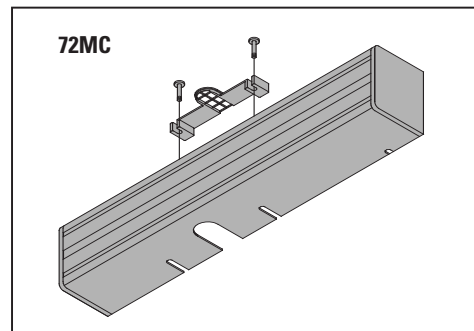
Standard, non-handed, cast iron cylinder and mounting plate.



COVERS

COVER, 4810-72MC

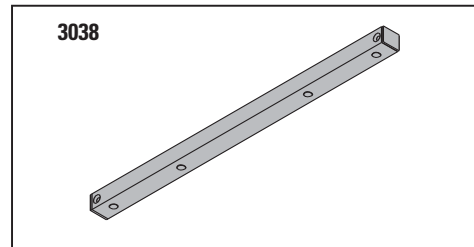
Standard, non-handed metal cover with black end caps.



TRACKS

STANDARD TRACK, 4810-3038

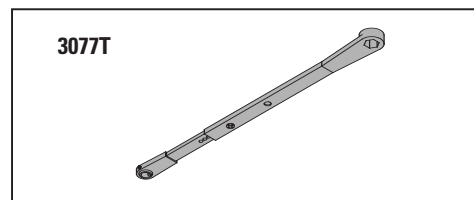
Standard non-handed track.
Will not accept hold open clip or bumper assembly.



ARMS

STANDARD ARM, 4810-3077T

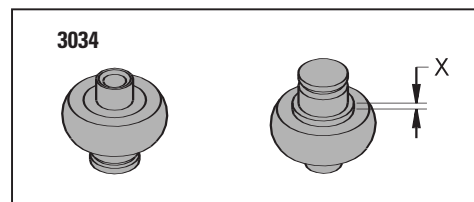
Non-handed arm.
Track roller not included with arm.



INSTALLATION ACCESSORIES

TRACK ROLLER, 4810-3034

Quiet low friction roller assembly.
Shoulder dimension "X" = 1/8" (3mm).



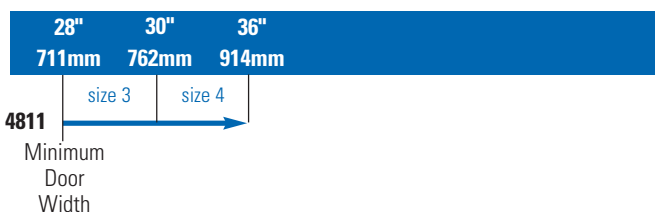
LCN 4810 SERIES

TABLE OF SIZES

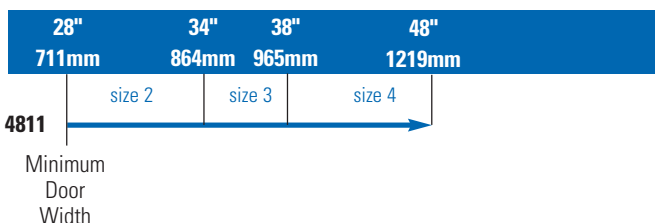
Non-sized 4810 series cylinder is adjustable from size 1 through size 4 and is shipped set to size 3. Closing power of 4810 Series closers may be increased 50%.

→ Indicates recommended range of door width for closer size.
 Note: Minimum door width 28" (711 mm).

EXTERIOR (and VESTIBULE) DOOR WIDTH



INTERIOR DOOR WIDTH



HOW-TO-ORDER 4810 SERIES CLOSERS

1. SPECIFY FINISH.

- Standard Powder Coat _____
 Aluminum, Dark Bronze, Brass.

Closer will be shipped with:

- STANDARD CYLINDER,
- STANDARD METAL COVER,
- STANDARD ARM,
- TRACK ROLLER,
- STANDARD TRACK,
- WOOD and MACHINE SCREW PACK,
unless options listed below are selected.

CLOSER OPTIONS

FINISH

- Custom Powder Coat (RAL) _____
- Plated Finish, US _____

SCREW PACK

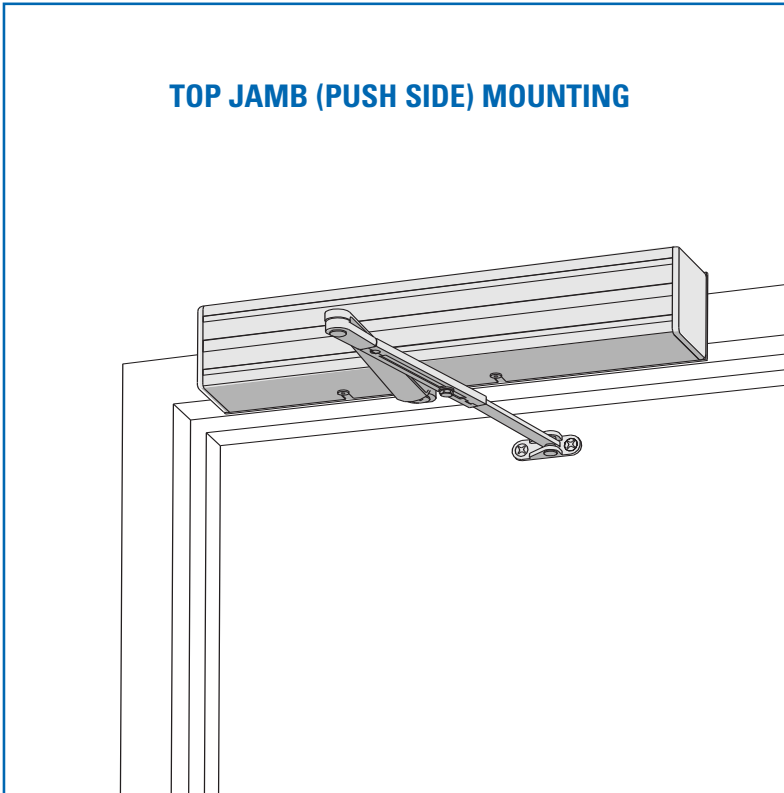
- TB*, Wood & Machine Screw (TBWMS)
 *Specify door thickness if other than 1 3/4".

SPECIAL TEMPLATE

- ST-_____

LCN 4820 SERIES

TOP JAMB (PUSH SIDE) MOUNTING



The 4820 AUTO EQUALIZER™ is LCN's pneumatically powered MULTI-DOOR solution. This low-energy automatic operator provides easy access for people with disabilities, the elderly, or the frail. Designed primarily for manual opening applications that occasionally require automatic opening.

- ▶ Ideal for multi-door applications since cost per door leaf decrease significantly as the number of door leaves increases.
- ▶ Standard, plate mounted 4820 series closer shipped with regular arm, metal cover, and wood and machine screw pack. See 4820 Series page 19 for options.
- ▶ Meets ADA requirements (power mode).
- ▶ Non-sized cylinders for interior doors to 4'6" and exterior doors to 3'6".
- ▶ Non-handed.
- ▶ Requires additional system components. See CONTROL BOX pages 26-28 and ACTUATORS & ACCESSORIES, page 121.
- ▶ Standard or optional custom powder coated finish, end caps are black.
- ▶ Optional plated finish on cover, arm, and fasteners.

- ▶ **Multi-Door Solution**
- ▶ **Utilizes a 10,000,000 Cycle Heavy Duty Door Closer**
- ▶ **Quiet, Efficient & Reliable**
- ▶ **Requires Control Boxes with integral compressor or control box using auxiliary air supply.**
- ▶ **No Guard Rails/Safety Mats Required**

The 4820 Series is UL and cUL228 and meets the provisions of ANSI Standards A117.1, A156.19, and the Americans with Disabilities Act.

MOUNTING				FINISH		COVER		CYLINDER			*ARM FUNCTION						
TOP JAMB (PULL SIDE)	TOP JAMB (PUSH SIDE)	PARALLEL ARM	CONCEALED	POWDER COAT	PLATED	PLASTIC	METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY*	POWER OPERATOR	HOLD-OPEN	STANDARD (SINGLE)	REGULAR (DOUBLE)	EXTRA DUTY	CUSH-N-STOP	SPRING CUSH
○	●	○	○	●	●	○	●	●	○	○	○	○	○	○	○	○	○

- AVAILABLE
- NOT AVAILABLE

♿ * Meets ADA requirements (power mode).
 * See individual series for maximum manual opening.

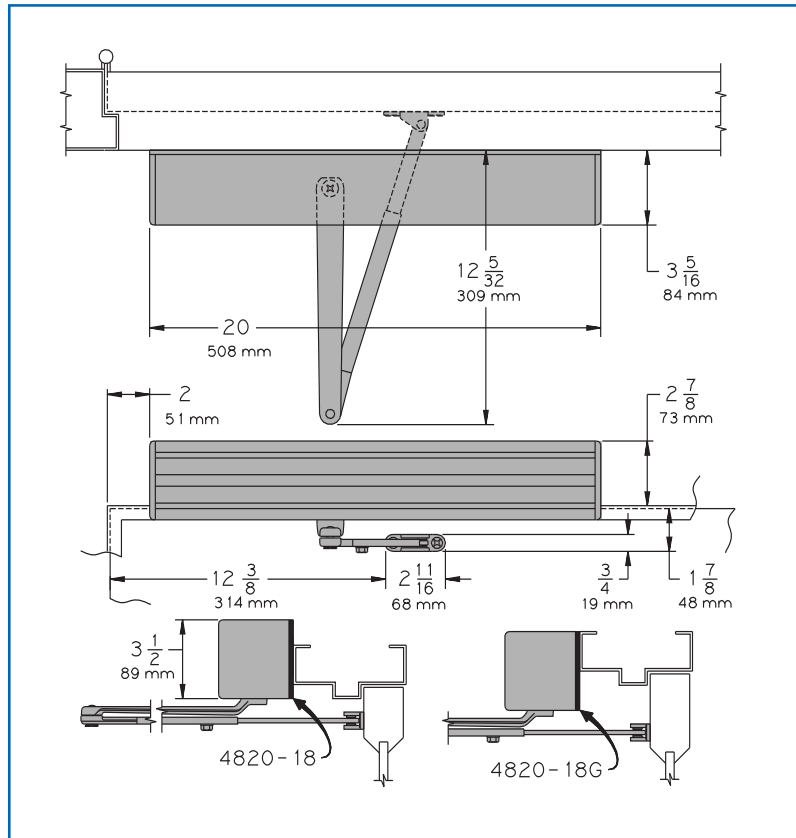
LCN 4820 SERIES

MOUNTING DETAILS

TOP JAMB (PUSH SIDE) MOUNTING

MAXIMUM OPENING

Templating allows 90° power opening and 100° manual opening.



- ▶ **Butt Hinges** should not exceed 5" (127 mm) in width.
- ▶ **Auxiliary Stop is recommended.**
- ▶ **Reveal** of 4 1/2" (114 mm) allows up to 90° power opening and 100° manual opening. 8" (203 mm) allows up to 90° power opening and 100° manual opening with LONG ARM where standard rod and shoe is replaced with optional LONG ROD AND SHOE, 4820-79LR.
- ▶ **Head Frame** minimum 1 3/4" (44 mm).
With flush ceiling use PLATE, 4820-18G substituted for standard plate.
- ▶ **Top Rail** minimum 1 3/4" (44 mm).
Closer on 4820-18G plate requires 3" (76 mm) minimum.
- ▶ **System Diagram** See "AUTOMATIC OPERATORS" section pages 7-8 for typical system wiring, and page 28 for electrical and pneumatic data for control boxes.

Options

- ▶ Long arm.
- ▶ 18G plate.

Special Templates

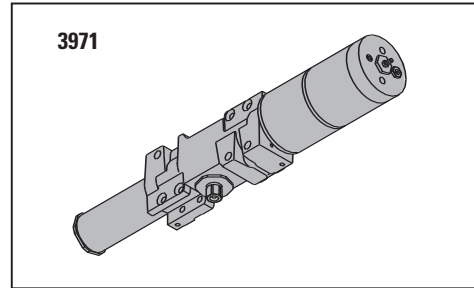
Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

LCN 4820 SERIES

CYLINDERS

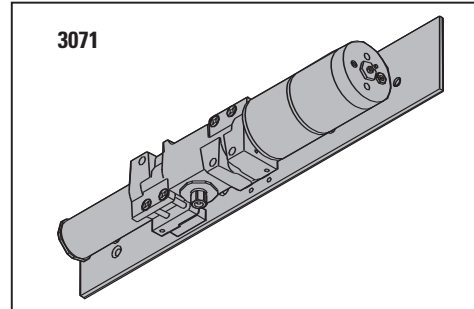
CYLINDER ONLY, 4822-3971

Standard, non-handed, cast iron cylinder.



CYLINDER ASSEMBLY, 4822-3071

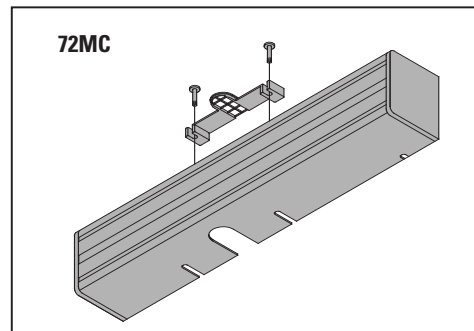
Standard, non-handed, cast iron cylinder. Includes; 4820-18 Mounting Plate or 4820-18G Mounting Plate (must specify).



COVERS

COVER, 4820-72MC

Standard, non-handed metal cover with black end caps.



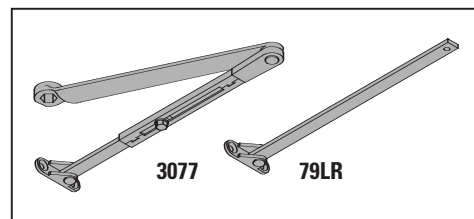
ARMS

REGULAR ARM, 4820-3077

Non-handed arm.

LONG ARM, 4820-3077L

Arm includes LONG ROD AND SHOE, 4820-79LR for deep reveals.

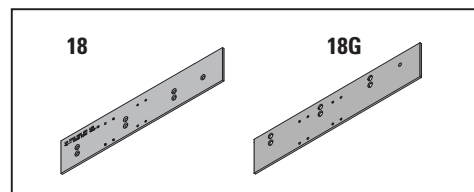


INSTALLATION ACCESSORIES

PLATE, 4820-18

Standard mounting plate.

Plate requires minimum 1 3/4" (44 mm) minimum head frame and 2" (51 mm) top rail.



PLATE, 4820-18G

Replaces standard plate for flush ceiling condition.

Plate requires minimum 1 3/4" (44 mm) minimum head frame and 3" (76 mm) top rail.

LCN 4820 SERIES

TABLE OF SIZES

Non-sized 4820 Series cylinder is adjustable from size 2 through size 5 and is shipped set to size 3. Closing power of 4820 Series closers may be increased 50%.

→ Indicates recommended range of door width for closer size.

EXTERIOR (and VESTIBULE) DOOR WIDTH

	24" 610mm	30" 762mm	36" 914mm	42" 1067mm
4822	size 3	size 4	size 5	
Minimum Door Width	→			

INTERIOR DOOR WIDTH

	24" 610mm	34" 864mm	38" 965mm	48" 1219mm	54" 1372mm
4822	size 2	size 3	size 4	size 5	
Minimum Door Width	→				

HOW-TO-ORDER 4820 SERIES CLOSERS

1. SPECIFY FINISH.

- Standard Powder Coat _____
Aluminum, Dark Bronze, Brass.

Closer will be shipped with:

- STANDARD CYLINDER,
 - STANDARD METAL COVER,
 - REGULAR ARM,
 - WOOD and MACHINE SCREW PACK,
- unless options listed below are selected.*

CLOSER OPTIONS

FINISH

- Custom Powder Coat (RAL) _____
- Plated Finish, US _____

ARM

- Long (LONG)

SCREW PACK

- TB*, Wood & Machine Screw (TBWMS)
*Specify door thickness if other than 1 3/4".

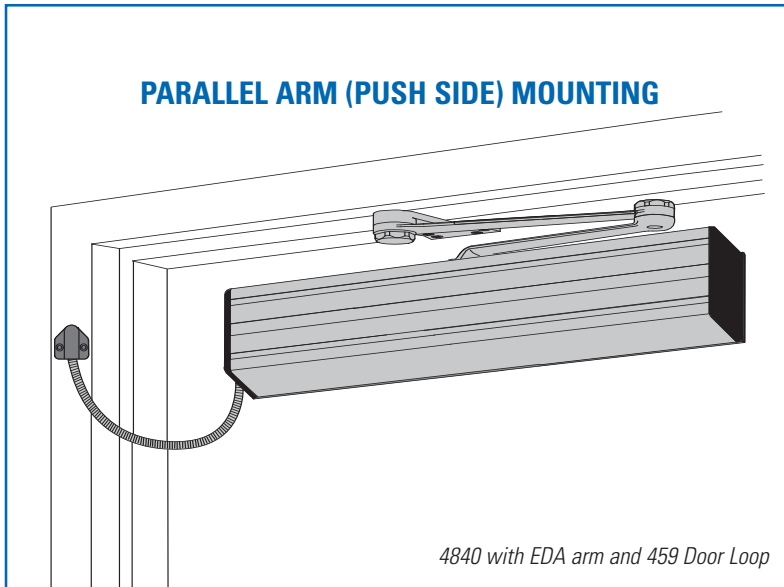
INSTALLATION ACCESSORIES

- Plate, 4820-18
- Plate, 4820-18G

SPECIAL TEMPLATE

- ST-_____

LCN 4840 SERIES



The 4840 AUTO EQUALIZER™ is LCN's pneumatically powered MULTI-DOOR solution. This low-energy automatic operator provides easy access for people with disabilities, the elderly, or the frail. Designed primarily for manual opening applications that occasionally require automatic opening.

- ▶ Ideal for multi-door applications since cost per door leaf decrease significantly as the number of door leaves increases.
- ▶ Standard, plate mounted 4840 series closer shipped with EXTRA DUTY arm, metal cover and a wood and machine screw pack. See 4840 Series page 23-24 for options.
- ▶ Meets ADA requirements (power mode).
- ▶ Installation requires use of either DOOR LOOP-459 or TRANSFER HINGE- 460, see page 24 in this section for details.
- ▶ Non-sized cylinders for interior doors to 4'6" and exterior doors to 3'6".
- ▶ Non-Handed.
- ▶ Requires additional system components. See CONTROL BOX pages 26-28 and ACTUATORS & ACCESSORIES, page 121.
- ▶ Standard or optional custom powder coated finish, end caps are black.
- ▶ Optional plated finish on cover, arm, and fasteners.

- ▶ **Multi-Door Solution**
- ▶ **Utilizes a 10,000,000 Cycle Heavy Duty Door Closer**
- ▶ **Quiet, Efficient & Reliable**
- ▶ **Requires Control Boxes with integral compressor or control box using auxiliary air supply.**
- ▶ **No Guard Rails/Safety Mats Required**

The 4840 Series is UL and cUL listed and meets the provisions of ANSI Standards A117.1,A156.19, and the Americans with Disabilities Act.

MOUNTING				FINISH		COVER		CYLINDER			*ARM FUNCTION						
○ TOP JAMB (PULL SIDE)	○ TOP JAMB (PUSH SIDE)	● PARALLEL ARM	○ CONCEALED	● POWDER COAT	○ PLATED	○ PLASTIC	○ METAL	● NON-HANDED	○ NON-SIZED	○ ACCESSIBILITY*	○ POWER OPERATOR	○ HOLD-OPEN	○ STANDARD (SINGLE)	○ REGULAR (DOUBLE)	○ EXTRA DUTY	○ CUSH-N-STOP	○ SPRING CUSH
													○ 90°	○ 90°	○ 90°		

- AVAILABLE
- NOT AVAILABLE

♿ * Meets ADA requirements (power mode).
 * See individual series for maximum manual opening.

LCN 4840 SERIES

MOUNTING DETAILS

PARALLEL ARM (PUSH SIDE) MOUNTING

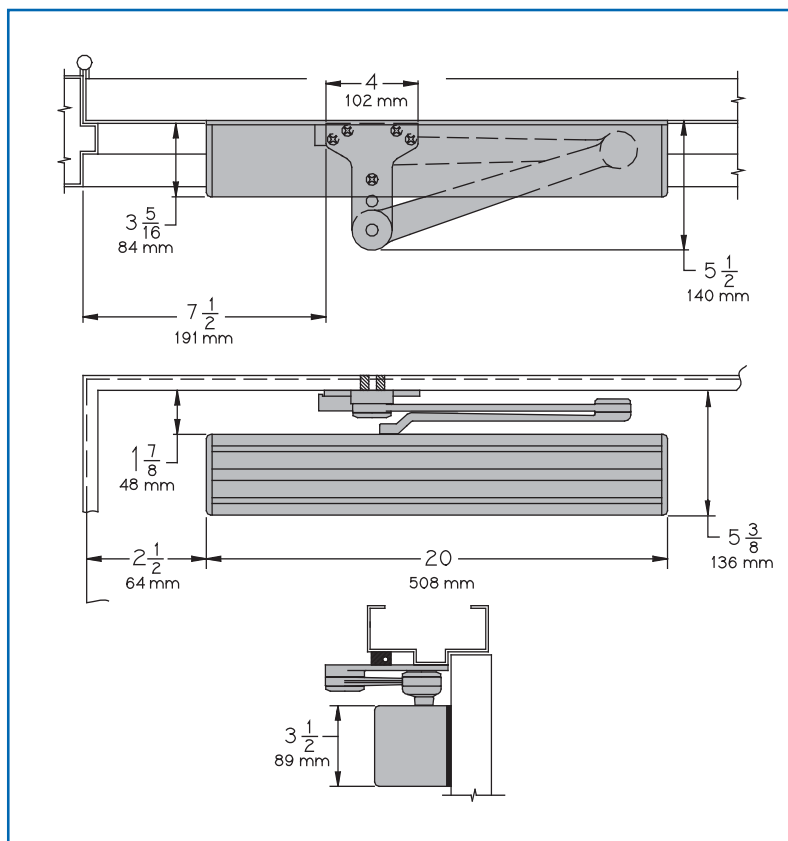
MAXIMUM OPENING

Maximum power opening is 90° with all arms.

Maximum manual opening is 105° with EDA or SPRING CUSH arms.

Maximum manual opening is 100° with CUSH-N-STOP arm.

NOTE: For CUSH-N-STOP or SPRING CUSH arm installations with maximum opening less than listed above, consult factory for Special Template.



Options

- CUSH or SPRING CUSH arms.

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

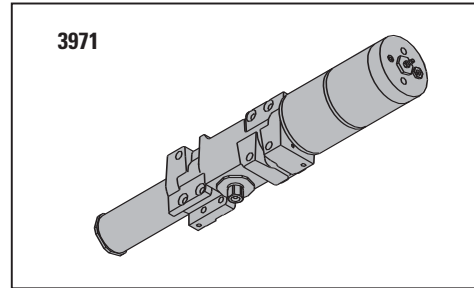
- ▶ **Butt Hinges** should not exceed 5" (127 mm) in width.
- ▶ **Auxiliary Stop** is recommended when CUSH-N-STOP or SPRING CUSH arms are not used.
- ▶ **Clearance** for EDA or CUSH shoes is 5 1/2" (140 mm) from door face.
- ▶ **Top Rail** minimum 4 1/8" (105 mm), 6" minimum top rail for screw not to show in glass
- ▶ **Head Frame** (flush) requires PA FLUSH PANEL ADAPTER, 4840-419.
- ▶ **Stop Width** minimum 1" (25 mm).
- ▶ **Blade Stop** clearance requires 1/2" (13 mm) BLADE STOP SPACER, 4840-61.
- ▶ **System Diagram** See "AUTOMATIC OPERATORS" section pages 7-8 for typical system wiring, and page 28 for electrical and pneumatic data for control boxes.

LCN 4840 SERIES

CYLINDERS

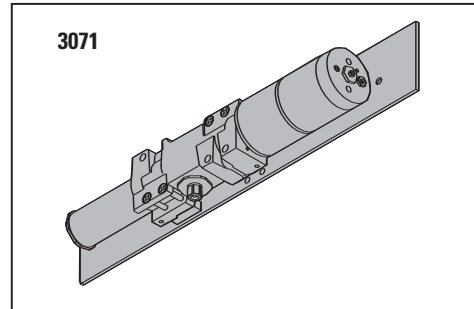
CYLINDER ONLY, 4841-3971

Standard, non-handed, cast iron cylinder.



CYLINDER ASSEMBLY, 4841-3071

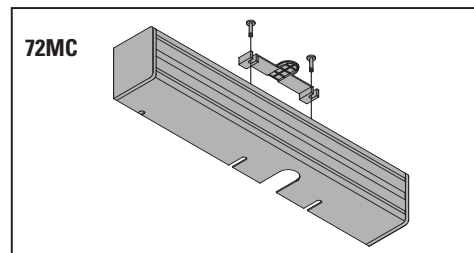
Standard, non-handed, cast iron cylinder and mounting plate.



COVERS

COVER, 4840-72MC

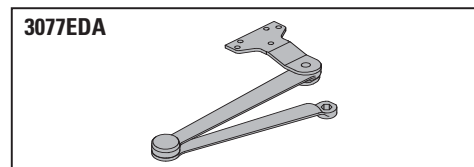
Standard, non-handed metal cover with black end caps.



ARMS

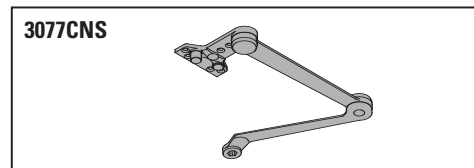
EXTRA DUTY ARM, 4840-3077EDA

Standard, non-handed parallel arm features forged solid steel main arm and forearm for potentially abusive installations.



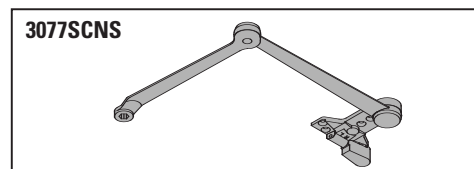
CUSH-N-STOP ARM, 4840-3077CNS

Optional, non-handed parallel arm features forged solid steel main arm and forearm with stop in soffit shoe.



SPRING CUSH ARM, 4840-3077SCNS

Optional, non-handed parallel arm for abusive applications features forged solid steel main arm and forearm with spring loaded stop in soffit shoe.

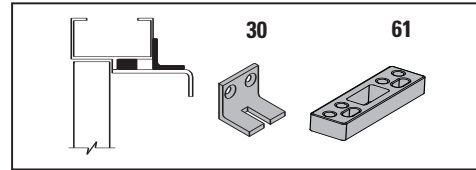


LCN 4840 SERIES

INSTALLATION ACCESSORIES

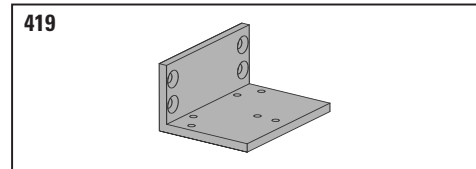
CUSH SHOE SUPPORT, 4840-30

Provides anchorage for fifth screw used with EDA and CUSH arms, where reveal is less than 3 1/16" (78 mm).



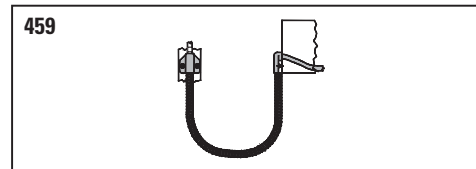
BLADE STOP SPACER, 4840-61

Required to lower parallel arm shoe to clear 1/2" (13 mm) blade stop.



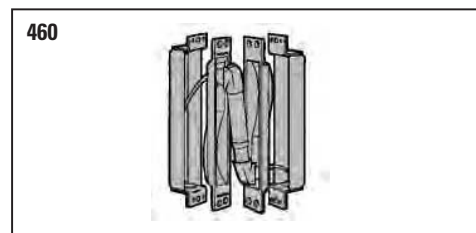
PA FLUSH PANEL ADAPTER, 4840-419

Provides horizontal mounting surface for parallel arm shoe on single rabbetted or flush frame.



DOOR LOOP KIT, 4840-459

Surface mounted, flexible metal loop transfers pressurized air via pneumatic tubing from frame to closer end cap. Extra caps allow tubing to run on frame surface or concealed in the frame.



PNEUMATIC TRANSFER HINGE, 4840-460

Transfers pressurized air via pneumatic tubing from frame to door leaf for fully concealed installations. Preparation of a raceway is required from the hinge stile of the door to the top rail for concealment of the pneumatic tubing within the door leaf.

LCN 4840 SERIES

TABLE OF SIZES

Non-sized 4841 cylinder is adjustable from size 1 through size 5 and is shipped set to size 3. Closing power of 4841 closers may be increased 50%.

→ Indicates recommended range of door width for closer size.
 Note: Minimum door width 24" (610 mm).

EXTERIOR (and VESTIBULE) DOOR WIDTH

24"	30"	36"	42"
610mm	762mm	914mm	1067 mm
	size 3	size 4	size 5

4841 →
 Minimum Door Width

INTERIOR DOOR WIDTH

24"	34"	38"	48"	54"
610mm	864mm	965mm	1219mm	1372mm
		size 3	size 4	size 5

4841 →
 Minimum Door Width

HOW-TO-ORDER 4840 SERIES CLOSERS

1. SPECIFY FINISH.

- Standard Powder Coat _____
 Aluminum, Dark Bronze, Brass.

Closer will be shipped with:

- STANDARD CYLINDER,
- STANDARD METAL COVER,
- EXTRA DUTY ARM,
- WOOD and MACHINE SCREW PACK,
- unless options listed below are selected.

CLOSER OPTIONS

FINISH

- Custom Powder Coat (RAL) _____
- Plated Finish, US _____

ARMS

- CUSH-N-STOP (CUSH)
- SPRING CUSH (SCUSH)

SCREW PACK

- TB*, Wood & Machine Screw (TBWMS)
- *Specify door thickness if other than 1 3/4".

INSTALLATION ACCESSORIES

- Cush Shoe Support, 4840-31
- Blade Stop Spacer, 4840-61
- PA Flush Panel Adapter, 4840-419
- Door Loop Kit, 4840-459
- Pneumatic Transfer Hinge, 4840-460

SPECIAL TEMPLATE

- ST-_____

LCN 7900 SERIES CONTROL BOXES

Control Boxes

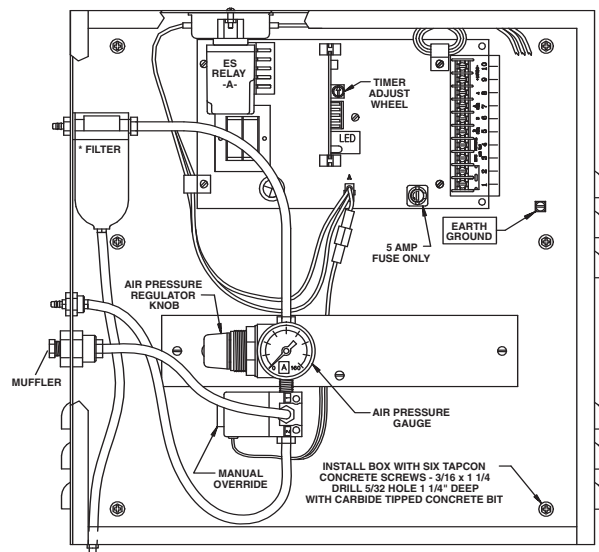
Heavy duty, surface mounted control box contains one or two electrically controlled pneumatic circuits. Air filtration, pneumatic regulation, and system timing is performed by the control box. 7980 series control boxes also contain a built-in air pump to power the system. Each pneumatic circuit can be adjusted for a hold open time up to 30 seconds. Output air pressure can be adjusted to precisely tailor system to individual door requirements.

Pneumatic connections use standard barbed fittings and 925 tubing from the compressor to the control box to the operator. A package of barbed tee and butt connectors are supplied with each control box to simplify installations. Consult LCN for details.

Other than a semi-annual inspection of the air filter assembly and muffler, no periodic system maintenance is required.

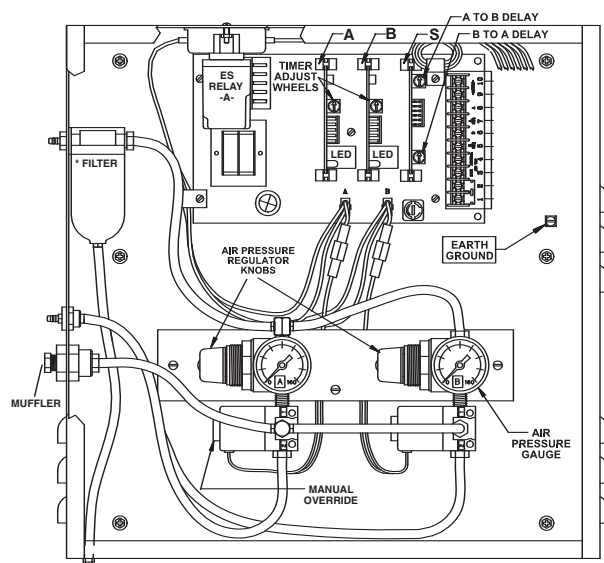
7901 and ES7901 CONTROL BOX

For single door applications or independent control of single door in multiple door systems. Two door leaves can be operated, if they are activated simultaneously. The single pneumatic circuit accepts Normally Open (N.O.) inputs from hardwired or RF (wireless) actuator/receiver combinations. The 7901 control box requires a separate compressor.



7902 and ES7902 CONTROL BOX

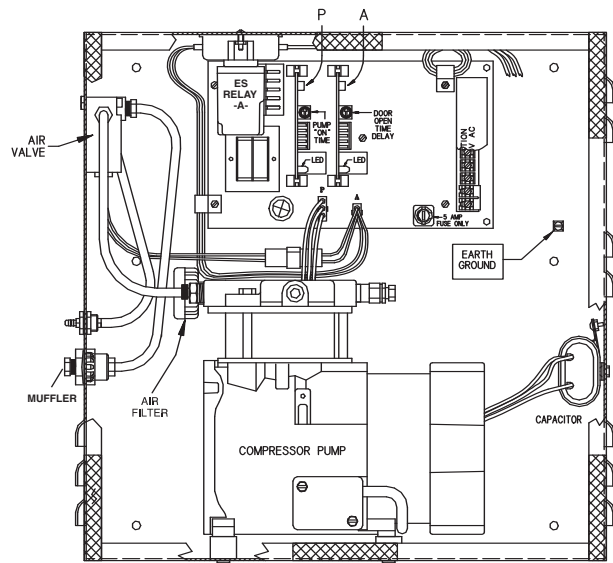
For independent operation of two door or four door leaves, if pairs are actuated simultaneously. Two independent pneumatic circuits accept Normally Open (N.O.) inputs from hardwired or RF (wireless) actuator/receiver combinations. Sequential operation (add suffix "S") is available for 7902. The 7902 control box requires a separate compressor.



LCN 7900 SERIES CONTROL BOXES

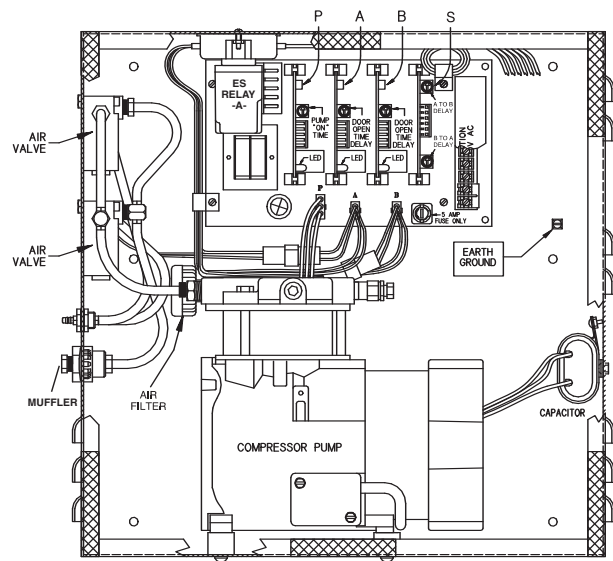
7981 and ES7981 CONTROL BOX

Self-contained control box/compressor combination for single door leaf applications. The single pneumatic circuit accepts Normally Open (N.O.) inputs from hardwired or RF (wireless) actuator/receiver combinations. The 7981 control box does not require a separate compressor.



7982 and ES7982 CONTROL BOX

Self-contained control box/compressor combination for independent or simultaneous operation of two door leaves. Two independent pneumatic circuit accepts Normally Open (N.O.) inputs from hardwired or RF (wireless) actuator/receiver combinations. The 7982 control box does not require a separate compressor. Sequential operation (add suffix "S") is available for 7982 control boxes.



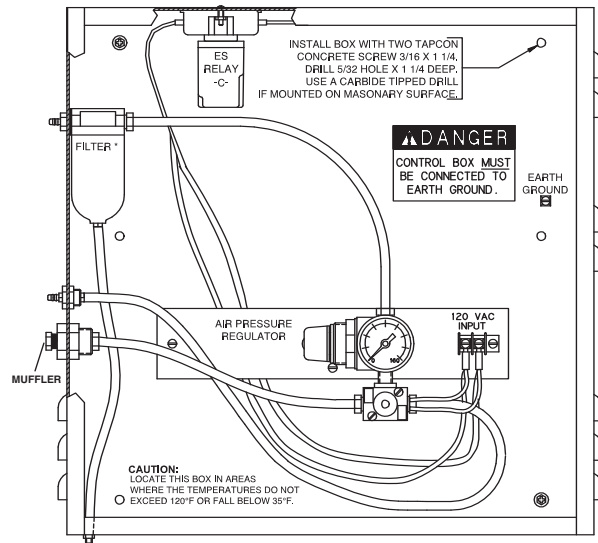
LCN 7900 SERIES CONTROL BOXES

7949 and ES7949 CONTROL BOX

Auxiliary “blow-open” box works with or without 7901 or 7902 and one or two Auto Equalizers. Controlled by smoke evacuation system, the 7949 open the door(s) to allow fresh air into the building. Normal Auto Equalizer functions are not available when “blow-open” box is activated.

OPTIONAL “ES” BOXES

Identical in function(s) to the basic box but includes an isolated (SPDT) relay with 1 set of Normally Open (N.O.) and Normally Closed (N.C.) contacts to control an electric strike. The LCN control box cannot power the strike. ES7949 has two sets of isolated (DPDT) contacts. Compressor size recommendations are based on normal usage for the number of operations listed. All LCN supplied auxiliary compressors include an automatic drain feature.



CONTROL BOX INSTALLATION NOTES

1. Locate a 7900 series control box so no more than 100 linear feet of LCN 925 pneumatic tubing is required between the control box and door. Maximum 50 linear feet for a 7980 series.
2. Locate a 7900/7980 series control box where the temperatures do not exceed 120°F or fall below 35°F.
3. 7901, 7902 and 7949 control box input 120V AC @ 1 amp. 7981 and 7982 control boxes input 120V AC @ 5 amp.
4. Output voltage is 12V DC @ 0.25 amp. max.
5. Air pressure input, 80 PSI minimum/100 PSI maximum, required for 7901, 7902 and 7949.
6. Regulated air output up to 80 PSI for Auto Equalizer.
7. Auto Equalizers require approximately 0.5 cfm airflow in heavy traffic.
8. All control boxes are 15"x15"x6".

LCN 7900 SERIES CONTROL BOX ACCESSORIES

AIR FILTER, -329

Replacement inlet air filter for 7981 or 7982 series control boxes.

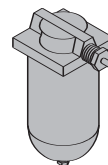
329



AIR FILTER, -329G

Replacement inlet air filter assembly for 7901 or 7902 series control boxes.

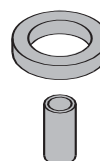
329G



FILTER AND SEAL, -929

Internal filter and seal component to the Air Filter -329G assembly.

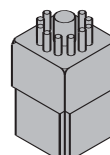
929



RELAY, -390

Single pole, double throw (SPDT) relay only for 7901, 7902, 7981, or 7982 series control boxes.

390 (A & B)
390C



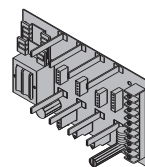
RELAY, -390C

Double pole, double throw (DPDT) relay only for 7949 series blow open control box.

POWER SUPPLY BOARD, -900

Main power supply/input board for the 7901, 7902, 7981, or 7982 series control boxes.

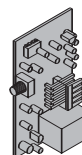
900



TIMER CARD, -903

0 to 30 second timer module. Plugs into the power supply board, -900. 7901 (A slot) series control box requires 1 each. 7902 (A/B slots) and 7981 (P/A slots) series control boxes require 2 each. 7982 (P/A/B slots) series control box requires 3 each.

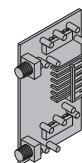
903



SEQUENCER CARD, -3426

Dual, 0 to 30-second sequence timer module for 7902 and 7982 series control boxes. Can be added to a standard 7902 or 7982 series control box to convert to a sequential operation. Sequencer card, -3426 is included when ordering a 7902S or 7982S series control box.

3426



LCN 7900 SERIES CONTROL BOX ACCESSORIES

VALVE ASSEMBLY, -941

Regulator valve assembly for 7901 series control box.

VALVE ASSEMBLY, -942

Regulator valve assembly for 7902 series control box.

VALVE ASSEMBLY, -941C

Regulator valve assembly for 7949 series blow open control box.

SOLENOID VALVE ASSEMBLY, -3299A

Air valve assembly for 7981 series control box or the 'A' circuit valve assembly for the 7982 series control box.

SOLENOID VALVE ASSEMBLY, -3299B

Air valve assembly for the 'B' circuit in the 7982 series control box.

RELAY PACKAGE 'A', -3390A

ES relay assembly for 7901 and 7981 series control boxes or the 'A' circuit ES relay assembly in a 7902 or 7982 series control boxes. Includes -390 relay, base, and wires. Can be added to standard 7901, 7902, 7981, or 7982 series control boxes to convert to ES operation. Relay package, -3390A is included when ordering a 7901ES, 7902ES, 7981ES, or 7982ES series control box.

RELAY PACKAGE 'B', -3390B

ES relay assembly for 'B' circuit in 7902 or 7982 series control boxes. Includes -390 relay, base, and wires. Can be added to standard 7902 or 7982 series control boxes to convert to ES operation.

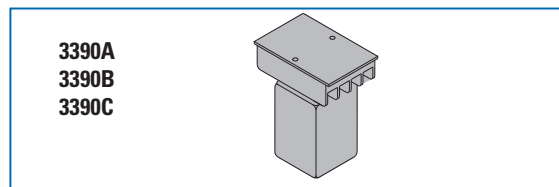
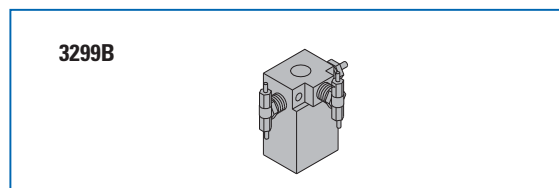
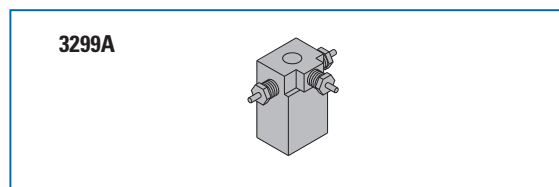
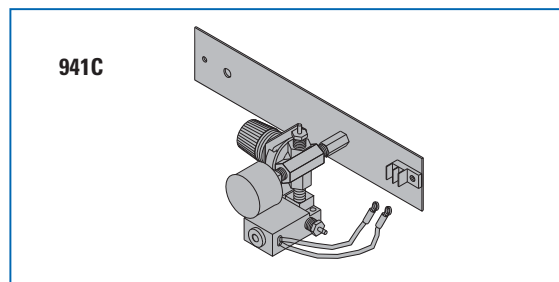
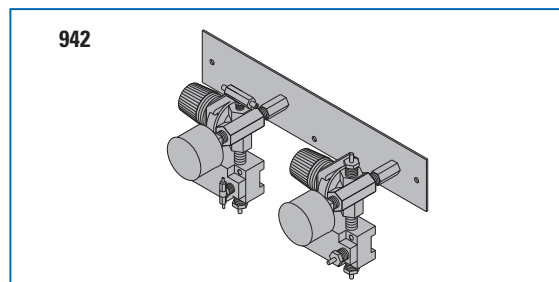
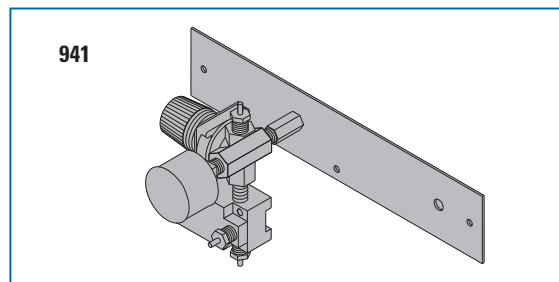
Relay package, -3390B is included when ordering a 7902ES or 7982ES series control box.

RELAY PACKAGE 'C', -3390C

ES relay assembly in 7949 series blow open control box. Includes -390C relay, base, and wires.

Can be added to standard 7949 series blow open control box to convert to ES operation.

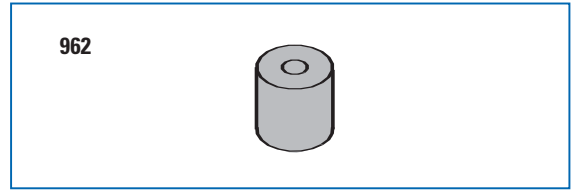
Relay package, -3390C is included when ordering a 7949ES series control box.



LCN 7900 SERIES CONTROL BOX ACCESSORIES

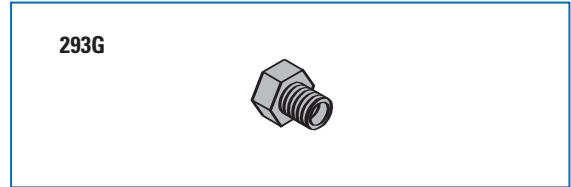
ISOLATOR, -962

Rubber Isolators for 7981/7982 compressor assembly, -3960.



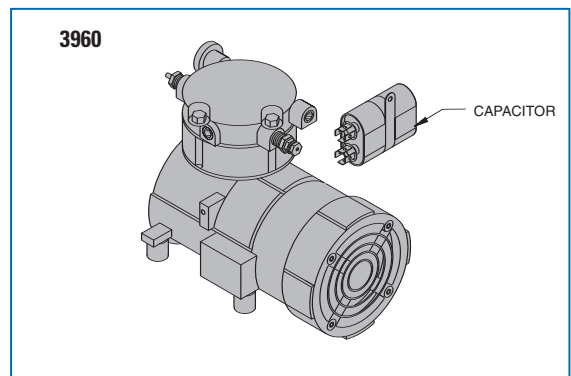
MUFFLER, -293G

Exhaust muffler for 7901, 7902, 7949, 7981, and 7982 series control boxes.



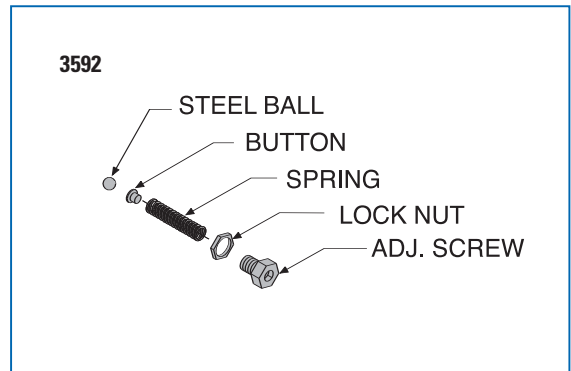
COMPRESSOR ASSEMBLY, -3960

Internal air pump assembly for 7981 or 7982 series control box. Includes starter capacitor, -962 Isolators, and -329 air filter.



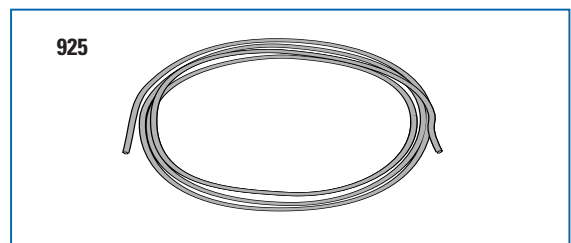
COMPRESSOR SERVICE KIT, -3592

Internal components for pressure release valve on -3960 Compressor Assembly.

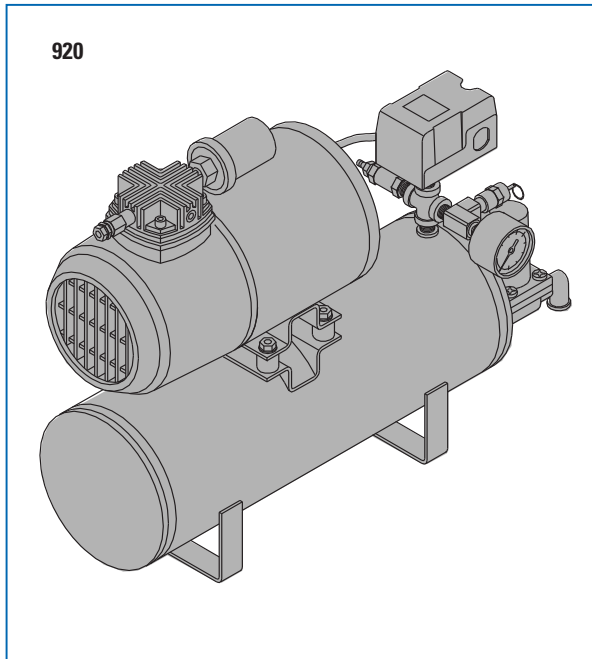


PNEUMATIC TUBING, 925

1/8" (3mm) I.D. flexible pneumatic tubing for use with standard barbed fittings provided on pneumatic control boxes and operators. Order by linear footage required. 7910-925 tubing is not fire-rated. Contact LCN for applications where tubing must run through rated plenums.



LCN 900 SERIES COMPRESSORS



LCN does not manufacture the compressors listed. For warranty information and service parts, contact the compressor manufacturer.

920 (illustrated)

Operators	Up to 2 Auto Equalizers.
Capacity	2 gallon pressure tank.
Dimensions	23" long, 9" wide, 17" high.
Electrical	115V AC 60 Hz, Single Phase
Amperage	6.0 in-rush, 4.0 continuous
Motor H.P.	0.17
Acoustical	73 dba @ 3', 68 dba @ 20'

921

Operators	Up to 4 Auto Equalizers.
Capacity	12 gallon pressure tank.
Dimensions	31" long, 14" wide, 21" high.
Electrical	115V AC 60 Hz, Single Phase
Amperage	9.0 in-rush, 6.0 continuous
Motor H.P.	0.25
Acoustical	78 dba @ 3', 71 dba @ 20'

922

Operators	Up to 8 Auto Equalizers.
Capacity	20 gallon pressure tank.
Dimensions	33" long, 20" wide, 27" high.
Electrical	115V AC, 60 Hz, Single Phase
Amperage	25.0 in-rush, 10.0 continuous
	or
	230V AC, 60 Hz, Single Phase
	19.0 in-rush, 5.0 continuous
Motor H.P.	0.50
Acoustical	81 dba @ 3', 73 dba @ 20'

923

Operators	Up to 20 Auto Equalizers.
Capacity	30 gallon pressure tank.
Dimensions	38" long, 23" wide, 30" high.
Electrical	115V AC, 60 Hz, Single Phase
Amperage	85.0 in-rush, 22.0 continuous
	or
	230V AC, 60 Hz, Single Phase
	50.0 in-rush, 11.0 continuous
Motor H.P.	1.50
Acoustical	83 dba @ 3', 75 dba @ 20'

Compressor size recommendations are based on normal usage for the number of operators listed. All LCN supplied compressors include an automatic drain feature to periodically exhaust condensation from the pressure tank. Consider sound level, vibration, space requirements, condensation drainage, mounting, and placement of air lines when selecting compressor location. Provide adequate ventilation to avoid overheating the compressor. Compressors carry the compressor manufacturer's limited one year warranty. Contact LCN for details.

COMPRESSOR INSTALLATION NOTES

1. When usage is infrequent (less than two activations per minute), use one size smaller compressor.
2. Locate compressor so less than 500 linear feet of LCN 7910-925 tubing is required between compressor and control box.
3. Locate compressor where the temperatures do not exceed 120° F or fall below 35° F.
4. Projects requiring ASME certification of the pressure tank require a 921 or larger compressor.
5. LCN 7910-925 tubing or 3/16" metal tubing (by others) must be used to maintain warranty. Contact LCN for details.

LCN ELECTROHYDRAULIC POWERED SYSTEMS

ELECTRIC AUTO EQUALIZERS

These Auto Equalizer products are an addition to the original pneumatic drive system. People moving through a door can use it as a normal rack & pinion door closer or, at the touch of a button, open the door automatically. An integrated digital control suite provides all electrical control functions. These self-contained units are suitable for use on single leaf doors or pair of doors where each leaf is equipped with an operator. The operator provides all the control and power elements into a single operator package, only some actuators are required to complete the system.

- ▶ Introduced in 1995
- ▶ Two surface mount models available. The 4630 mounts on the pull side of the door and the 4640 series mounts on the push side of the door.
- ▶ Integrates a modified heavy-duty 4040 series cast iron cylinder. The 4040 series closer has been independently tested to 10 million cycles.
- ▶ Mounting plate and cover end caps are only available in a powder coat black finish.
- ▶ 4600 Electric Operators are not approved for smoke evacuation systems.

UNIQUE FEATURES

▶ Digital Control Box

Provides exceptionally precise control of a large range of built-in functions combined with superior durability and performance. Visual indications and digital readouts of all control function settings and activity make adjustments easy, fast and accurate.

▶ Dual Independent Program Memories

Each unit is pre-programmed to factory default settings. The installer can adjust the unit to meet the job site requirements. These field settings are locked into the computer's memory. Any subsequent field adjustments replace the original field adjustments. The factory settings are always retained in memory and can be recalled to replace the field settings in just seconds, restoring the unit to its original programming.

▶ On-Board Diagnostics

Sophisticated built-in diagnostics program monitors the system microprocessor, power supplies, drive system and actuators circuitry. Reduces the time required to make sure the installation is complete and correct.

▶ On-Board Power Supply

Provides both 12V DC and 24V DC outputs to power card readers, manual actuators and other peripherals.

▶ "No Destruct" Drive System

Specially designed motor and clutch assembly provide a 'breakaway' function that reduces the chance the operator will be damaged in an abusive application. If a vandal tries to force the door closed while it is trying to open, the clutch mechanism prevents damage. The door is never out of control because the heavy duty 4040 closer is always operable.

▶ Electronic Circuit Protection

The high voltage input circuit is protected by an electronic circuit breaker. The low voltage output circuits by self-resetting fuses.

▶ Visual Function Indicators

LED's allow direct observation of these inputs:

- input power
- fire alarm input
- normal trigger (actuator) input
- sequential trigger (actuator) input
- hold open/alternate action (actuator) input
- lockout timer
- safety sensor (clear) input
- safety sensor (active) input

▶ Programming Mode

Allows tailoring the following functions to meet specific site conditions:

- hold open time
- 90° slow down time
- one shot input [ON or OFF]
- Exterior mode [ON or OFF] function to accommodate momentary resistance, like wind gusts, during the opening swing.
- electric strike delay timer
- electric strike 3 second power function [ON or OFF]
- sequential trigger delay timer
- alternate action timer
- lockout timer

ELECTRIC AUTO EQUALIZER SYSTEMS

- ▶ Originally introduced in 1995.
- ▶ Exceeds proposed ANSI cycle test standard of 300,000 full load automatic operating cycles. Integrated LCN 10 million cycle heavy duty 4040 door closer.
- ▶ Power operation plus full door control.
- ▶ For all applications, single or multi-door projects.
- ▶ Opening time to backcheck no faster than 3 seconds.
- ▶ Opening time 4 seconds or more to fully open.
- ▶ Must remain fully open for at least 5 seconds.
- ▶ Closing time from 90° to 10° no faster than 3 seconds.
- ▶ Less than 15 pounds-force to stop door's motion.
- ▶ Kinetic energy must not exceed 1.25 lbf-ft.
- ▶ In event of failure; less than 15 lbf. to release latch, less than 30 lbf. to put door in motion, less than 15 lbf. to fully open door systems.

Continued on page 34

LCN ELECTROHYDRAULIC POWERED SYSTEMS

STANDARDS, LISTINGS & APPROVALS

- ▶ UL listed for self-closing doors without hold open under "SWINGING DOOR CLOSERS (GVEV)" file R1943.
- ▶ Tested and certified under ANSI Standard A156.19. Refer to Section 2.1 and consult factory for details.
- ▶ ANSI Standard A117.1, Section 4.13.13
- ▶ ADA law, Section 4.13.12.
- ▶ UBC 7.2 (1997) for positive pressure plus UL 10B and UL 10C listing.
- ▶ Wiring is compliant with both UL 325 and the NEC. Separation of high and low voltage.
- ▶ Consult the factory for other listings such as; cUL, Department of Labor and Industry of the Commonwealth of Pennsylvania, The Board of Standards and Appeals of the City of New York, Fire and Panic Safety Standards of the California State Fire Marshal.
- ▶ UL Listed for Fire Rated Door Operators with Automatic Closers, File No. (GUJY).

WARRANTY

- ▶ 2 year limited warranty. See General Section for complete details.

MAINTENANCE

- ▶ Operators mounted according to the LCN installation instructions require no periodic maintenance or adjustments.
- ▶ Monthly, quarterly and annual visual inspections are recommended.
- ▶ No service contracts.

LCN ELECTROHYDRAULIC POWERED SYSTEMS

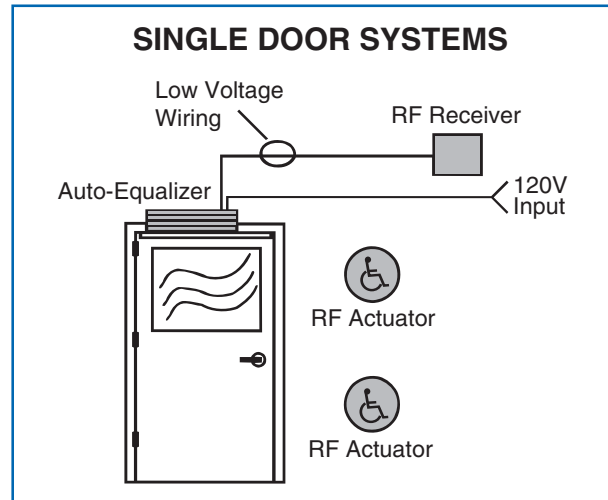
These pages illustrate examples of typical Electric LCN systems. Please consult your local SSC representative or LCN for assistance with specific installations and material requirements.

SINGLE DOOR SYSTEM

- ▶ An Interior Door.
- ▶ No guide rails or safety devices.
- ▶ Free Swinging (or Dogged) Door.

How It Works

Wireless RF actuators with receiver, powered by the Auto Equalizer simplify installation and minimize installation costs. For automatic door operation, touching either actuator signals the receiver and controller module to open the door to 90°. The door is held there until the system times out, then full spring power is applied to reliably close and latch the door. Door opening speed and hold open time are adjustable on the controller. Closing power and speed are adjustable on the cylinder assembly. If not actuated, the Auto Equalizer functions as a full featured door closer.



BILL OF MATERIALS

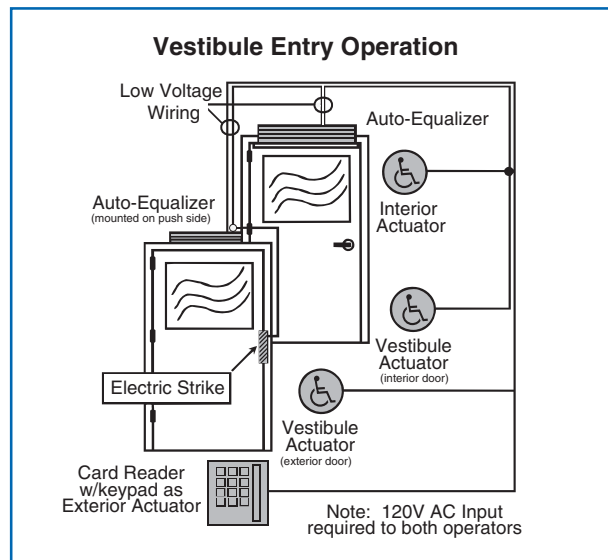
Qty.	Part No.	Description
1	4631	Auto Equalizer
2	8310-3856WS	RF Actuators
1	8310-865	RF Receiver

VESTIBULE ENTRY SYSTEM

- ▶ Exterior & Vestibule doors.
- ▶ Sequential Operation.
- ▶ No guide rails or safety devices.
- ▶ Controlled Access, Free Egress.

How It Works

This installation provides both accessibility and security for building occupants. The Auto Equalizer controller module provides both the power and coordination for card reader and electric strike applications. A built-in delay allows the strike to release before the door begins to open. Two interconnected Auto Equalizers provide sequential operation in both directions. Vestibule actuators allow single door ingress/egress from the vestibule as needed. *Note: An EL device requires a separate power supply.* If not actuated, the Auto Equalizer functions as a full featured door closer.

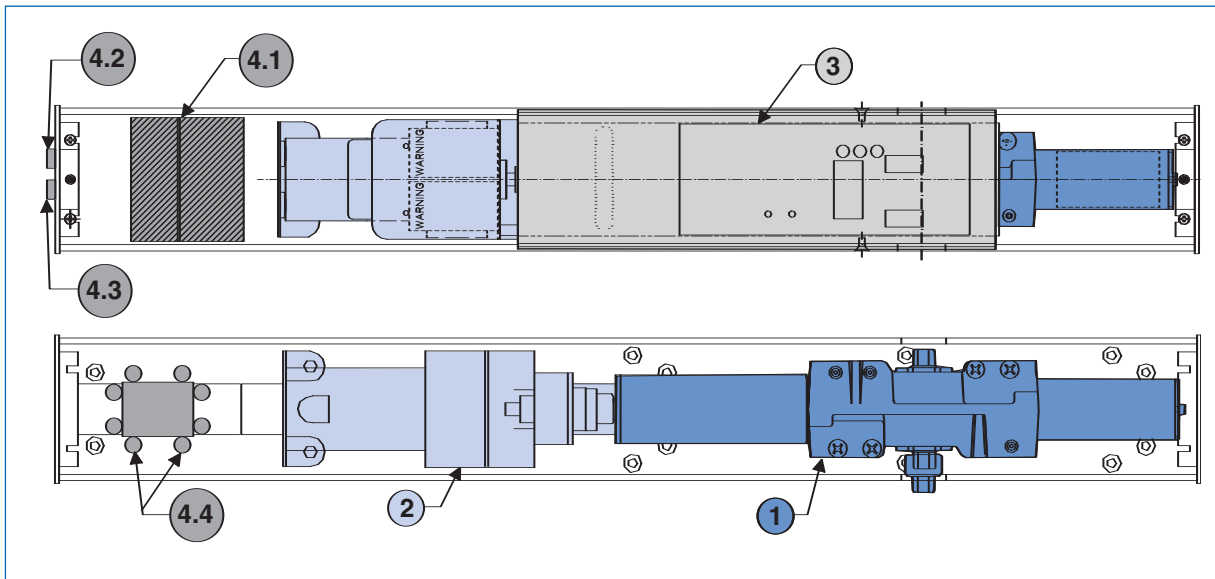


BILL OF MATERIALS

Qty.	Part No.	Description
1	4642	Auto Equalizer (exterior)
1	4631	Auto Equalizer (interior)
3	8310-856	Wall Plate Actuators

Other products from Von Duprin and Schlage

LCN 4630/4640 ELECTROHYDRAULIC POWERED SYSTEMS



1 DOOR CLOSER ASSEMBLY

- ▶ Based on a heavy duty 4040, cast iron cylinder with all-weather fluid for consistency and reliability.
- ▶ Rugged drive mechanism provides the connection to the electric motor assembly.
- ▶ Fully adjustable, independent hydraulic regulation controls the door to minimize the chance of damage to the door and frame assemblies.

2 ELECTRIC MOTOR/CLUTCH ASSEMBLY

- ▶ Highly efficient motor combined with a custom designed gear system provides exceptionally quiet and smooth operation.
- ▶ Special clutch transmits the power and provides a unique "breakaway" function that prevents damage to the operator, door and frame if a vandal forces the door closed during the powered opening swing.

3 DIGITAL CONTROLLER MODULE

- ▶ Digital Control Suite
- ▶ Dual Independent Program Memories
- ▶ On Board Diagnostics
- ▶ Visual Function Indicators
- ▶ Adjustable Programming Modes

4.x FIELD WIRING

- 4.1 ▶ Input power; 120V AC @ 1.5 amperes.
 - ▶ On-board, low voltage power supply provides both 12V and 24V DC @ 1.0 ampere (maximum combined load) for LCN actuators, RF receivers, and electric strikes or magnetic locks.
 - ▶ Circuit breaker switch and self-resetting fuses protect input and output power from voltage spikes.
 - ▶ Terminal strips simplify field wiring.
- 4.2 ▶ On/Off Switch (red)
- 4.3 ▶ Hold Open Switch (black)
- 4.4 ▶ Separate conduits for high voltage power and low voltage power and signal wiring meet UL and National Electrical Code requirements.

LCN ELECTROHYDRAULIC POWERED SYSTEMS

LCN DIGITAL CONTROL BOX

Opening Speed Adjustment

Limited to a minimum of 3 seconds to backcheck (approx. 70°)

Opening Force Adjustment

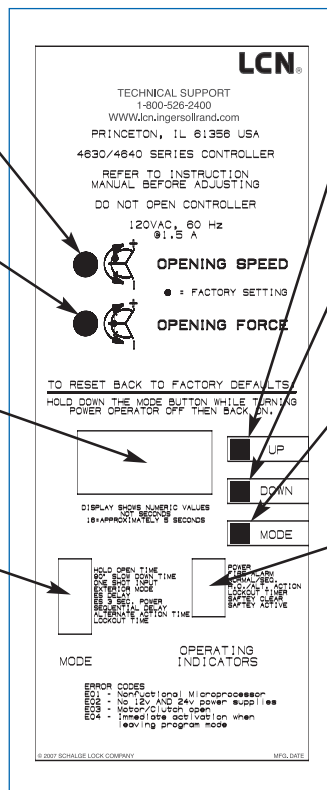
Maximum of 15 lb-f to stop door swing

Time Display

Displays numeric value relating to timing adjustments (16 = approx. 5 seconds)

Mode Indicator

Indicates programming mode currently being displayed



Up Button

Increases time or changes from OFF to ON when programming

Down Button

Decreases time or changes from OFF to ON when programming

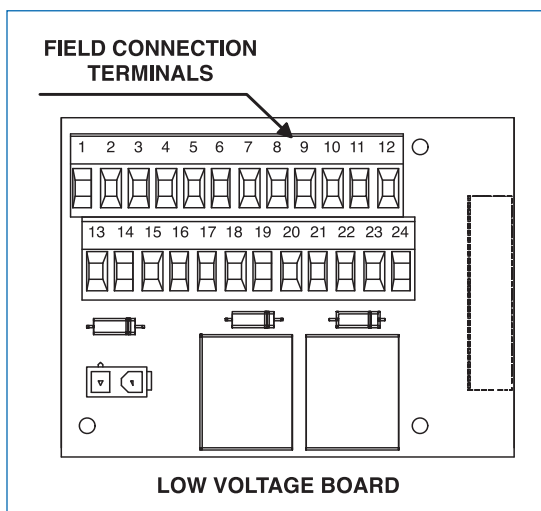
Mode Button

Advances through programming setups on Mode Indicator

Operating Indicators

Displays operating information about internal functions and external hardware

LCN LOW VOLTAGE (CLASS 2 NEC) ELECTRICAL CONNECTIONS



FUNCTION

Actuator - Normal Input (N.O.)
Actuator - Sequential Input (N.O.)
Actuator - Alternate Action (N.O.)
Actuator - Continuous (N.O.)
Sequential Output
Stop Side Safety (N.O.)
Swing Side Safety (N.O.)
Fire Alarm Contact (N.C.)
Auxiliary Relay Contacts(5 amp max)

E.S. Relay Contacts(5 amp max)

12V DC & 24V DC Negative*

12V DC Positive*

24V DC Positive*

TERMINAL

16 & 17 or 18 & 19
8 & 19
15 & 17
6 & 17
9
19 & 20
19 & 21
13 & 14 (Fire Shunt)
10 - Common
11 - N.O.
12 - N.C.
22 - Common
23 - N.O.
24 - N.C.
2, 4, 13, 17, & 19
5 & 7
1 & 3

* Note: 1 Amp max load between 12V and 24V DC outputs

LCN 4630 SERIES

MOUNTING DETAILS

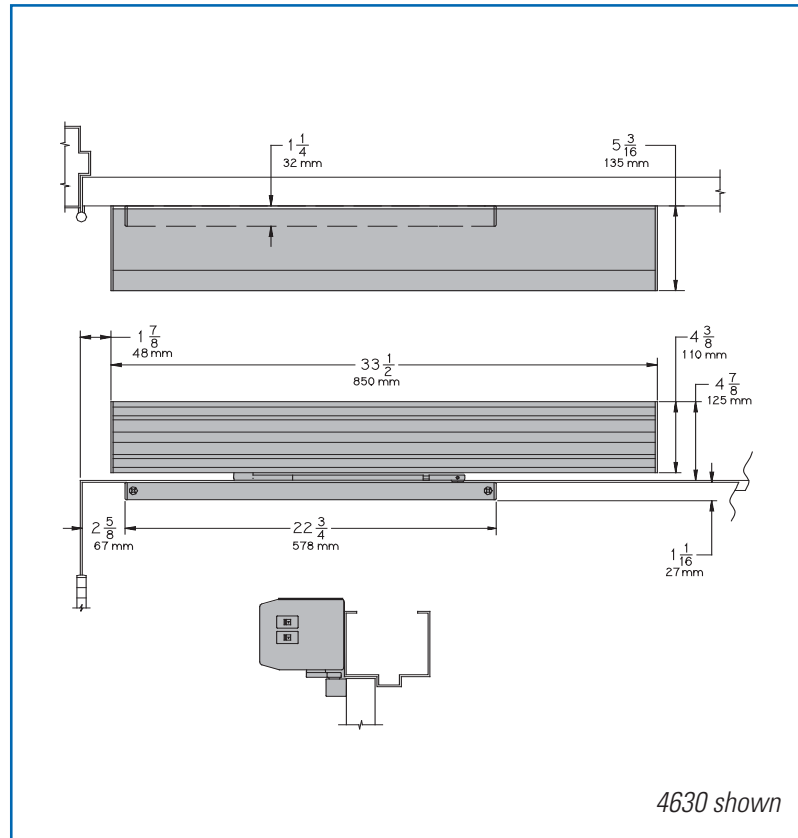
TOP JAMB (PULL SIDE) MOUNTING

MAXIMUM OPENING

Templating allows 90° power opening and 170° manual opening.

Please note that many track style door closers are capable of allowing 180° of door swing. Be aware that the majority of track style closers are at their weakest closing force in the 180 – 130° range. Consult factory for applications where exterior or large/heavy door must swing 180°.

Consult factory for all pivot mounted installations.



- ▶ **Butt Hinges** should not exceed 5" (127 mm) in width.
- ▶ **Auxiliary Stop is recommended.**
- ▶ **Reveal** should not exceed 1/8" (3 mm).
- ▶ **Head Frame** minimum 2" (51 mm).
- ▶ **Top Rail** minimum 1 1/8" (29 mm).
- ▶ **Opening Time and Force** are variable by adjustments to the electronic control module located on the operator assembly. Maximum hold open time adjustable up to approximately five minutes.
- ▶ **System Diagram** See "AUTOMATIC OPERATORS" section page 35 for typical system wiring and pages 36-37 for electrical data.

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

LCN 4630 SERIES

CYLINDERS

CYLINDER ONLY, 4631-3971

Standard, non-handed, cast iron cylinder.

CYLINDER ASSEMBLY, 4631-3071

Standard, non-handed, cast iron cylinder and mounting plate. Includes; 4630-3454 Motor Clutch, 4630-3180 I/O Board Assembly and 4630-3462 Controller.

CYLINDER ASSEMBLY, 4631-3071CS

Standard, non-handed, cast iron cylinder and mounting plate. Includes; 4630-3454 Motor Clutch, 4630-3180 I/O Board Assembly and 4630-3462 Controller. Same as a 4630-3071 assembly except on/off switch is concealed in endcap and no hold open switch is included. (separate key switches suggested)

COVERS

COVER, 4630-72MC

Standard, non-handed metal cover.

TRACKS

STANDARD TRACK, 4630-3038

Standard non-handed track.
Will not accept hold open clip or bumper assembly.

ARMS

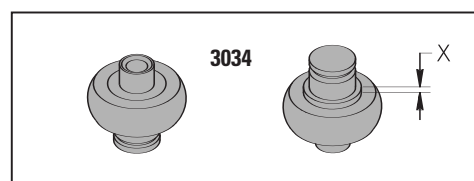
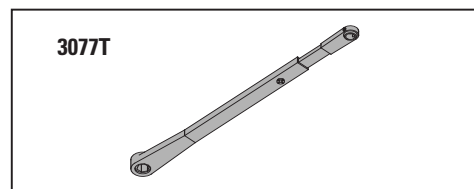
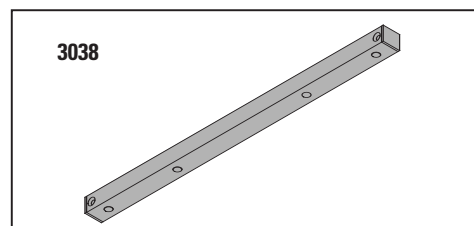
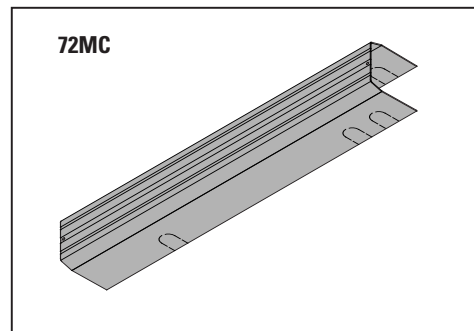
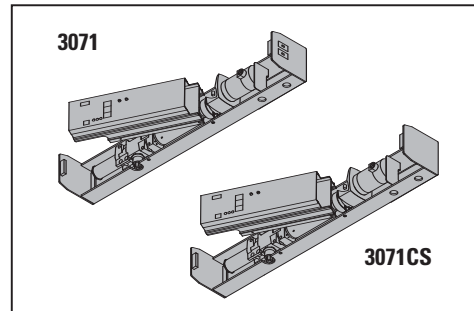
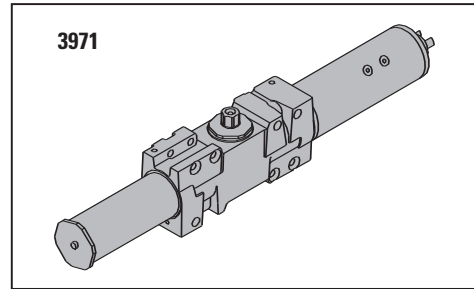
STANDARD ARM, 4630-3077T

Non-handed arm.
Track roller not included with arm.

INSTALLATION ACCESSORIES

TRACK ROLLER, 4630-3034

Quiet low friction roller assembly.
Shoulder dimension "X" = 1/8" (3mm).



LCN 4630 SERIES

INSTALLATION ACCESSORIES

SWITCH END CAP, 4630-334

End cap (black powder coat only) with cut outs for installing on/off and hold open switches.

BLANK END CAP, 4630-334-2

Black powder coat only.

SWITCH END CAP, 4630-334CS

End cap and switch (black powder coat only) for concealed switch option.

ON/OFF SWITCH ASSEMBLY, 4630-3179-1

Red rocker switch. Plugs into high voltage PC board.

HOLD OPEN SWITCH ASSEMBLY, 4630-3179-2

Black rocker switch. Plug into low voltage PC board.

PC BOARD ASSEMBLY, 4630-3180

High and low voltage PC boards connected to mounting bracket.

MOTOR/CLUTCH ASSEMBLY, 4630-3454

A geared assembly in an LCN power operator that incorporates a "no destruct" feature.

CONTROL BOX ASSEMBLY, 4630-3462

Digital controller with built-in 12/24 VDC power supply. Programming and timing functions are adjusted on controller.

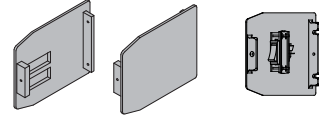
AC POWER CABLE, 4630-3498-2

2 wire cable to connect 120 VAC from PC board assembly to controller.

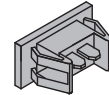
RIBBON CABLE CONNECTOR, 4630-3498-1

16 wire ribbon cable connecting 1-24 pin terminal connectors to controller.

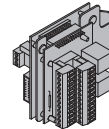
334
334-2
334CS



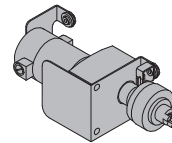
3179-1
3179-2



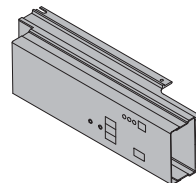
3180



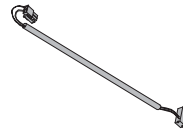
3454



3462



3498-2



3498-1



LCN 4630 SERIES

TABLE OF SIZES

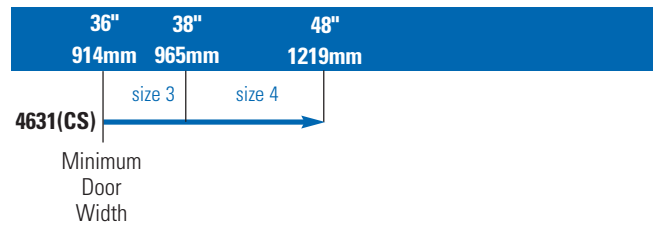
Non-Sized 4630 series cylinder is adjustable from size 1 through size 4 and is shipped set to size 3. Closing power of 4630 Series closers may be increased 50%.

➔ Indicates recommended range of door width for closer size.
Note: Minimum door width 36" (914 mm).

EXTERIOR (and VESTIBULE) DOOR WIDTH



INTERIOR DOOR WIDTH



HOW-TO-ORDER 4630 SERIES CLOSERS

1. SPECIFY FINISH.

- Standard Powder Coat _____
Aluminum, Dark Bronze, Brass.

Closer will be shipped with:

- STANDARD CYLINDER,
 - STANDARD METAL COVER,
 - STANDARD ARM,
 - TRACK ROLLER,
 - STANDARD TRACK and
 - WOOD and MACHINE SCREW PACK,
- unless options listed below are selected.*

CLOSER OPTIONS

CYLINDER ASSEMBLY

- 4630CS (concealed on/off switch)
(separate key switches suggested)

FINISH

- Custom Powder Coat (RAL) _____
- Plated Finish, US _____

SCREW PACK

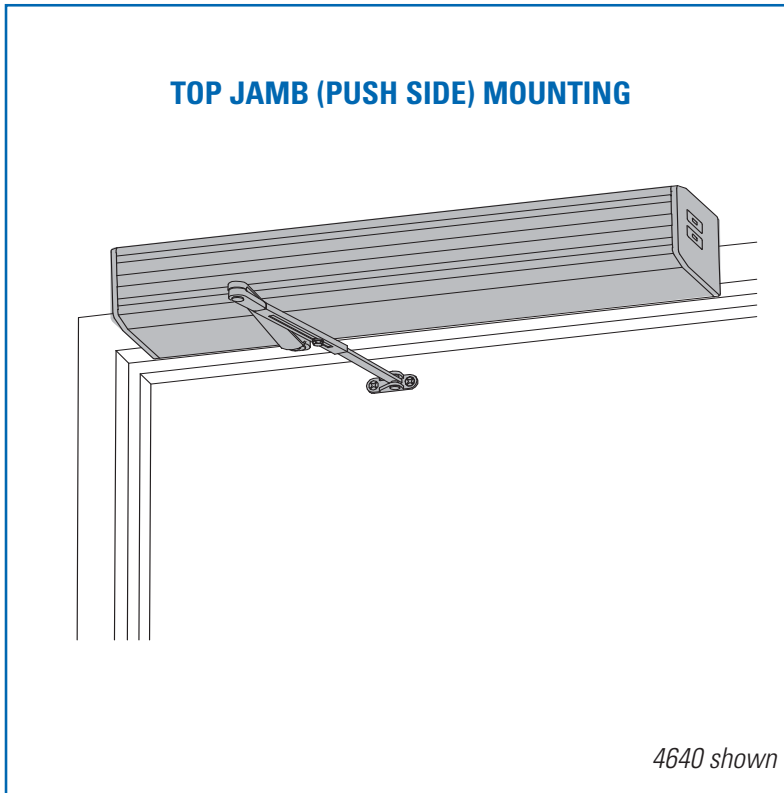
- TB*, Wood & Machine Screw (TBWMS)
- TORX Machine Screw (TORX)
- TB* & TORX Machine Screw (TBTRX)

*Specify door thickness if other than 1 3/4".

SPECIAL TEMPLATE

- ST-_____

LCN 4640 SERIES

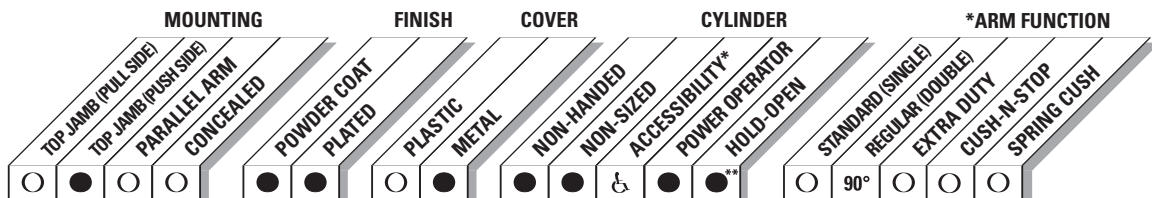


The 4640 AUTO EQUALIZER™ is LCN's SMART & RELIABLE electrically powered low-energy power operator. It provides easy access for people with disabilities, the elderly, or the frail. Designed primarily for manual opening applications that occasionally require automatic opening.

- ▶ **NEW Digital Control Suite**
- ▶ **Utilizes a 10,000,000 Cycle Heavy Duty Door Closer**
- ▶ **On-Board Diagnostics**
- ▶ **On-Board Power Supply**
- ▶ **Factory-Default Memory**
- ▶ **Plug-and-Play Connections**
- ▶ **No Destruct Feature**
- ▶ **No Guard Rails or Safety Mats Required**

- ▶ Standard, top jamb (push side) mounted 4640 series closer shipped with regular arm, metal cover, and wood and machine screw pack. Actuators available separately, see page 121.
- ▶ Meets ADA, requirements (power mode).
- ▶ Non-sized cylinders for interior doors to 4'6" and exterior doors to 3'6".
- ▶ Non-handed for either right or left swinging door.
- ▶ 4640 has easily accessible switches to provide on/off and continuous hold open functions. 4640CS provides concealed on/off power switch. Control module provides all timing and sequential door functions, electric strike controls and adjustments for opening speed and force.
- ▶ Standard or optional custom powder coated finish, end caps are black.
- ▶ Optional plated finish on cover, arm, and fasteners.

The 4640 Series is UL and cUL listed with regular arm for self-closing doors and meets the provisions of ANSI Standards A117.1, A156.19, and the Americans with Disabilities Act.



- AVAILABLE
- NOT AVAILABLE
- ♿ Meets ADA requirements (power mode).
- * See individual series for maximum manual opening.
- ** Switch provided for continuous Hold-Open (4640 only).

LCN 4640 SERIES

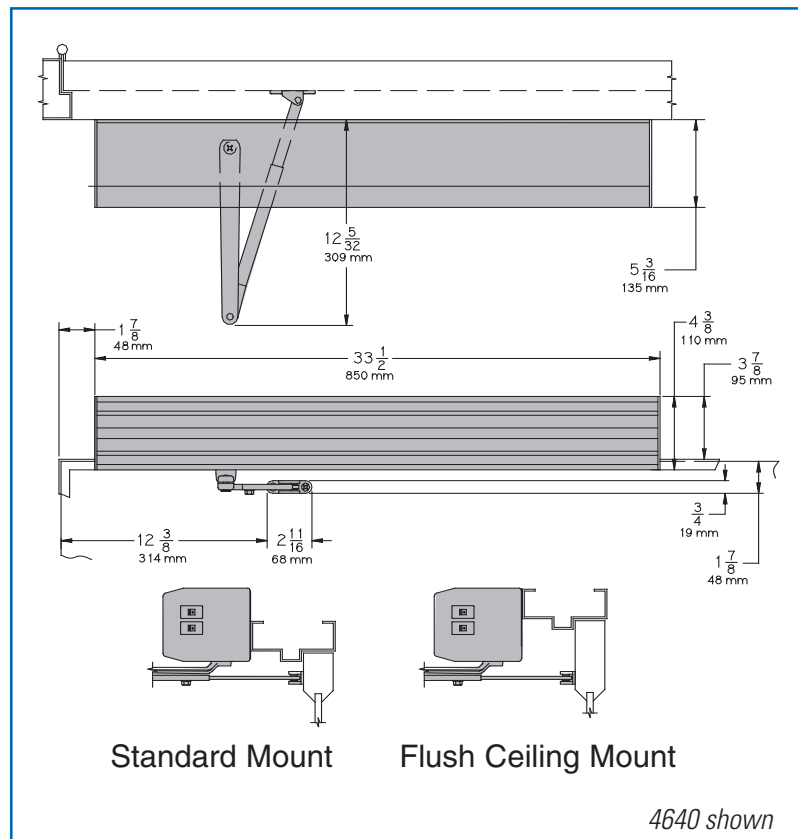
MOUNTING DETAILS

TOP JAMB (PUSH SIDE) MOUNTING

MAXIMUM OPENING

Templating allows 90° power opening and 100° manual opening.

Consult factory for all pivot mounted installations.



- ▶ **Butt Hinges** should not exceed 5" (127 mm) in width.
- ▶ **Auxiliary Stop is recommended.**
- ▶ **Reveal** of 4 1/2" (114 mm) allows up to 90° power opening and 100° manual opening. 8" (203 mm) allows up to 90° power opening and 100° manual opening with LONG ARM where standard rod and shoe is replaced with optional LONG ROD AND SHOE, 4640-79LR.
- ▶ **Head Frame** minimum 1 3/4" (44 mm). The standard mounting plate is also used to meet flush ceiling conditions.
- ▶ **Top Rail** minimum 1 3/4" (44 mm).
Flush ceiling installation requires 3 3/4" (95 mm) minimum.
- ▶ **Opening Time and Force** are variable by adjustments to the electronic control module located on the operator assembly. Maximum hold open time adjustable up to approximately five minutes.
- ▶ **System Diagram** See "AUTOMATIC OPERATORS" section page 37 for typical system wiring and pages 36-37 for electrical data.

Options

- ▶ Long arm.

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

LCN 4640 SERIES

CYLINDERS

CYLINDER ONLY, 4642-3971

Standard, non-handed, cast iron cylinder.

CYLINDER ASSEMBLY, 4642-3071

Standard, non-handed, cast iron cylinder and mounting plate. Includes; 4640-3454 Motor Clutch, 4640-3180 I/O Board Assembly and 4640-3462 Controller.

CYLINDER ASSEMBLY, 4642-3071CS

Standard, non-handed, cast iron cylinder and mounting plate. Includes; 4640-3454 Motor Clutch, 4640-3180 I/O Board Assembly and 4640-3462 Controller. Same as a 4640-3071 assembly except on/off switch is concealed in endcap and no hold open switch is included. (separate key switches suggested)

COVERS

COVER, 4640-72MC

Standard, non-handed metal cover.

ARMS

REGULAR ARM, 4640-3077

Non-handed arm.

LONG ARM, 4640-3077L

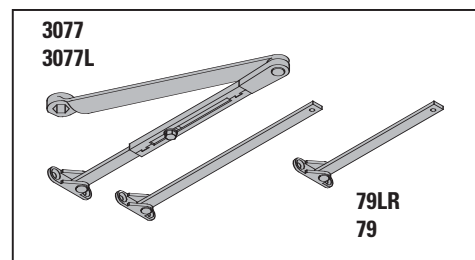
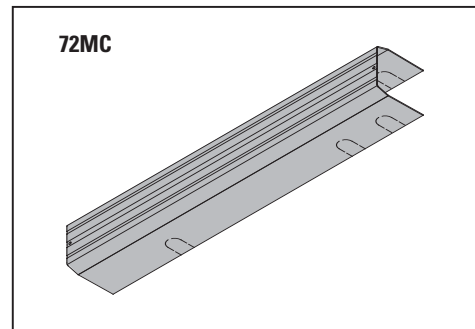
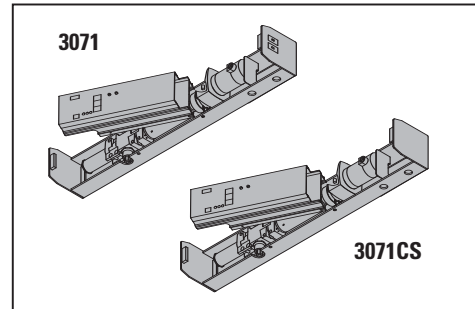
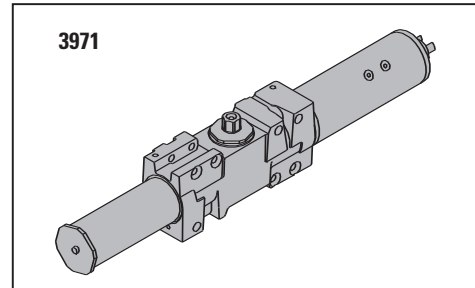
Arm includes LONG ROD AND SHOE, 4640-79LR for deep reveals.

ROD & SHOE, 4640-79

Rod for use with regular arm.

LONG ROD & SHOE, 4640-79LR

Long rod for use with long arm.



LCN 4640 SERIES

INSTALLATION ACCESSORIES

SWITCH END CAP, 4640-334

End cap (black powder coat only) with cut outs for installing on/off and hold open switches.

BLANK END CAP, 4640-334-2

Black power coat only.

SWITCH END CAP, 4640-334CS

End cap and switch (black powder coat only) for concealed switch option.

ON/OFF SWITCH ASSEMBLY, 4640-3179-1

Red rocker switch. Plugs into high voltage PC board.

HOLD-OPEN SWITCH ASSEMBLY, 4640-3179-2

Black rocker switch. Plug into low voltage PC board.

PC BOARD ASSEMBLY, 4640-3180

High and low voltage PC boards connected to mounting bracket.

MOTOR/CLUTCH ASSEMBLY, 4640-3454

A geared assembly in an LCN power operator that incorporates a "no destruct" feature.

CONTROL BOX ASSEMBLY, 4640-3462

Digital controller with built-in 12/24 VDC power supply. Programming and timing functions are adjusted on controller.

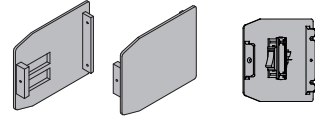
AC POWER CABLE, 4640-3498-2

2 wire cable to connect 120 VAC from PC board assembly to controller.

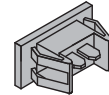
RIBBON CABLE CONNECTOR, 4640-3498-1

16 wire ribbon cable connecting 1-24 pin terminal connectors to controller.

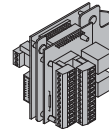
334
334-2
334CS



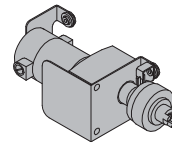
3179-1
3179-2



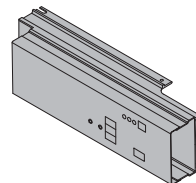
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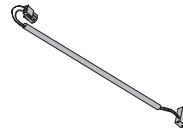
3454



3462



3498-2



3498-1



LCN 4640 SERIES

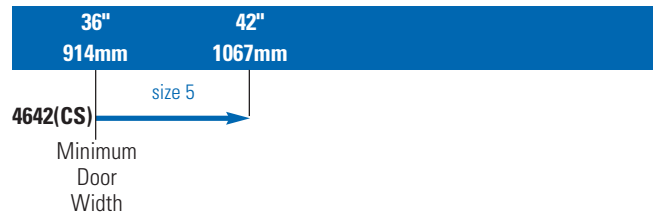
TABLE OF SIZES

Non-sized 4640 series cylinder is adjustable from size 2 through size 5 and is shipped set to size 3. Closing power of 4640 Series closers may be increased 50%.

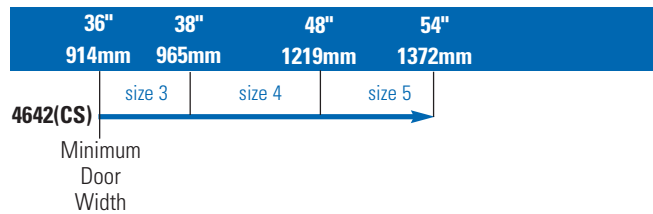
→ Indicates recommended range of door width for closer size.

NOTE: Minimum door width 36" (914 mm)

EXTERIOR (and VESTIBULE) DOOR WIDTH



INTERIOR DOOR WIDTH



HOW-TO-ORDER 4640 SERIES CLOSERS

1. SPECIFY FINISH.

- Standard Powder Coat _____
Aluminum, Dark Bronze, Brass.

Closer will be shipped with:

- STANDARD CYLINDER,
 - STANDARD METAL COVER,
 - REGULAR ARM, and
 - WOOD and MACHINE SCREW PACK,
- unless options listed below are selected.

CLOSER OPTIONS

CYLINDER ASSEMBLY

- 4640CS (concealed on/off switch)
(separate key switches suggested)

FINISH

- Custom Powder Coat (RAL) _____
- Plated Finish, US _____

ARM

- Long (LONG)

SCREW PACK

- TB*, Wood & Machine Screw (TBWMS)
- TORX Machine Screw (TORX)
- TB* & TORX Machine Screw (TBTRX)

*Specify door thickness if other than 1 3/4".

SPECIAL TEMPLATE

- ST-_____

LCN ELECTROMECHANICAL POWERED SYSTEMS

ELECTROMECHANICAL AUTOMATIC OPERATORS

LCN's electromechanical products are designed primarily for automatic opening applications that occasionally require manual opening. A control box provides all electrical functions. These self-contained units are suitable for use on single leaf doors or pair of doors. These products combine all the control and power elements into a single operator package, only some actuators are required to complete the system.

- ▶ Surface mounted and overhead concealed mountings available.
- ▶ Available in two standard anodized finishes – aluminum and dark bronze.

LOW ENERGY ELECTROMECHANICAL POWER OPERATORS

- ▶ Complies with ANSI 156.19
- ▶ Opening time from full close to backcheck is no faster than 3 seconds
- ▶ Less than 15lbs of force to open door manually

STANDARDS, LISTINGS & APPROVALS

- ▶ UL listed for self-closing doors without hold open. UL 325.
- ▶ Tested and certified under ANSI.
- ▶ Low Energy Electromechanical Operators ANSI 156.19
- ▶ ADA Compliant. Applicable to Low Energy Electromechanical Operators only.
- ▶ Wiring is compliant with both UL 325 and the NEC. Separation of high and low voltage.
- ▶ Consult the factory for other listings.

WARRANTY

- ▶ 2 year limited warranty. See General Section for complete details

MAINTENANCE

Low Energy Electromechanical Power Operators

- ▶ Operators mounted according to the LCN Installation instructions require no periodic maintenance or adjustments.
- ▶ Monthly, quarterly and annual visual inspections are recommended.
- ▶ No service contracts.

LCN ELECTROMECHANICAL POWERED SYSTEMS

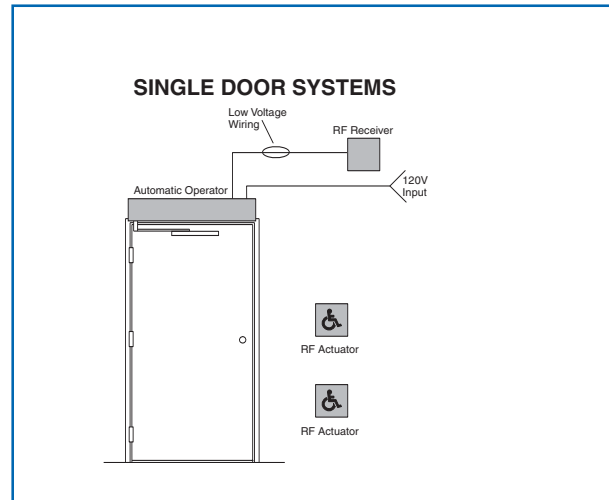
This page illustrates examples of typical Electromechanical LCN systems. Please consult your local SSC representative of LCN for assistance with specific installations and material requirements.

SINGLE DOOR SYSTEM (Low Energy)

- ▶ An Interior Door.
- ▶ No guide rails or safety devices.
- ▶ Free Swinging (or Dogged) Door.

How It Works

Wireless RF actuators with receiver, powered by the transformer allows for easy installation. For automatic door operation, touching either actuator signals the receiver and power operator to open the door to 90 degrees. The door is held there until the system times out. Door closes via spring return. Door opening speed, closing speed and hold open time is adjustable on the control box. If not actuated, the power operator functions as a manual door.



BILL OF MATERIALS

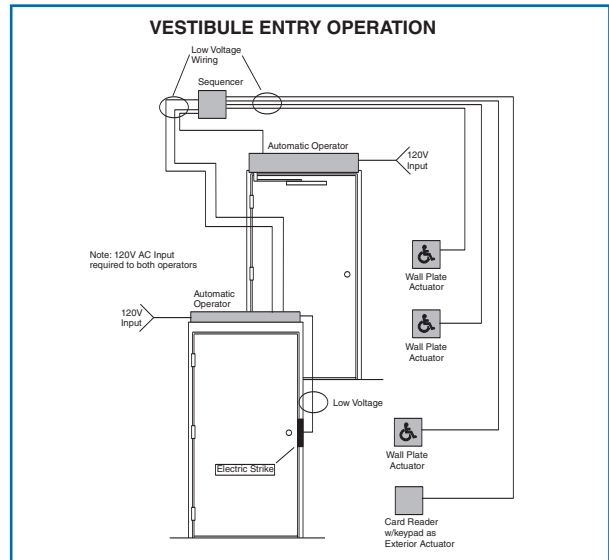
Qty.	Part No.	Description
1	9531	Automatic Operator (RH)
2	8310-3853WS	RF Actuators
1	8310-865	RF Receiver

VESTIBULE ENTRY SYSTEM (Low Energy)

- ▶ Exterior & Vestibule doors.
- ▶ Sequential Operation.
- ▶ No guide rails or safety devices.
- ▶ Controlled Access, Free Egress.

How It Works

This installation provides both accessibility and security for building occupants. It allows for the integration of multiple automatic operators, a card reader and electric strike. A sequencer allows sequential operation of the two automatic operators. Vestibule actuators allow single door ingress/egress from the vestibule as needed. If not actuated the power operator functions as a manual door.

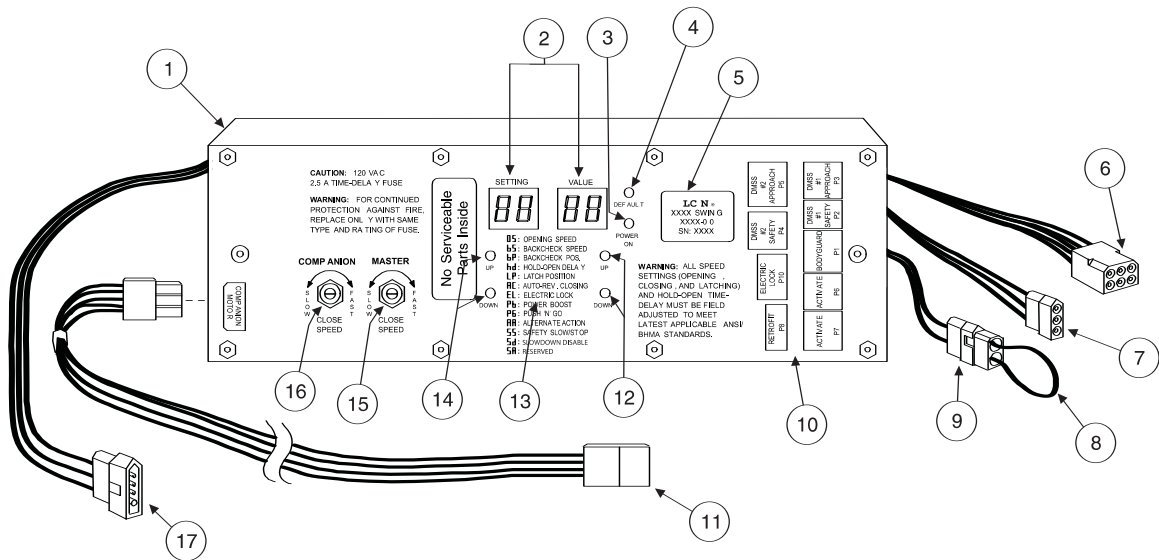


BILL OF MATERIALS

Qty.	Part No.	Description
1	9542	Automatic operator (RH)
1	9531	Automatic operator (RH)
3	8310-853	Wall Plate Actuators
1	8310-845	Sequencer
		Other products from Von Duprin and Schlage

LCN ELECTROMECHANICAL POWERED SYSTEMS

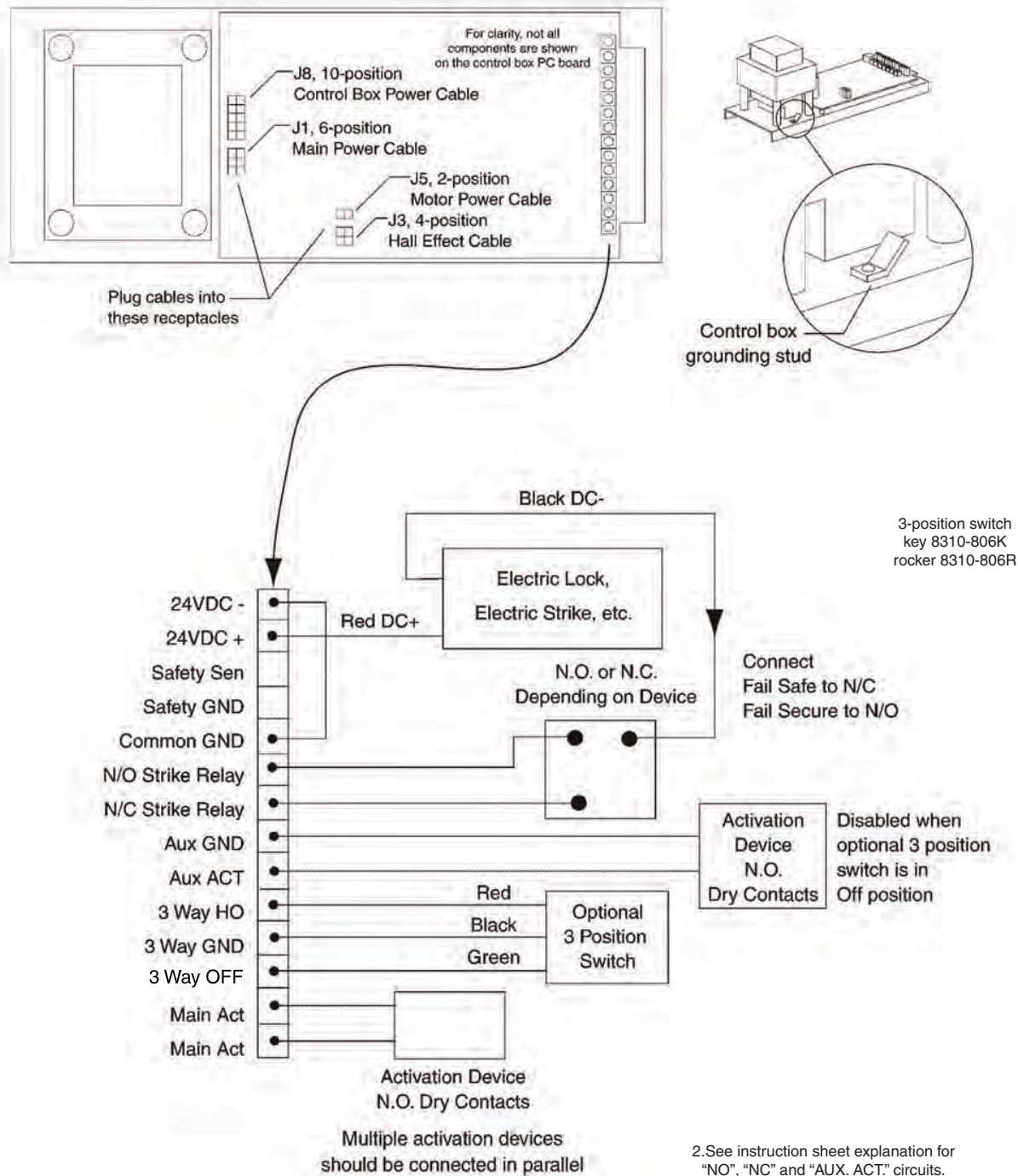
CONTROL BOX - 2800, 9500 SERIES



- | | |
|--|---|
| 1. Control Box, 115V | 10. Accessory Direct Connect Diagram |
| 2. Seven Segment Display | 11. 6-Pin Connector for Companion Motor (supplied only w/ simultaneous pairs) |
| 3. Power Indicator | 12. Value Adjustment Push Buttons |
| 4. Factory Default Push Button | 13. Setting Adjustment Menu |
| 5. Model Identification Label | 14. Function Adjustment Push Buttons |
| 6. 6-Pin Connector for Master Motor | 15. Closing Speed Adjustment Dial (Master) |
| 7. 3-Pin Connector for 3 Position Switch | 16. Closing Speed Adjustment Dial (Companion) |
| 8. Breakaway Jumper Cable | 17. 3-Pin Connector for AC power |

LCN ELECTROMECHANICAL POWERED SYSTEMS

PREMIUM CONTROL BOX - 9100 SERIES



LCN ELECTROMECHANICAL POWERED SYSTEMS

GENERAL ELECTRICAL DATA

1. Input power 115 volt, 3 wire, single phase, 60Hz, fused, 15 amp supply.
2. UL approved type flexible conduit is recommended for the 115 volt power line.
3. The 115 volt power supply must be a dedicated circuit from the main circuit breaker panel and must not be connected into a building lighting system operating fluorescent lights.
4. Location of conduits determined by mounting. See installation instructions for location.

2800, 9500 Series

ELECTRICAL DATA

1. 120 VAC input @ 2.5 amps (2800, and 9500 Series).
2. 24 V AC output @ 1.5 amps (protected by self-resetting thermal fuse).
3. 24 V DC available with SO kit included.

9100 Series

ELECTRICAL DATA

1. 120 VAC input @ 1 amp.
2. 24 VDC output @ 2.5 amps on premium control box.

LCN BENCHMARK UNIQUE FEATURES

Dual Independent Program Memories

Each unit is pre-programmed to factory default settings. The installer can adjust the unit to meet the job site requirements. These field settings are locked into the computer's memory. Any subsequent field adjustments replace the original field adjustments. The factory settings are always retained in memory and can be recalled to replace the field settings in just seconds, restoring the unit to its original programming.

On-Board Power Supply

Provides 24V DC output to power card readers, manual actuators and other peripherals.

Electronic Circuit Protection

Fused input circuit protection and fused output protection for 24 VDC peripherals

Visual Function Indicators

There are 2 LED s for installation and trouble shooting feedback. The motor LED will illuminate when the motor drive circuit energizes this is when the operator is activated it will remain on only during the opening of the door and the power LED this will illuminate when power is applied to the board and remains illuminated as long as there is power applied to the board.

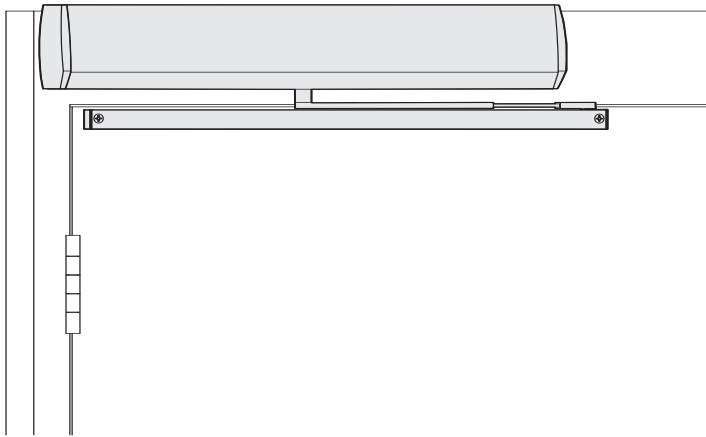
Programming Mode

Allows tailoring the following functions to meet specific site conditions:

- ▶ Power Boost
- ▶ Opening Speed
- ▶ Backcheck Speed
- ▶ Hold Open Time Delay
- ▶ Backcheck Position
- ▶ Closing Speed
- ▶ Latch Position
- ▶ Push 'N Go
- ▶ Delayed Activation

LCN 9130 SERIES

SINGLE DOOR, SURFACE MOUNT (PULL) OFFSET PIVOT/BUTT HINGE

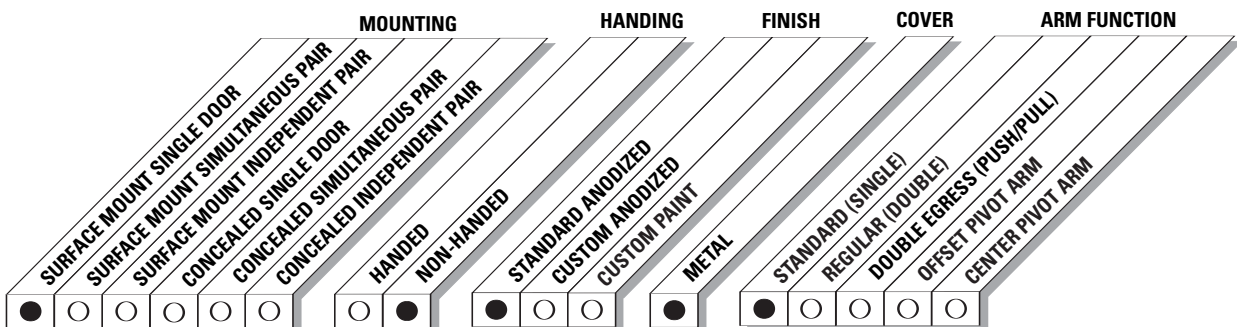


The 9130 BENCHMARK by LCN is an electrically powered low-energy operator. It provides easy access for people with disabilities, the elderly or the frail. Designed primarily for automatic opening applications that occasionally require manual opening. The BENCHMARK is a cost-effective solution for retrofitting an activated or manual door.

- ▶ **Push 'N Go permits non-switch activation**
- ▶ **Microprocessor control box ensures reliability and maintains customer settings**
- ▶ **Power Boost allows for increased closing force near latch**

- ▶ 9130 series operator is shipped with motor gearbox, control box, mounting plate, standard arm, metal cover, standard track, wood and machine screws. Actuators available separately, see page 121.
- ▶ Single interior door, surface mounted.
- ▶ ADA compliant.
- ▶ On/Off switch included as standard.
- ▶ Non-handed for either right or left swinging door.
- ▶ 27" cover is standard, 36" optional.
- ▶ All potentiometers clearly labeled with their functions.
- ▶ LED lights indicate power to control box and motor gearbox.

9130 Series is fully compliant with UL 325 and meets the provisions of ANSI A156.19. The 9130 Series is UL listed for fire-rated applications. The 9130 Series also meets the provisions of the Americans with Disabilities Act.

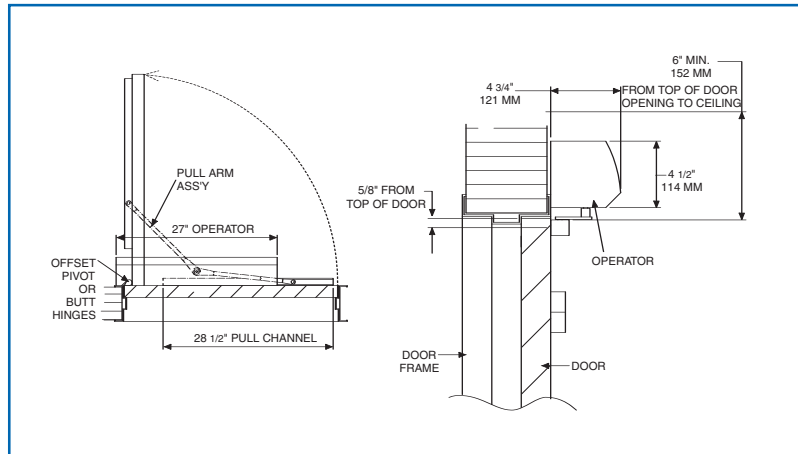


● AVAILABLE
○ NOT AVAILABLE

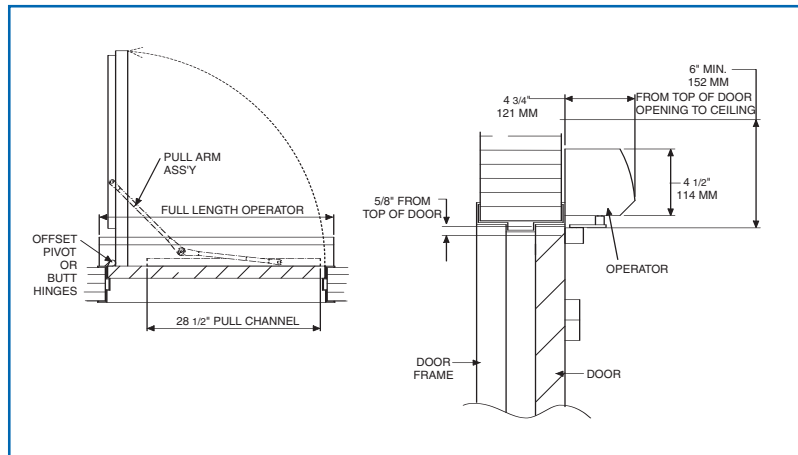
LCN 9130 SERIES

MOUNTING DETAILS

TOP JAMB SINGLE DOOR (OFFSET/BUTT HINGE, CENTER PIVOT, PULL, STANDARD COVER) MOUNTING



TOP JAMB SINGLE DOOR (OFFSET/BUTT HINGE, CENTER PIVOT, PULL, FULL COVER) MOUNTING



MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

- ▶ **Butt Hinges** should not exceed 5" (127 mm) in width.
- ▶ **Reveal** should not exceed 1/8" (3 mm).
- ▶ **Head Frame** minimum 2" (51 mm).
- ▶ **Top Rail** minimum 2" (51 mm).
- ▶ **Opening and Closing Time** are variable by adjustments to the electronic control module located on the operator assembly. Maximum hold open time adjustable up to approximately 30 seconds.
- ▶ **System Diagram** see "AUTOMATIC OPERATORS" section pages 52-54 for typical system wiring and page 55 for electrical data.
- ▶ Please consult your local SSC representative or LCN for assistance with specific installations and material requirements.

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

LCN 9130 SERIES

MOTOR GEARBOX

MOTOR GEARBOX ASSEMBLY (W/O SWITCH), 9130-3454

Driving mechanism for operator. For full length unit. Switch not included.

MOTOR GEARBOX ASSEMBLY, 9130-3454S

Driving mechanism for operator. For 27" unit. Switch included.

BRACKETS

MOUNTING BRACKET, 9130-3018

Standard mounting bracket.

SWITCH BRACKET – 29" CABLE, 9130-3351-1

Bracket used to locate switch at end of cover on full length unit.

SWITCH BRACKET – 41" CABLE, 9130-3351-2

Bracket used to locate switch at end of cover on full length unit.

SWITCH BRACKET – 51" CABLE, 9130-3351-3

Bracket used to locate switch at end of cover on full length unit.

CONTROL BOXES

CONTROL BOX, (120v), 9130-3462

Electronic controlling device with power supply output and power boost feature for Benchmark.

COVERS

METAL COVER, 9130-72MC

Standard, 27", non-handed, extruded aluminum cover.

FULL METAL COVER, 9130-72FC

36", non-handed, extruded aluminum cover.

COVER INSERT 9130-163

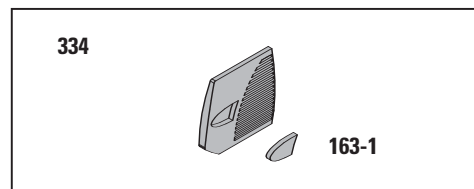
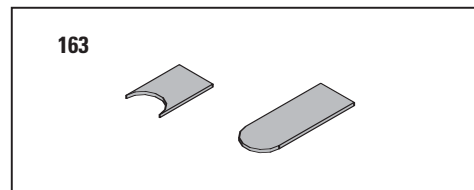
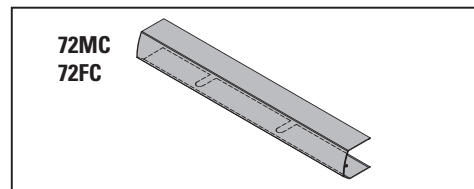
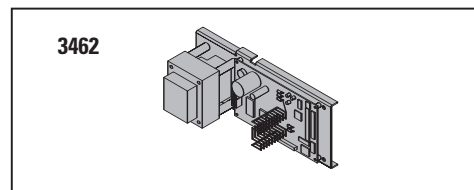
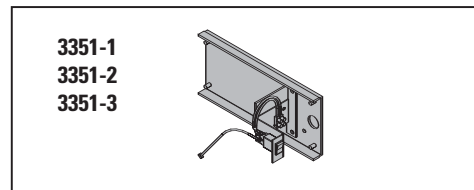
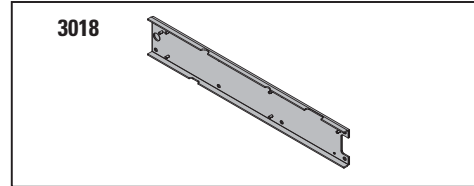
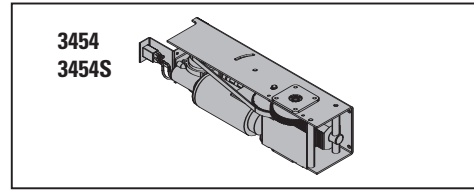
Used to cover operator shaft opening.

COVER END CAP INSERT, 9130-163-1

Used to cover switch hole opening.

COVER END CAP, 9130-334

Black plastic end caps.



LCN 9130 SERIES

TRACKS

STANDARD TRACK, 9130-3038

Standard, non-handed track.

TRACK END CAP, 9130-73

Black plastic end caps.

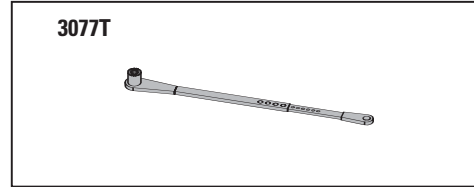
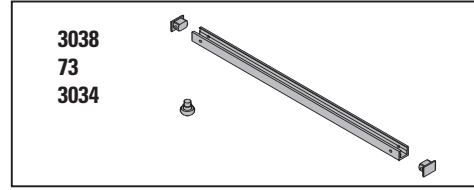
ROLLER, 9130-3034

Quiet low friction roller assembly.

ARMS

STANDARD ARM, 9130-3077T

Non-handed arm. Track roller not included.

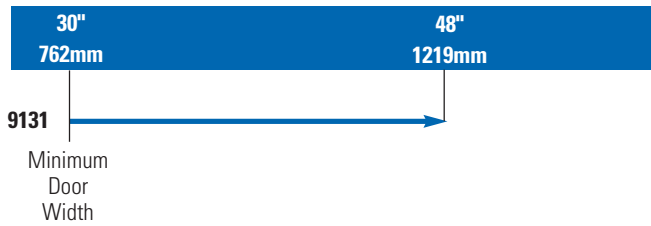


LCN 9130 SERIES

TABLE OF SIZES

→ Indicates recommended range of door width for operator.
Note: For All Benchmark Series
30" minimum door width for 27" pull operator
36" minimum door width for full length pull operator

DOOR WIDTH



HOW-TO-ORDER 9130 SERIES OPERATORS

1. SPECIFY FINISH.

- Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator will be shipped with:

-STANDARD MOTOR GEARBOX (SF)
-STANDARD CONTROL BOX (SC)
-MOUNTING BRACKET
-27" METAL COVER (CL27)
-STANDARD ARM (3077T)
-STANDARD TRACK w/TRACK ROLLER
-WOOD and MACHINE SCREW PACK
Unless options listed below are selected.

OPERATOR OPTIONS

COVER

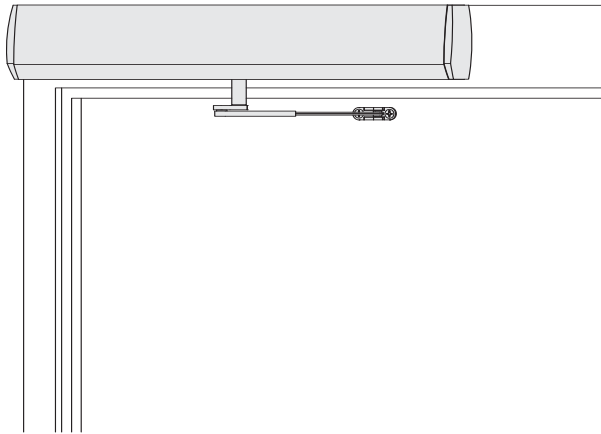
- 36" Full Cover

SPECIAL TEMPLATE

- ST-_____

LCN 9140 SERIES

SINGLE DOOR, SURFACE MOUNT (PUSH) OFFSET PIVOT/BUTT HINGE



The 9140 BENCHMARK by LCN is an electrically powered low-energy operator. It provides easy access for people with disabilities, the elderly or the frail. Designed primarily for automatic opening applications that occasionally require manual opening. The BENCHMARK is a cost-effective solution for retrofitting an activated or manual door.

- ▶ **Push 'N Go permits non-switch activation**
- ▶ **Microprocessor control box ensures reliability and maintains customer settings**
- ▶ **Power Boost allows for increased closing force near latch**

- ▶ 9140 series operator is shipped with motor gearbox, control box, mounting plate, regular arm, metal cover, standard track, wood and machine screw pack. Actuators available separately, see page 121.
- ▶ Single interior door, surface mounted.
- ▶ ADA compliant.
- ▶ On/Off switch included as standard.
- ▶ Non-handed for either right or left swinging door.
- ▶ 27" cover is standard, 36" optional.
- ▶ All potentiometers clearly labeled with their functions.
- ▶ LED lights indicate power to control box and motor gearbox.

9140 Series is fully compliant with UL 325 and meets the provisions of ANSI A156.19. The 9140 Series is UL listed for fire-rated applications. The 9140 Series also meets the provisions of the Americans with Disabilities Act.

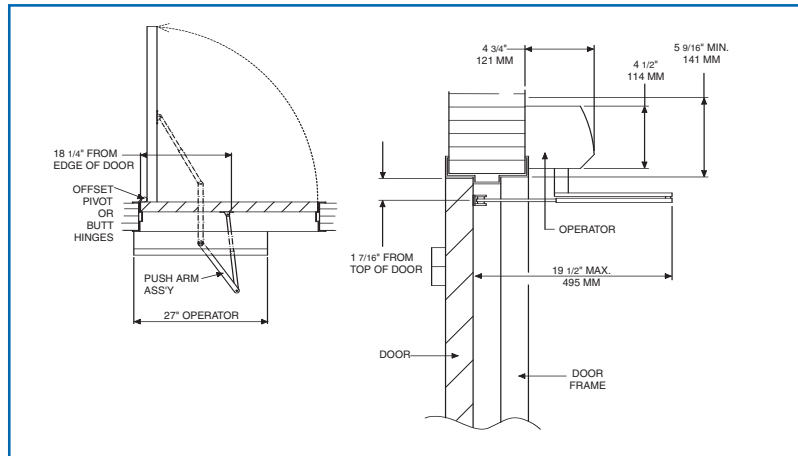
MOUNTING			HANDING			FINISH		COVER		ARM FUNCTION		
●	○	○	○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○	○	○	○
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● AVAILABLE
○ NOT AVAILABLE

LCN 9140 SERIES

MOUNTING DETAILS

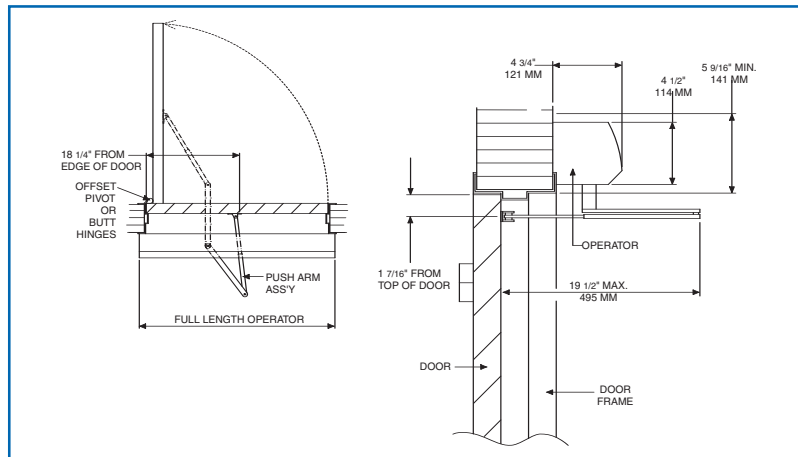
TOP JAMB SINGLE DOOR (OFFSET/BUTT HINGE, CENTER PIVOT, PULL, STANDARD COVER) MOUNTING



TOP JAMB SINGLE DOOR (OFFSET/BUTT HINGE, CENTER PIVOT, PULL, FULL COVER) MOUNTING

MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.



- ▶ **Butt Hinges** should not exceed 5" (127 mm) in width.
- ▶ **Reveal** for push installations should not exceed 6" (152 mm) for REGULAR ARM and 9 3/4" (248 mm) for LONG ARM.
- ▶ **Head Frame** minimum 2" (51 mm).
- ▶ **Top Rail** minimum 2" (51 mm). Flush ceiling installation requires 5 1/4" (133 mm) minimum.
- ▶ **Opening and Closing Time** are variable by adjustments to the electronic control module located on the operator assembly. Maximum hold open time adjustable up to approximately 30 seconds.
- ▶ **System Diagram** see "AUTOMATIC OPERATORS" section pages 52-54 for typical system wiring and page 55 for electrical data.
- ▶ Please consult your local SSC representative or LCN for assistance with specific installations and material requirements.

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

LCN 9140 SERIES

MOTOR GEARBOX

MOTOR GEARBOX ASSEMBLY, 9140-3454S

Driving mechanism for operator. For 27" unit. Switch included.

MOTOR GEARBOX ASSEMBLY (W/O SWITCH), 9140-3454

Driving mechanism for operator. For full length unit. Switch not included.

BRACKETS

MOUNTING BRACKET, 9140-3018

Standard mounting bracket.

SWITCH BRACKET – 29" CABLE, 9140-3351-1

Bracket used to locate switch at end of cover on full length unit.

SWITCH BRACKET – 41" CABLE, 9140-3351-2

Bracket used to locate switch at end of cover on full length unit.

SWITCH BRACKET – 51" CABLE, 9140-3351-3

Bracket used to locate switch at end of cover on full length unit.

CONTROL BOXES

CONTROL BOX, (120v), 9140-3462

Electronic controlling device with power supply output and power boost feature for Benchmark.

COVERS

METAL COVER, 9140-72MC

Standard, 27", non-handed, extruded aluminum cover.

FULL METAL COVER, 9140-72FC

36" Full length, non-handed, extruded aluminum cover.

COVER INSERT 9140-163

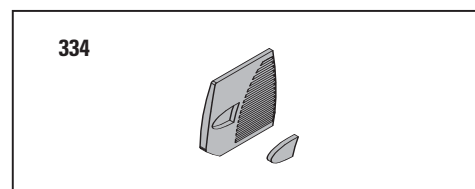
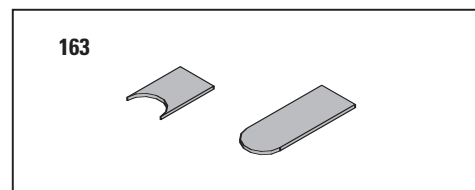
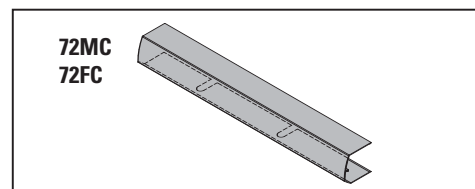
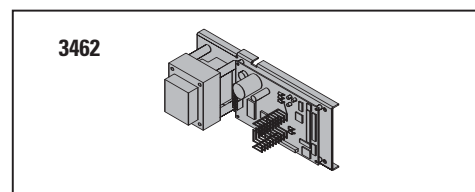
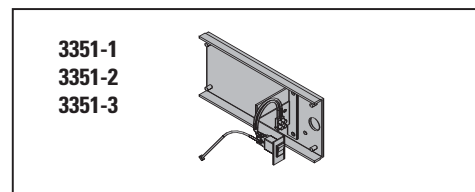
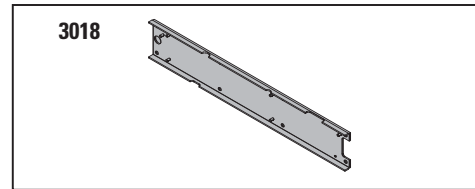
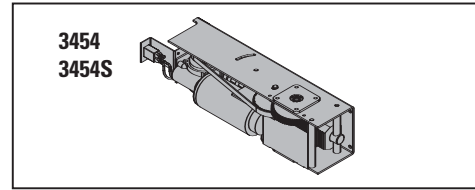
Used to cover operator shaft opening.

COVER END CAP INSERT, 9140-163-1

Used to cover switch hole opening.

COVER END CAP, 9140-334

Black plastic end caps.



LCN 9140 SERIES

ARMS

REGULAR ARM, 9140-3077

Non-handed arm.

LONG PUSH ARM, 9140-3077L

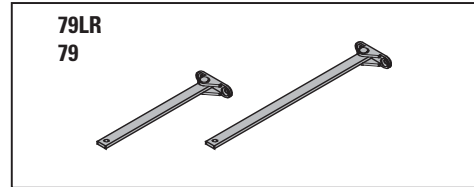
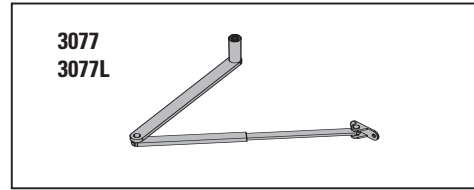
Non-handed long arm.

ROD & SHOE, 9140-79

Rod for use with regular arm.

LONG ROD & SHOE, 9140-79LR

Long rod for use with long arm.

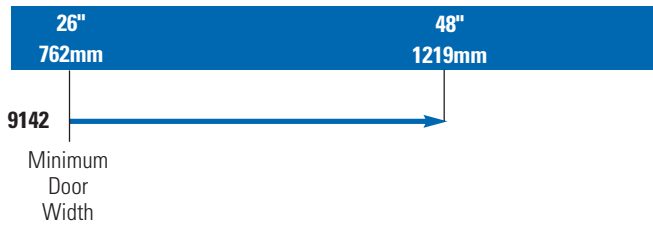


LCN 9140 SERIES

TABLE OF SIZES

→ Indicates recommended range of door width for operator.
Note: For All Benchmark Series
26" minimum door width for 27" push operator
36" minimum door width for full length push operator

DOOR WIDTH



HOW-TO-ORDER 9140 SERIES OPERATORS

1. SPECIFY FINISH.

- Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator will be shipped with:

- STANDARD MOTOR GEARBOX (SF)
- STANDARD CONTROL BOX (SC)
- MOUNTING BRACKET
- 27" METAL COVER (CL27)
- REGULAR ARM (3077)
- WOOD and MACHINE SCREW PACK

Unless options listed below are selected.

OPERATOR OPTIONS

COVER

- 36" Full Cover

ARM

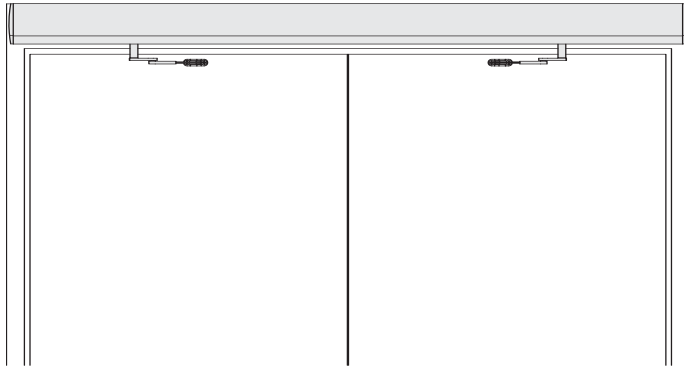
- Long Arm (3077L)
(reveals 6" to 9 3/4")

SPECIAL TEMPLATE

- ST-_____

LCN 9150 SERIES

PAIR DOOR, SURFACE MOUNT (PUSH) OFFSET PIVOT/BUTT HINGE

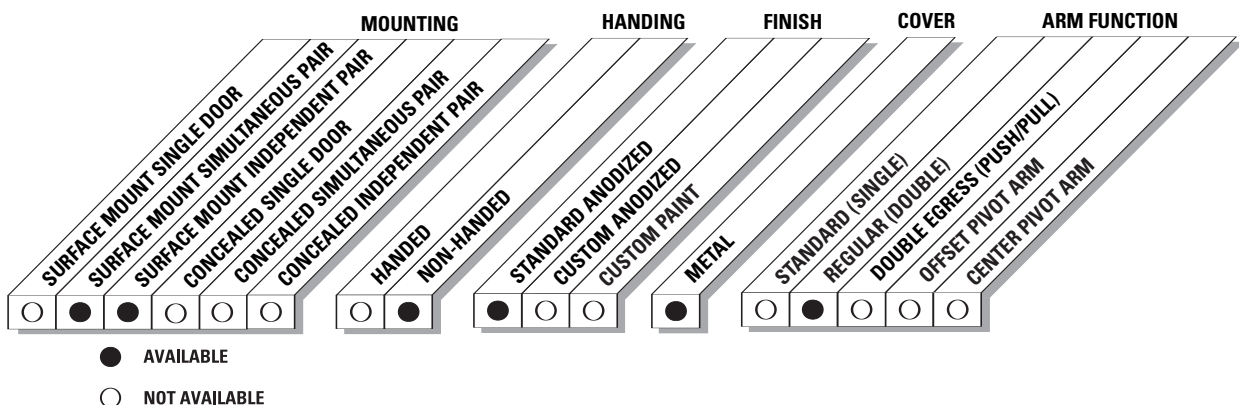


The 9150 BENCHMARK by LCN is an electrically powered low-energy operator. It provides easy access for people with disabilities, the elderly or the frail. Designed primarily for automatic opening applications that occasionally require manual opening. The BENCHMARK is a cost-effective solution for retrofitting an activated or manual door.

- ▶ **Push 'N Go permits non-switch activation**
- ▶ **Microprocessor control box ensures reliability and maintains customer settings**
- ▶ **Power Boost allows for increased closing force near latch**

- ▶ 9150 series operator is shipped with motor gearboxes, control boxes, mounting plate, regular arms, metal cover, wood and machine screw packs. Actuators available separately, see page 121.
- ▶ Pair of interior doors, surface mounted.
- ▶ ADA compliant.
- ▶ On/Off switch included as standard.
- ▶ Non-handed for either right or left swinging door.
- ▶ 72" cover is standard, 96" is optional.
- ▶ All potentiometers clearly labeled with their functions.
- ▶ LED lights indicate power to control box and motor gearbox.

9150 Series is fully compliant with UL 325 and meets the provisions of ANSI A156.19. The 9150 Series is UL listed for fire-rated applications. The 9150 Series also meets the provisions of the Americans with Disabilities Act.

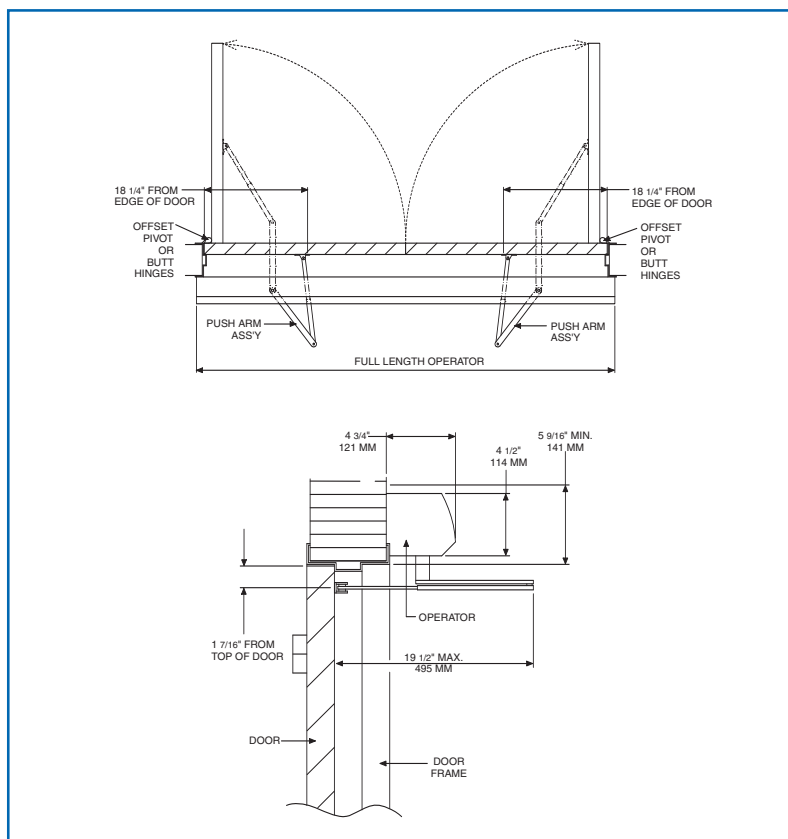


LCN 9150 SERIES

MOUNTING DETAILS

TOP JAMB, INDEPENDENT/SIMULTANEOUS PAIR (OFFSET PIVOT/BUTT HINGE, CENTER PIVOT, PUSH) MOUNTING

Determined by wiring method during installation.



MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

- ▶ **Butt Hinges** should not exceed 5" (127 mm) in width.
- ▶ **Reveal** for push installations should not exceed 6" (152 mm) for REGULAR ARM and 9 3/4" (248 mm) for LONG ARM.
- ▶ **Head Frame** minimum 2" (51 mm).
- ▶ **Top Rail** minimum 2" (51 mm). Flush ceiling installation requires 5 1/4" (133 mm) minimum.
- ▶ **Opening and Closing Time** are variable by adjustments to the electronic control module located on the operator assembly. Maximum hold open time adjustable up to approximately 30 seconds.
- ▶ **System Diagram** see "AUTOMATIC OPERATORS" section pages 52-54 for typical system wiring and page 55 for electrical data.
- ▶ Please consult your local SSC representative or LCN for assistance with specific installations and material requirements.

LCN 9150 SERIES

MOTOR GEARBOX

MOTOR GEARBOX ASSEMBLY, 9150-3454S

Driving mechanism for operator. For 27" unit. Switch included.

MOTOR GEARBOX ASSEMBLY (W/O SWITCH), 9150-3454

Driving mechanism for operator. For full length unit. Switch not included.

BRACKETS

MOUNTING BRACKET, 9150-3018

Standard mounting bracket.

CONTROL BOXES

CONTROL BOX, (120v), 9150-3462

Electronic controlling device with power supply output and power boost feature for Benchmark.

COVERS

METAL COVER, 9150-72MC

Standard, 72", non-handed, extruded aluminum cover.

FULL METAL COVER, 9150-72FC

96" Full length, non-handed, extruded aluminum cover.

COVER INSERT 9150-163

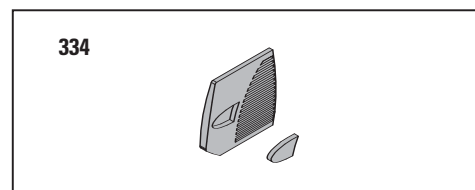
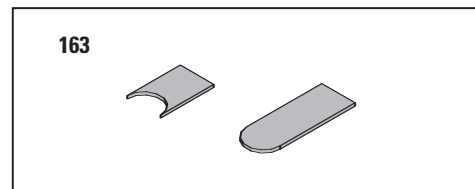
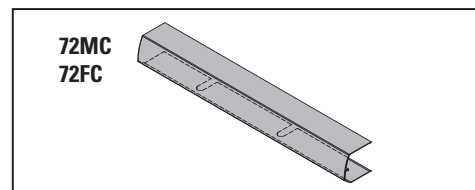
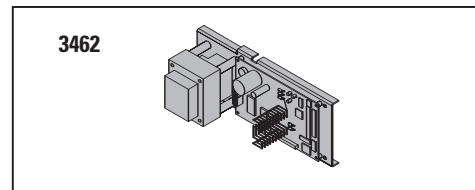
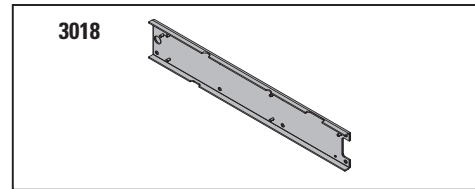
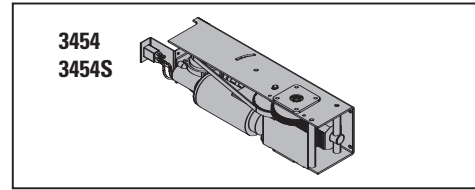
Used to cover operator shaft opening.

COVER END CAP INSERT, 9150-163-1

Used to cover switch hole opening.

COVER END CAP, 9150-334

Black plastic end caps.



LCN 9150 SERIES

ARMS

REGULAR ARM, 9140-3077

Non-handed arm.

LONG ARM, 9140-3077L

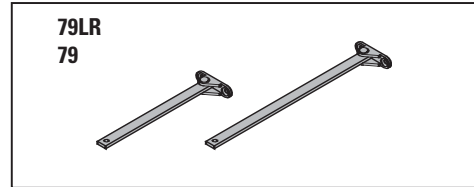
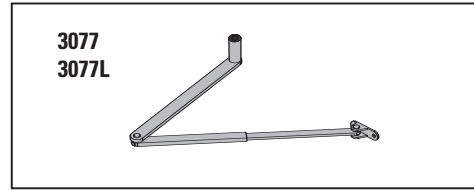
Non-handed long arm.

ROD & SHOE, 9140-79

Rod for use with regular arm.

LONG ROD & SHOE, 9140-79LR

Long rod for use with long arm.



LCN 9150 SERIES

TABLE OF SIZES

→ Indicates recommended range of door width for operator.
Note: For All Benchmark Series
52" minimum door width for full length push double door operator.

DOOR WIDTH



HOW-TO-ORDER 9150 SERIES OPERATORS

1. SPECIFY FINISH.

- Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator will be shipped with:

- STANDARD MOTOR GEARBOX (2 ea) (SF)
 - STANDARD CONTROL BOX (2 ea.) (SC)
 - MOUNTING BRACKET (2 ea.)
 - 72" METAL COVER (CL72)
 - REGULAR ARMS (2 ea.) (3077)
 - WOOD and MACHINE SCREW PACK
- Unless options listed below are selected.

OPERATOR OPTIONS

COVER

- 96" Full Length Cover

ARM

- Long Arm (3077L)
(reveals 6" to 9 3/4")

SPECIAL TEMPLATE

- ST-_____

LCN SENIOR SWING UNIQUE FEATURES

Digital Control Suite

Provides exceptionally precise control of a large range of built-in functions combined with superior durability and performance. Visual indications and digital readouts of all control function settings and activity make adjustments easy, fast and accurate.

Dual Independent Program Memories

Each unit is pre-programmed to factory default settings. The installer can adjust the unit to meet the job site requirements. These field settings are locked into the computer's memory. Any subsequent field adjustments replace the original field adjustments. The factory settings are always retained in memory and can be recalled to replace the field settings in just seconds, restoring the unit to its original programming.

On-Board Diagnostics

Sophisticated built-in diagnostics program monitors the system microprocessor, power supplies, drive systems and actuator and safety circuits. Reduces the time required to make sure the installation is complete and correct.

On-Board Power Supply

Provides 24V AC output or 24V DC output with rectifier to power card readers, manual actuators and other peripherals.

Plug and Play Sensors

Motion sensors and safety sensors feature a "plug and play" concept allowing fast and accurate wiring connections in only seconds.

Electronic Circuit Protection

High voltage (primary AC Input) is protected by replaceable fuse. Low voltage (secondary AC input) is protected by self-resetting fuses.

Visual Function Indicators

LED's allow direct observation of these inputs while in visual function indicator mode:

- ▶ Key switch- set to Auto, OFF or HOLD
- ▶ Activate
- ▶ DMSS approach
- ▶ DMSS safety
- ▶ Bodyguard
- ▶ Power Boost Disable

Programming Mode

Allows tailoring the following functions to meet specific site conditions

- ▶ Opening Speed
- ▶ Backcheck Speed
- ▶ Backcheck Position
- ▶ Hold Open Delay
- ▶ Latch Position
- ▶ Auto Reverse- Closing
- ▶ Electric Lock Delay
- ▶ Power Boost
- ▶ Push 'N' Go
- ▶ Alternate Action
- ▶ Safety Slow/Stop
- ▶ Slow Down Disable

Push 'N Go

Allows pedestrians to walk up to the door and push it open as if it were a manual door. After the door is manually opened approximately 5 degrees, the Push 'N Go feature takes over and continues to open the door – slowly and automatically to the full open position. With Push 'N Go, the door will stay fully open from one to 32 seconds, depending on the time delay chosen.

Auto Reverse

A safety feature that reverses the direction of the door when it comes into contact with an object during either opening or closing.

Safety Slow/Stops Function

Once the door starts opening, any person or object entering the swing area will cause the door to go into a safety slow speed. This function can be set to allow for a short stop once a person or object is sensed.

Power Boost

Adds an additional latching force to ensure secure latching in severe wind or stack conditions. Power Boost is also ideal for overcoming slowing obstacles such as electric strikes. Provides approximately 25 lbs. of additional closing force.

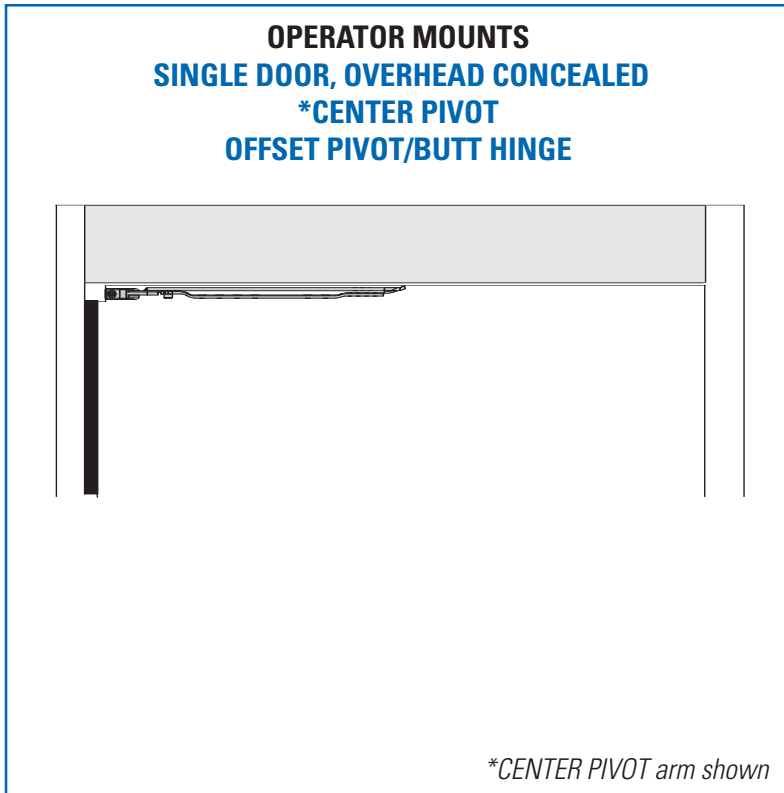
Microprocessor

Control unit allows for quiet efficiency in operation. Combined with the all electromechanical unit, it eliminates unnecessary wear and prolongs the life of the unit.

Electric Lock Delay

Causes a 1 second delay between activate signal and door opening to allow time for most electric locks to disengage before operator opens door.

LCN 2810 SERIES



The 2810 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operator when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

- ▶ **Push 'N Go** permits non-switch activation
- ▶ **Power Boost** provides additional latching force
- ▶ **Electromechanical unit with microprocessor control**
- ▶ **Meets International Building Code requirements and ANSI A156.19**
- ▶ **UL approved for fire doors**

- ▶ 2810 series operator is shipped with motor gearbox, control box, arm, bottom pivot, header, and mounting hardware. Actuators available separately, see page 121.
- ▶ Single door, overhead concealed.
- ▶ Meets ADA, requirements (power mode only).
- ▶ Handed product.
- ▶ 36" header length is standard. Specify length 33" to 49" max.
- ▶ Double door header available up to 98", specify length 49" to 98" max. Consult factory regarding this option.
- ▶ Fixed or breakaway stop available with center pivot arm.
- ▶ Adjustable hold open period of 1 to 32 seconds in automatic or manual mode.

2810 Series is fully compliant with UL 325 & UL 1998 and meets the provisions of ANSI A156.19. The 2810 Series is UL listed for fire-rated applications. The 2810 Series also meets the provisions of the Americans with Disabilities Act.

MOUNTING					HANDING			FINISH		COVER		ARM FUNCTION		
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	
SURFACE MOUNT SINGLE DOOR					HANDED			METAL		STANDARD (SINGLE)		REGULAR (DOUBLE)		
SURFACE MOUNT SIMULTANEOUS PAIR					NON-HANDED			STANDARD ANODIZED		REGULAR (DOUBLE)		OFFSET PIVOT (PUSH/PULL)		
CONCEALED MOUNT INDEPENDENT PAIR								CUSTOM ANODIZED		DOUBLE EGRESS		CENTER PIVOT ARM		
CONCEALED SINGLE DOOR								CUSTOM PAINT		OFFSET PIVOT ARM				
CONCEALED SIMULTANEOUS PAIR										CENTER PIVOT ARM				
CONCEALED INDEPENDENT PAIR														

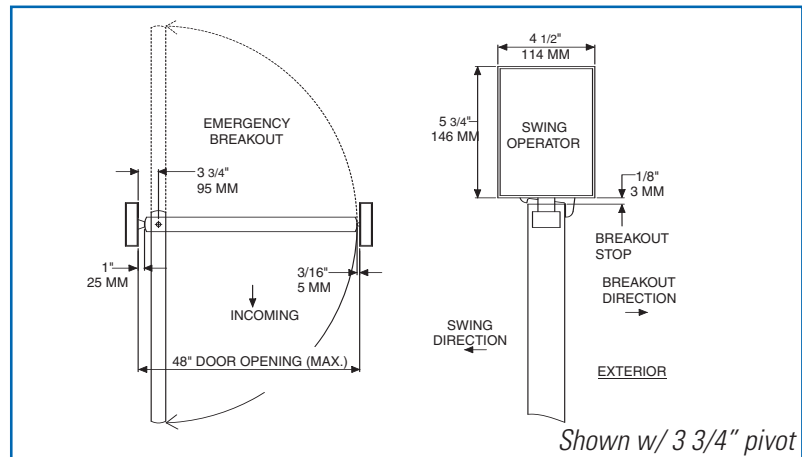
AVAILABLE
 NOT AVAILABLE

LCN 2810 SERIES

MOUNTING DETAILS

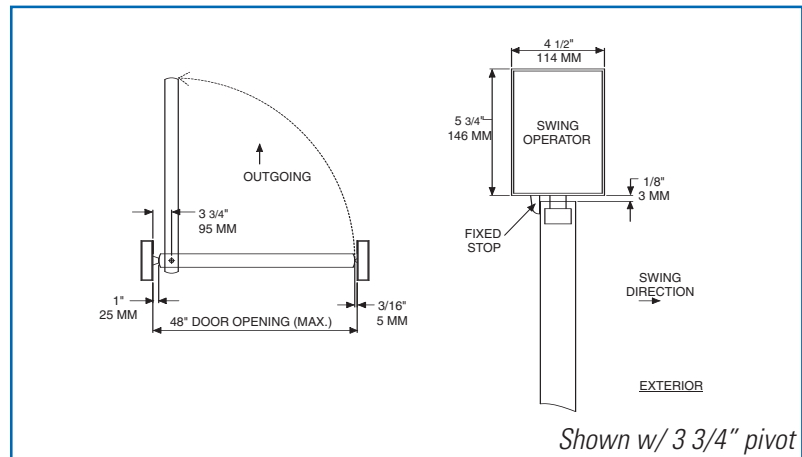
CONCEALED SINGLE DOOR (CENTER PIVOT, EMERGENCY BREAKOUT, PULL) MOUNTING

Minimum header length 36".



CONCEALED SINGLE DOOR (CENTER PIVOT, FIXED STOP, PUSH) MOUNTING

Minimum header length 36".



MAXIMUM OPENING

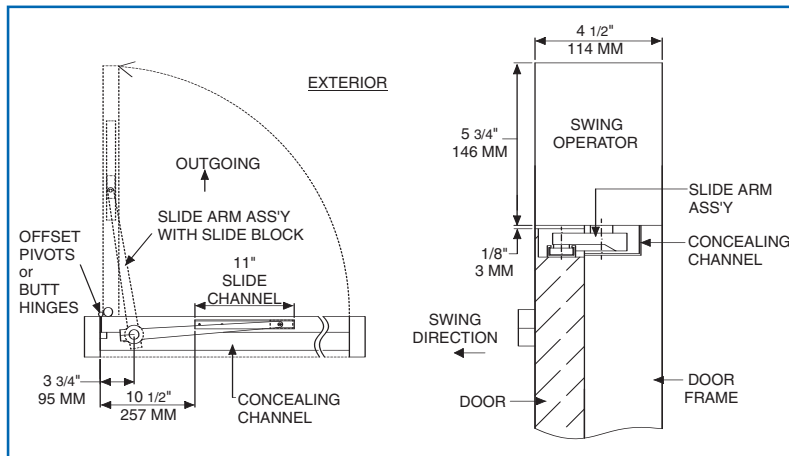
Template allows 90 degree power opening and 90 degree manual opening.

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

- ▶ **Head Frame** minimum 36" (L) x 5 3/4" (H) x 4 1/2" (W) " (914 mm x 146 mm x 114 mm).
- ▶ **Top Rail** minimum 2" (51 mm).
- ▶ **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- ▶ **Door Stop** required for each door panel.
- ▶ **System Diagram** see "AUTOMATIC OPERATORS" section pages 52-54 for typical system wiring and page 55 for electrical data.
- ▶ Please consult your local SSC representative or LCN for assistance with specific installations and material requirements.

LCN 2810 SERIES



CONCEALED SINGLE DOOR (OFFSET PIVOT OR BUTT HINGE, SLIDE ARM, PUSH) MOUNTING

Minimum header length 33".

Installations require bottom pivot and two intermediate pivots.

- ▶ **Head Frame** minimum 33" (L) x 5 3/4" (H) x 4 1/2" (W) " (838 mm x 146 mm x 114 mm).
- ▶ **Top Rail** minimum 2" (51 mm).
- ▶ **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- ▶ **Door Stop** required for each door panel.
- ▶ **System Diagram** see "AUTOMATIC OPERATORS" section pages 52-54 for typical system wiring and page 55 for electrical data.
- ▶ Please consult your local SSC representative or LCN for assistance with specific installations and material requirements.

MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

Special Templates

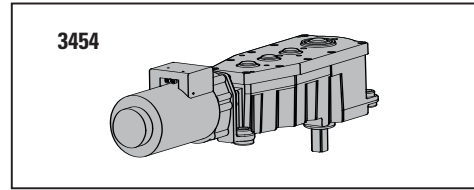
Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

LCN 2810 SERIES

MOTOR GEARBOX

MOTOR GEARBOX (STANDARD FORCE) – SENIOR SWING, 2810-3454

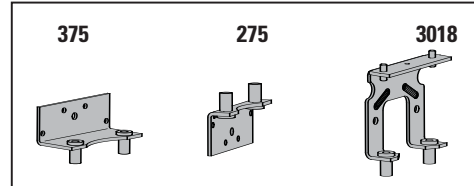
Driving mechanism for operator. Provides 15lbs opening force. Handed.



MOUNTING BRACKET

MOUNTING BRACKET – 3 3/4", 2810-375

Motor gearbox mounting bracket for 3 3/4" center, offset pivot, butt hinge installations. Front bracket.

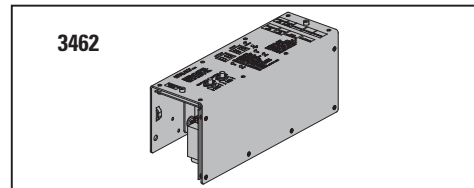


MOUNTING BRACKET – 2 3/4", 2810-275

Motor gearbox mounting bracket for 2 3/4" center pivot installations. Front bracket.

REAR MOUNT BRACKET, 2810-3018

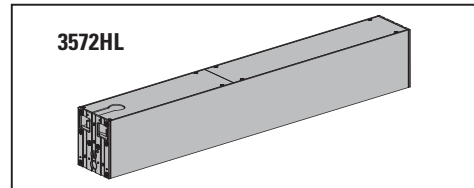
Motor gearbox mounting bracket. Rear bracket.



CONTROL BOXES

CONTROL BOX- SENIOR SWING, 2810-3462

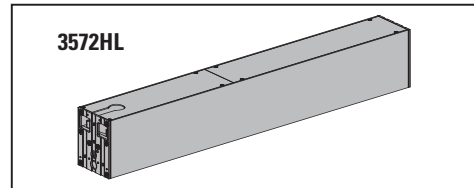
Electronic controlling device for Senior Swing.



HEADERS

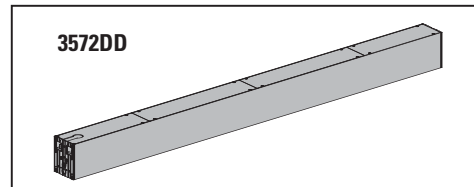
Header, 2810-3572HL

Standard, mounting header. Single door, single operator. Specify length 30" to 49" maximum.



Header, 2810-3572DD

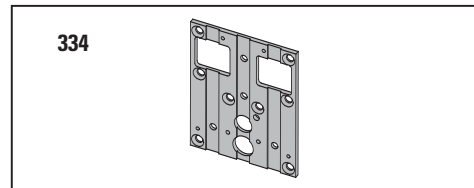
Standard, mounting header. Double door, single operator. Specify length 49" to 98" maximum.



END CAPS

HEADER END CAPS, 2810-334

End cap with openings for wiring.

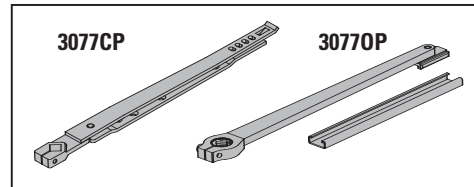


ARMS

CENTER PIVOT ARM, 2810-3077CP

(CENTER PIVOT INSTALLATIONS ONLY)

Used with overhead concealed operators and center pivoted doors.



OFFSET PIVOT ARM, 2810-3077OP

(OFFSET PIVOT OR BUTT HUNG INSTALLATIONS ONLY)

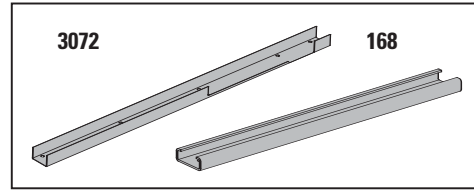
Handed arm. Used with overhead concealed operators.

LCN 2810 SERIES

CHANNELS

CONCEALING CHANNEL, 2810-3072

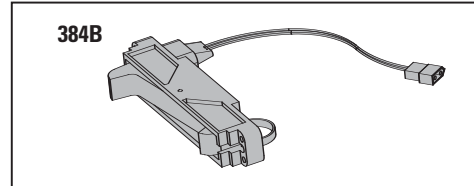
Used to conceal arm in overhead concealed applications. For offset pivot and butt hinges installations. If ordering separately specify length and hand.



SLIDE CHANNEL, 2810-168

(OFFSET PIVOT or BUTT HINGE INSTALLATIONS ONLY)

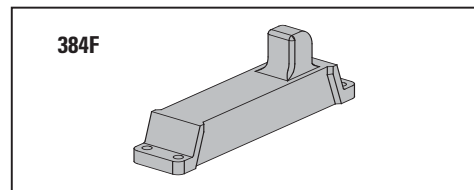
Mounts in concealing channel. Allows arm to slide.



INSTALLATION ACCESSORIES

DOOR STOP BREAKAWAY, 2810-384B

Allows in swinging door to swing out in case of emergency (Pull installations). For center pivoted installations only.

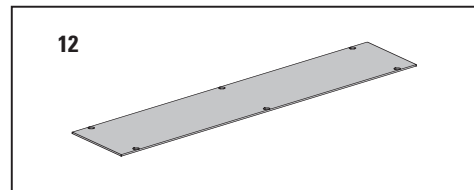


DOOR STOP FIXED, 2810-384F

Prevents out swinging door from swinging in (Push installations). For center pivoted installations only.

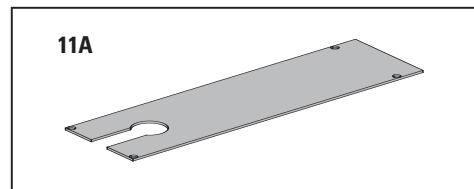
FILLER PLATE BLANK, 2810-12

Completes length of header box.



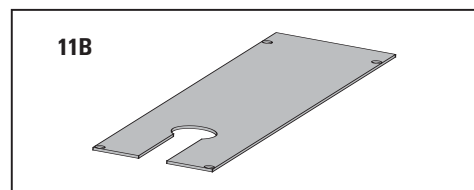
SPINDLE PLATE – 2 3/4", 2810-11A

Hides bottom of motor gearbox. Completes header box. Cutout allows for motor gearbox shaft. For 2 3/4" offset pivot/butt hinge installations.



SPINDLE PLATE – 3 3/4", 2810-11B

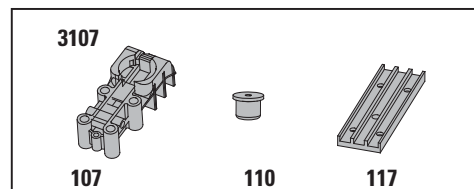
Hides bottom of motor gearbox. Completes header box. Cutout allows for motor gearbox shaft. For 3 3/4" center pivot installations.



PIVOTS

BOTTOM PIVOT ASSEMBLY, 2810-3107

Includes pivot body, pivot post and bottom pivot plate. For overhead concealed, center pivoted installations. Includes; 2810-107, 2810-110 and 2810-117.



PIVOT BODY, 2810-107

Bottom pivot body for center pivoted installations.

PIVOT POST, 2810-110

Connects pivot body to bottom pivot plate for center pivoted installations.

BOTTOM PIVOT PLATE, 2810-117

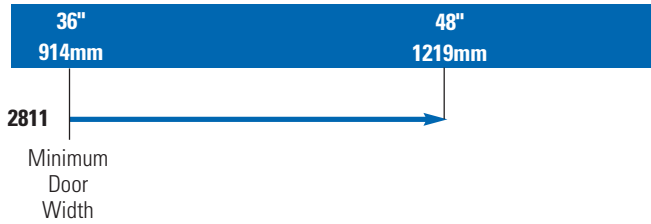
Applied to floor for center pivoted installations.

LCN 2810 SERIES

TABLE OF SIZES

→ Indicates recommended range of door width for operator.
 Note: For all Senior Swing Series
 Single Door - Width per leaf 36" minimum, 48" maximum

DOOR WIDTH



HOW-TO-ORDER 2810 SERIES OPERATORS

1. SELECT INSTALLATION TYPE

- 2811

2. ARMS

- Standard 3 3/4" (Offset pivoted) Arm (3077OP)
 Standard 2 3/4" (Center pivoted) Arm (3077CP)
 Standard 3 3/4" (Center pivoted) Arm (3077CP)

3. SPECIFY HAND

- RH
 LH

4. SPECIFY FINISH.

- Standard Anodized Finish _____
 Aluminum or Dark Bronze

Operator will be shipped with:

- STANDARD MOTOR GEARBOX (SF)
 - STANDARD CONTROL BOX (SC)
 - 36" HEADER (36HL)
 - 2 3/4" PIVOT POINT
 - WOOD and MACHINE SCREW PACK
- Unless options listed below are selected.*

OPERATOR OPTIONS

HEADER

- HL__ (Specify length 33" to 49" offset pivot)
 HL__ (Specify length 36" to 49" center pivot)
 DD__ (Specify length 49" to 98")

STOPS*

- Positive Mechanical Stop (POS)
 Panic Breakaway Stop (BKY)

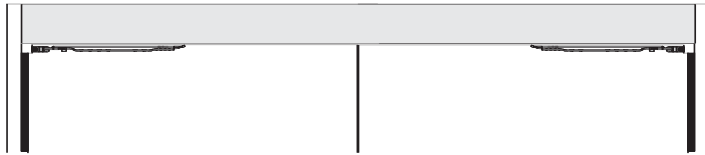
**Available with Center Pivoted installations only.*

SPECIAL TEMPLATE

- ST-_____

LCN 2850 SERIES

**OPERATOR MOUNTS
SIMULTANEOUS PAIR, OVERHEAD CONCEALED
*CENTER PIVOT
OFFSET PIVOT/BUTT HINGE**



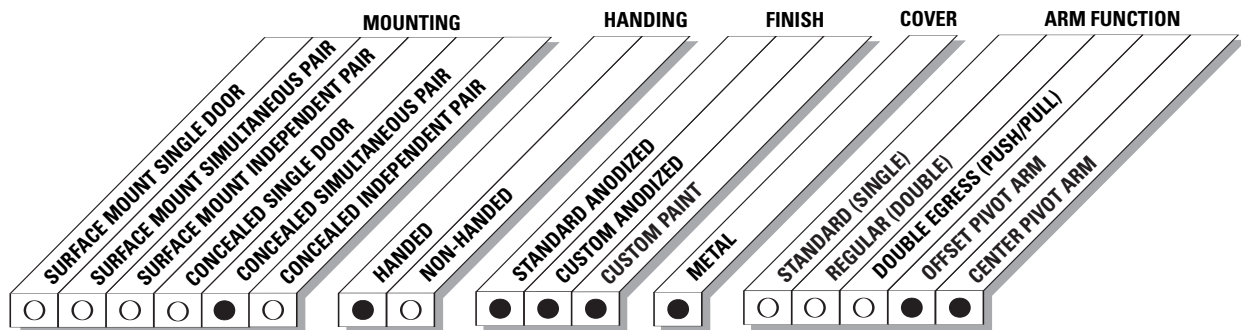
*CENTER PIVOT arm shown

The 2850 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operator when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

- ▶ **Push 'N Go** permits non-switch activation
- ▶ **Power Boost** provides additional latching force
- ▶ **Electromechanical unit** with microprocessor control
- ▶ **Digital keypad** for easy setup
- ▶ **Meets International Building Code requirements and ANSI A156.19**
- ▶ **UL approved for fire doors**

- ▶ 2850 series operator is shipped with motor gearbox, control box, arm, bottom pivot, header, and mounting hardware. Actuators available separately, see page 121.
- ▶ Simultaneous pair, overhead concealed.
- ▶ Meets ADA, requirements (power mode only).
- ▶ Handed product.
- ▶ 72" header length is standard. Specify other length 60" to 98" max. Consult factory regarding this option.
- ▶ Fixed or breakaway stop available (center pivot arm).
- ▶ Adjustable hold open period of 1 to 32 seconds in automatic or manual mode.

2850 Series is fully compliant with UL 325 & UL 1998 and meets the provisions of ANSI A156.19. The 2850 Series is UL listed for fire-rated applications. The 2850 Series also meets the provisions of the Americans with Disabilities Act.



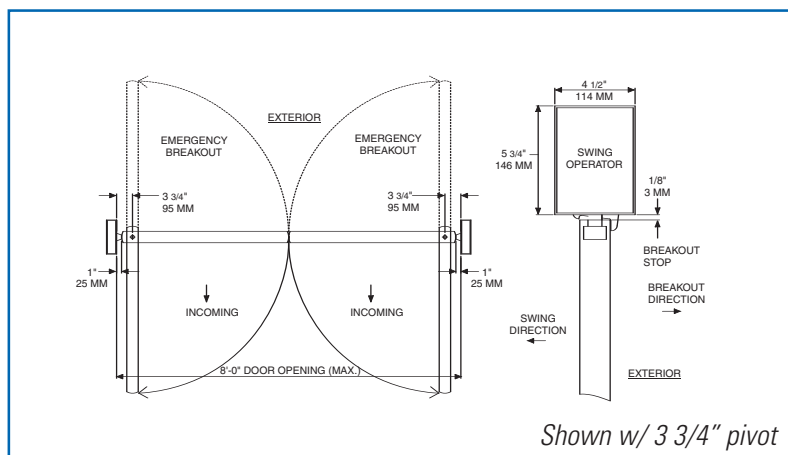
● AVAILABLE
○ NOT AVAILABLE

LCN 2850 SERIES

MOUNTING DETAILS

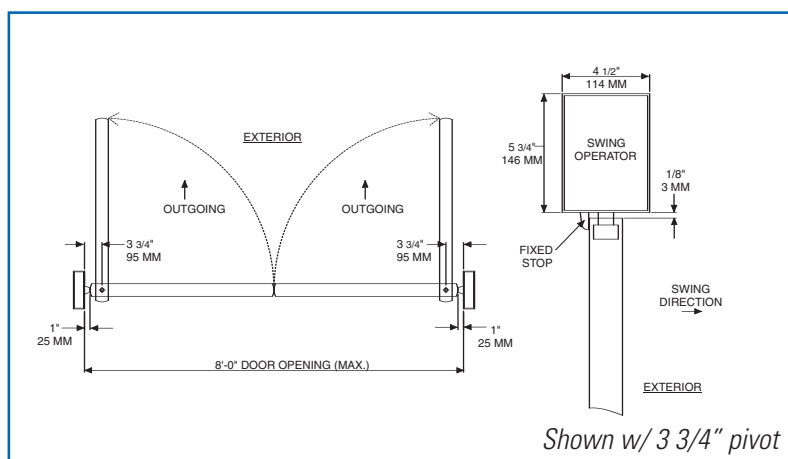
CONCEALED SIMULTANEOUS PAIR (CENTER PIVOT, EMERGENCY BREAK OUT, PULL) MOUNTING

Minimum header length 60" and 70" with stops.



CONCEALED SIMULTANEOUS PAIR (CENTER PIVOT, FIXED STOP, PUSH) MOUNTING

Minimum header length 60" and 70" with stops.



MAXIMUM OPENING

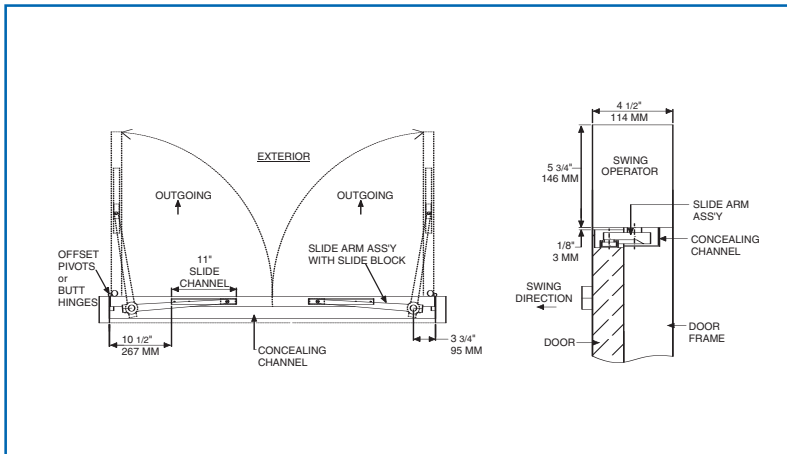
Template allows 90 degree power opening and 90 degree manual opening.

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

- ▶ **Head Frame** minimum 60" (L) x 5 3/4" (H) x 4 1/2" (W) " (1524 mm x 146 mm x 114 mm).
- ▶ **Top Rail** minimum 2" (51 mm).
- ▶ **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- ▶ **Door Stop** required for each door panel.
- ▶ **System Diagram** see "AUTOMATIC OPERATORS" section pages 52-54 for typical system wiring and page 55 for electrical data.
- ▶ Please consult your local SSC representative or LCN for assistance with specific installations and material requirements.

LCN 2850 SERIES



CONCEALED SIMULTANEOUS PAIR (OFFSET PIVOT/BUTT HINGE, PUSH) MOUNTING

Installations require bottom pivot and two intermediate pivots.

- ▶ **Head Frame** minimum 60" (L) x 5 3/4" (H) x 4 1/2" (W) " (1524 mm x 146 mm x 114 mm).
- ▶ **Top Rail** minimum 2" (51 mm).
- ▶ **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- ▶ **Door Stop** required for each door panel.
- ▶ **System Diagram** see "AUTOMATIC OPERATORS" section pages 52-54 for typical system wiring and page 55 for electrical data.
- ▶ Please consult your local SSC representative or LCN for assistance with specific installations and material requirements

MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

Special Templates

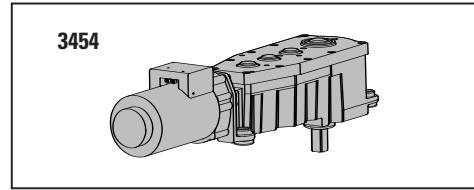
Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

LCN 2850 SERIES

MOTOR GEARBOX

MOTOR GEARBOX (STANDARD FORCE) – SENIOR SWING, 2850-3454

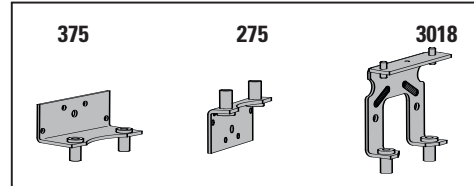
Driving mechanism for operator. Provides 15lbs opening force. Handed.



MOUNTING BRACKET

MOUNTING BRACKET – 3 3/4", 2850-375

Motor gearbox mounting bracket for 3 3/4" center, offset pivot, butt hinge installations. Front bracket.

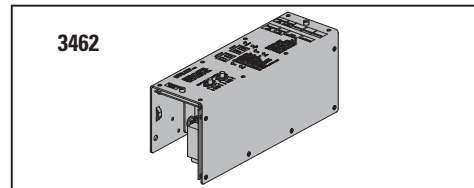


MOUNTING BRACKET – 2 3/4", 2850-275

Motor gearbox mounting bracket for 2 3/4" center pivot installations. Front bracket.

REAR MOUNT BRACKET, 2850-3018

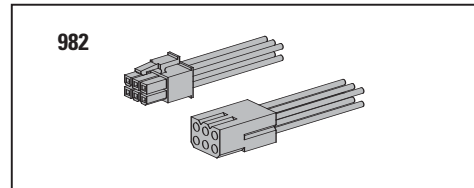
Motor gearbox mounting bracket. Rear bracket.



CONTROL BOXES

CONTROL BOX- SENIOR SWING, 2850-3462

Electronic controlling device for Senior Swing.



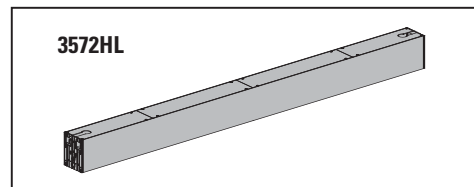
COMPANION CABLE, 2850-982

Cable that allows one control box to run two motor gearboxes. For use with Senior Swing.

HEADERS

HEADER, 2850-3572HL

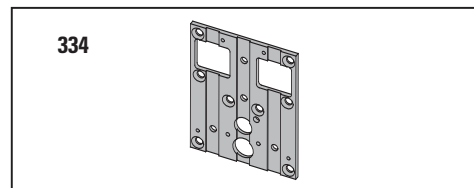
Standard, mounting header. Pair door, two operators. Specify length 60" to 98" maximum.



END CAPS

HEADER END CAPS, 2850-334

End cap with openings for wiring.



ARMS

CENTER PIVOT ARM, 2810-3077CP

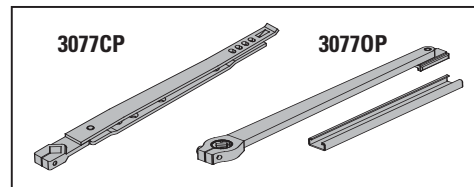
(CENTER PIVOT INSTALLATIONS ONLY)

Used with overhead concealed operators and center pivoted doors.

OFFSET PIVOT ARM, 2810-3077OP

(OFFSET PIVOT OR BUTT HUNG INSTALLATIONS ONLY)

Handed arm. Used with overhead concealed operators.

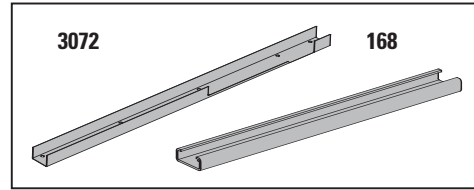


LCN 2850 SERIES

CHANNELS

CONCEALING CHANNEL, 2850-3072

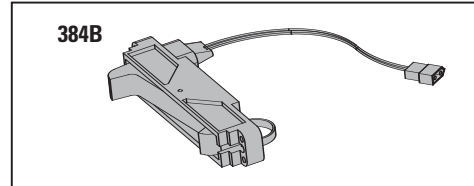
Used to conceal arm in overhead concealed applications. For offset pivot and butt hinges installations. If ordering separately specify length and hand.



SLIDE CHANNEL, 2810-168

(OFFSET PIVOT or BUTT HINGE INSTALLATIONS ONLY)

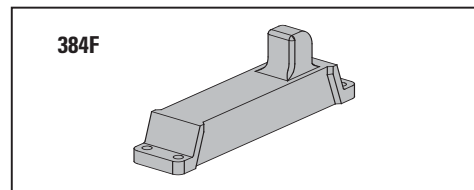
Mounts in concealing channel. Allows arm to slide.



INSTALLATION ACCESSORIES

DOOR STOP BREAKAWAY, 2850-384B

Allows in swinging door to swing out in case of emergency (Pull installations). For center pivoted installations only.

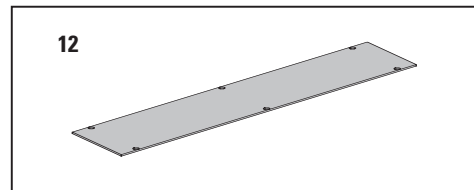


DOOR STOP FIXED, 2850-384F

Prevents out swinging door from swinging in (Push installations). For center pivoted installations only.

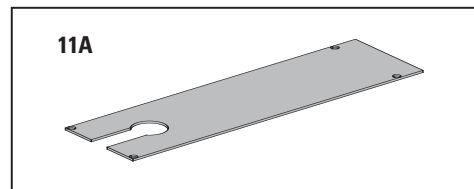
FILLER PLATE BLANK, 2850-12

Completes length of header box.



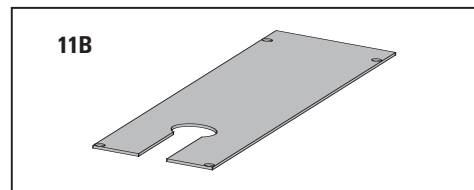
SPINDLE PLATE – 2 3/4", 2850-11A

Hides bottom of motor gearbox. Completes header box. Cutout allows for motor gearbox shaft. For 2 3/4" offset pivot/butt hinge installations.



SPINDLE PLATE – 3 3/4", 2850-11B

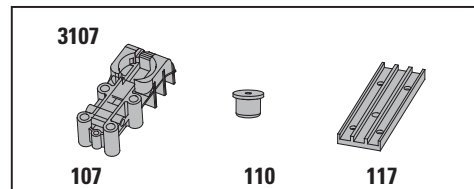
Hides bottom of motor gearbox. Completes header box. Cutout allows for motor gearbox shaft. For 3 3/4" center pivot installations.



PIVOTS

BOTTOM PIVOT ASSEMBLY, 2850-3107

Includes pivot body, pivot post and bottom pivot plate. For overhead concealed, center pivoted installations. Includes; 2850-107, 2850-110 and 2850-117.



PIVOT BODY, 2850-107

Bottom pivot body for center pivoted installations.

PIVOT POST, 2850-110

Connects pivot body to bottom pivot plate for center pivoted installations.

BOTTOM PIVOT PLATE, 2850-117

Applied to floor for center pivoted installations.

LCN 2850 SERIES

TABLE OF SIZES

→ Indicates recommended range of door width for operator.
 Note: For all Senior Swing Series
 Simultaneous Pair – Width per leaf 30" minimum to 48" maximum

DOOR WIDTH



HOW-TO-ORDER 2850 SERIES OPERATORS

1. SELECT INSTALLATION TYPE

2853

2. ARMS

- Standard 3 3/4" (Offset pivoted) Arm (3077OP)
- Standard 2 3/4" (Center pivoted) Arm (3077CP)
- Standard 3 3/4" (Center pivoted) Arm (3077CP)

3. SPECIFY FINISH.

- Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator will be shipped with:

-STANDARD MOTOR GEARBOX (SF) (1 LH & 1 RH)
 -STANDARD CONTROL BOX (SC)
 -COMPANION CABLE
 -72" HEADER (72HL)
 -2 3/4" PIVOT POINT
 -WOOD and MACHINE SCREW PACK
 Unless options listed below are selected.

OPERATOR OPTIONS

HEADER

- HL__ (Specify length 60" to 98")

STOPS*

- Pair Positive Mechanical Stop (POS)
- Pair Panic Breakaway Stop (BKY)

*Available with Center Pivoted installations only.

SPECIAL TEMPLATE

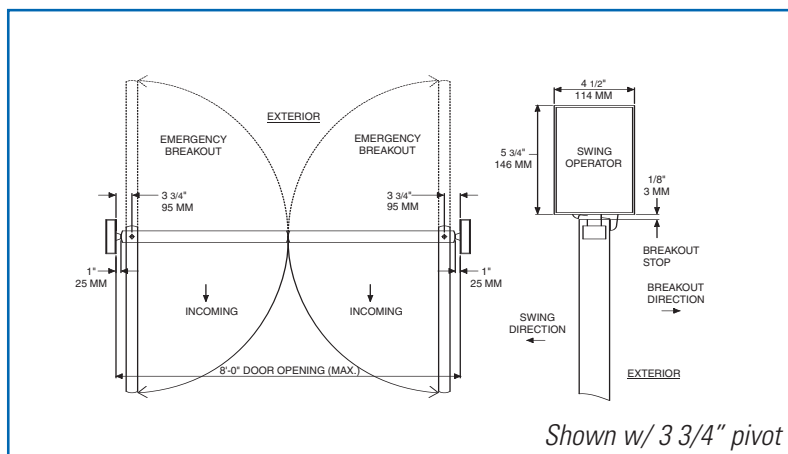
- ST-_____

LCN 2860 SERIES

MOUNTING DETAILS

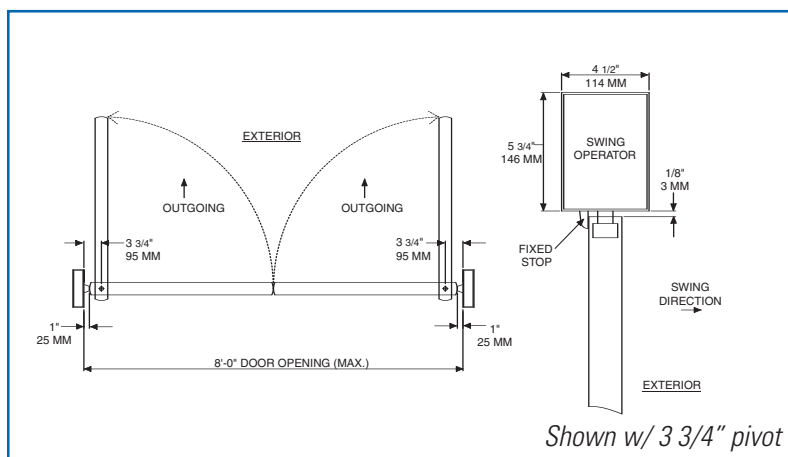
CONCEALED INDEPENDENT PAIR (CENTER PIVOT, EMERGENCY BREAK OUT, PULL) MOUNTING

Minimum header length 65" and 70" with stops.



CONCEALED INDEPENDENT PAIR (CENTER PIVOT, FIXED STOP, PUSH) MOUNTING

Minimum header length 65" and 70" with stops.



MAXIMUM OPENING

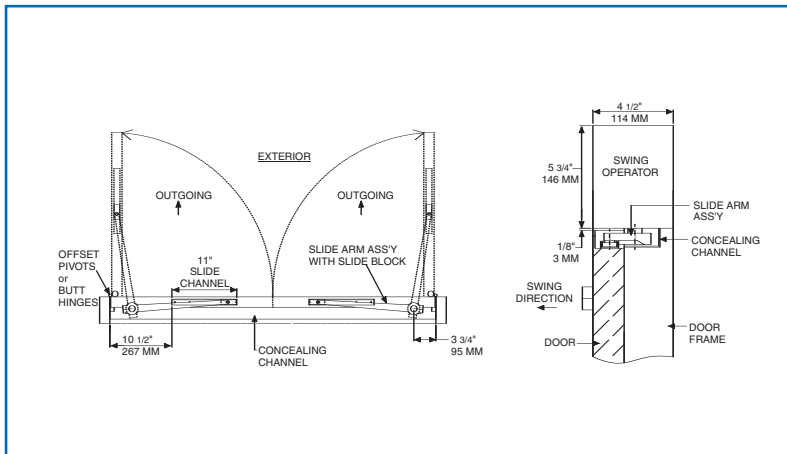
Template allows 90 degree power opening and 90 degree manual opening.

- ▶ **Head Frame** minimum 65" (L) x 5 3/4" (H) x 4 1/2" (W) " (1651 mm x 146 mm x 114 mm).
- ▶ **Top Rail** minimum 2" (51 mm).
- ▶ **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- ▶ **Door Stop** required for each door panel.
- ▶ **System Diagram** see "AUTOMATIC OPERATORS" section pages 52-54 for typical system wiring and page 55 for electrical data.
- ▶ Please consult your local SSC representative or LCN for assistance with specific installations and material requirements

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

LCN 2860 SERIES



CONCEALED INDEPENDENT PAIR (OFFSET PIVOT/BUTT HINGE, PUSH) MOUNTING

Installations require bottom pivot and two intermediate pivots.

- ▶ **Head Frame** minimum 65" (L) x 5 3/4" (H) x 4 1/2" (W) " (1651 mm x 146 mm x 114 mm).
- ▶ **Top Rail** minimum 2" (51 mm).
- ▶ **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- ▶ **Door Stop** required for each door panel.
- ▶ **System Diagram** see "AUTOMATIC OPERATORS" section pages 52-54 for typical system wiring and page 55 for electrical data.
- ▶ Please consult your local SSC representative or LCN for assistance with specific installations and material requirements

MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

Special Templates

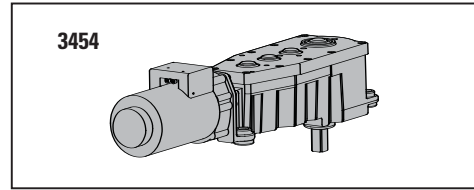
Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

LCN 2860 SERIES

MOTOR GEARBOX

MOTOR GEARBOX (STANDARD FORCE) – SENIOR SWING, 2860-3454

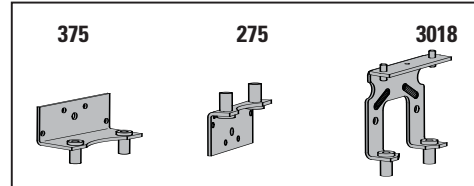
Driving mechanism for operator. Provides 15lbs opening force. Handed.



MOUNTING BRACKET

MOUNTING BRACKET – 3 3/4", 2860-375

Motor gearbox mounting bracket for 3 3/4" center, offset pivot, butt hinge installations. Front bracket.

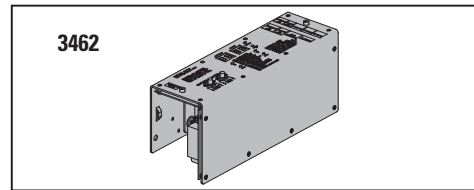


MOUNTING BRACKET – 2 3/4", 2860-275

Motor gearbox mounting bracket for 2 3/4" center pivot installations. Front bracket.

REAR MOUNT BRACKET, 2860-3018

Motor gearbox mounting bracket. Rear bracket.



CONTROL BOXES

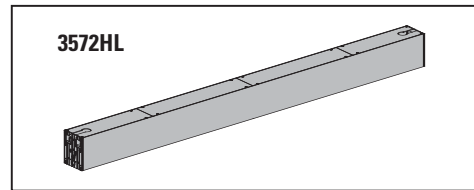
CONTROL BOX- SENIOR SWING, 2860-3462

Electronic controlling device for Senior Swing.

HEADERS

HEADER, 2860-3572HL

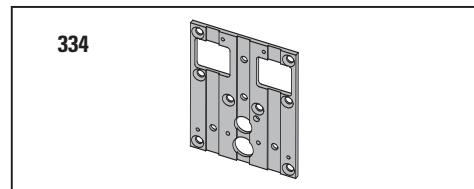
Standard, mounting header. Pair door, two operators. Specify length 65" to 98" maximum.



END CAPS

HEADER END CAPS, 2860-334

End cap with openings for wiring.



ARMS

CENTER PIVOT ARM, 2810-3077CP

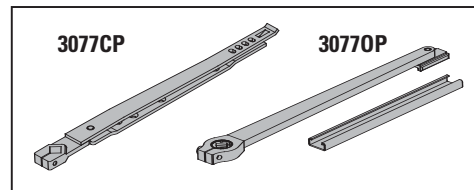
(CENTER PIVOT INSTALLATIONS ONLY)

Used with overhead concealed operators and center pivoted doors.

OFFSET PIVOT ARM, 2810-3077OP

(OFFSET PIVOT OR BUTT HUNG INSTALLATIONS ONLY)

Handed arm. Used with overhead concealed operators.

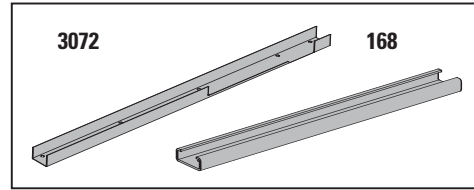


LCN 2860 SERIES

CHANNELS

CONCEALING CHANNEL, 2860-3072

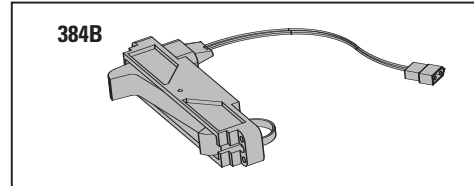
Used to conceal arm in overhead concealed applications. For offset pivot and butt hinges installations. If ordering separately specify length and hand.



SLIDE CHANNEL, 2810-168

(OFFSET PIVOT or BUTT HINGE INSTALLATIONS ONLY)

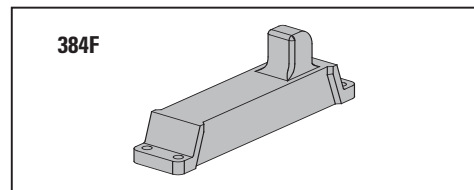
Mounts in concealing channel. Allows arm to slide.



INSTALLATION ACCESSORIES

DOOR STOP BREAKAWAY, 2860-384B

Allows in swinging door to swing out in case of emergency (Pull installations). For center pivoted installations only.

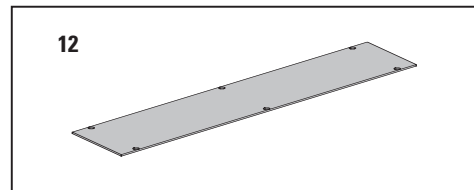


DOOR STOP FIXED, 2860-384F

Prevents out swinging door from swinging in (Push installations). For center pivoted installations only.

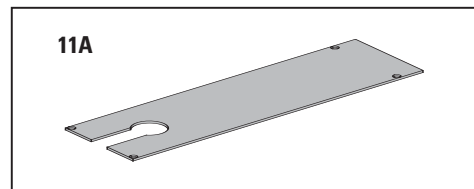
FILLER PLATE BLANK, 2860-12

Completes length of header box.



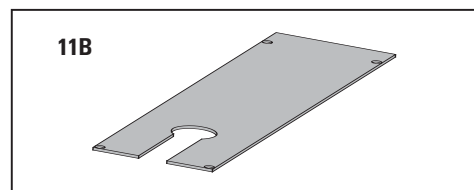
SPINDLE PLATE – 2 3/4", 2860-11A

Hides bottom of motor gearbox. Completes header box. Cutout allows for motor gearbox shaft. For 2 3/4" offset pivot/butt hinge installations.



SPINDLE PLATE – 3 3/4", 2860-11B

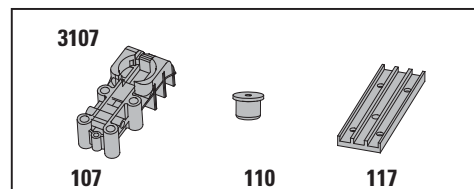
Hides bottom of motor gearbox. Completes header box. Cutout allows for motor gearbox shaft. For 3 3/4" center pivot installations.



PIVOTS

BOTTOM PIVOT ASSEMBLY, 2860-3107

Includes pivot body, pivot post and bottom pivot plate. For overhead concealed, center pivoted installations. Includes; 2860-107, 2860-110 and 2860-117.



PIVOT BODY, 2860-107

Bottom pivot body for center pivoted installations.

PIVOT POST, 2860-110

Connects pivot body to bottom pivot plate for center pivoted installations.

BOTTOM PIVOT PLATE, 2860-117

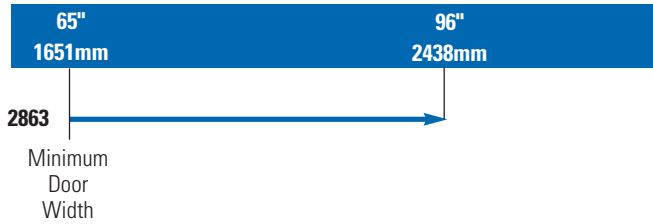
Applied to floor for center pivoted installations.

LCN 2860 SERIES

TABLE OF SIZES

→ Indicates recommended range of door width for operator.
 Note: For all Senior Swing Series
 Independent Pair – Width per leaf 32 1/2" minimum to 48" maximum

DOOR WIDTH



HOW-TO-ORDER 2860 SERIES OPERATORS

1. SELECT INSTALLATION TYPE

- 2863

2. ARMS

- Standard 3 3/4" (Offset pivoted) Arm (3077OP)
- Standard 2 3/4" (Center pivoted) Arm (3077CP)
- Standard 3 3/4" (Center pivoted) Arm (3077CP)

3. SPECIFY FINISH.

- Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator will be shipped with:

-STANDARD MOTOR GEARBOX (SF) (1 LH & 1 RH)
 -STANDARD CONTROL BOX (SC) (2 ea)
 -72" HEADER (72HL)
 -2 3/4" PIVOT POINT
 -WOOD and MACHINE SCREW PACK
 Unless options listed below are selected.

OPERATOR OPTIONS

HEADER

- HL__ (Specify length 65" to 98")

STOPS*

- Pair Positive Mechanical Stop (POS)
- Pair Panic Breakaway Stop (BKY)

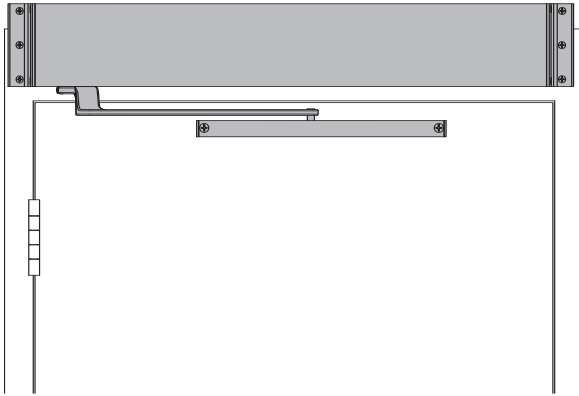
*Available with Center Pivoted installations only.

SPECIAL TEMPLATE

- ST-_____

LCN 9530 SERIES

SINGLE DOOR, SURFACE MOUNT (PULL) OFFSET PIVOT/BUTT HINGE



The 9530 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

- ▶ **Push 'N Go** permits non-switch activation
- ▶ **Power Boost** provides additional latching force
- ▶ **Electromechanical unit with microprocessor control**
- ▶ **Digital keypad** for easy setup
- ▶ **Meets International Building Code requirements and ANSI A156.19**
- ▶ **UL approved for fire doors**

- ▶ 9530 series operator is shipped with motor gearbox, control box, standard arm, header, and mounting hardware. Actuators available separately, see pages 121.
- ▶ Single door, surface mounted.
- ▶ Meets ADA requirements (power mode only).
- ▶ Handed product.
- ▶ 36" header length is standard. Specify length 33" to 49" max.
- ▶ Double door header available up to 98", specify other length 49" to 98" max. Consult factory regarding this option.
- ▶ Adjustable hold open period of 1 to 32 seconds in automatic or manual mode.

9530 Series is fully compliant with UL 325 & UL 1998 and meets the provisions of ANSI A156.19. The 9530 Series is UL listed for fire-rated applications. The 9530 Series also meets the provisions of the Americans with Disabilities Act.

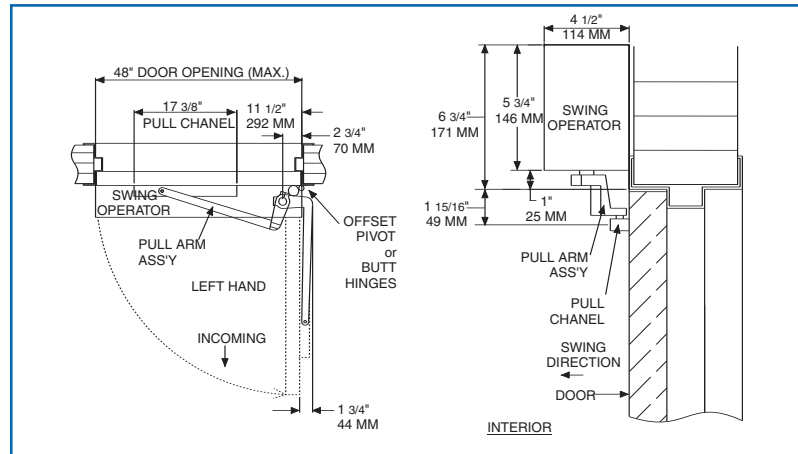
MOUNTING						HANDING			FINISH		COVER			ARM FUNCTION				
●	○	○	○	○	○	●	○	●	○	○	●	○	○	○	●	○	○	○
SURFACE MOUNT SINGLE DOOR						STANDARD ANODIZED			METAL		STANDARD (SINGLE)			REGULAR (DOUBLE)				
SURFACE MOUNT SIMULTANEOUS PAIR						CUSTOM ANODIZED					DOUBLE EGRESS (PUSH/PULL)			OFFSET PIVOT ARM				
SURFACE MOUNT INDEPENDENT PAIR						CUSTOM PAINT					CENTER PIVOT ARM							
CONCEALED SINGLE DOOR																		
CONCEALED SIMULTANEOUS PAIR																		
CONCEALED INDEPENDENT PAIR																		
HANDED																		
NON-HANDED																		

- AVAILABLE
- NOT AVAILABLE

LCN 9530 SERIES

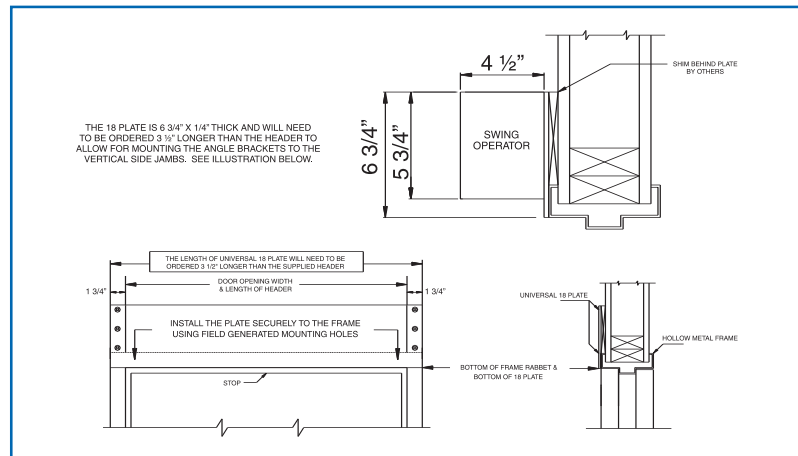
MOUNTING DETAILS

TOP JAMB SINGLE DOOR (OFFSET PIVOT/BUTT HINGE, CENTER PIVOT, PULL) MOUNTING



HOLLOW METAL FRAME

Suggested Installation



MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

- ▶ **Butt Hinges** should not exceed 5" (127 mm) in width.
- ▶ **Reveal** should not exceed 4" (102 mm).
- ▶ **Head Frame** minimum 1 3/4" (44 mm). Face frame 6 3/4" (171 mm) total operator clearance.
- ▶ **Top Rail** minimum 2 3/4" (70 mm).
- ▶ **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- ▶ **System Diagram** see "AUTOMATIC OPERATORS" section pages 52-54 for typical system wiring and page 55 for electrical data.
- ▶ Please consult your local SSC representative or LCN for assistance with specific installations and material requirements.

Special Templates

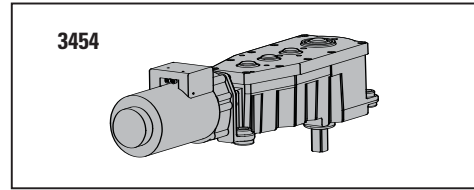
Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

LCN 9530 SERIES

MOTOR GEARBOX

MOTOR GEARBOX (STANDARD FORCE) – SENIOR SWING, 9530-3454

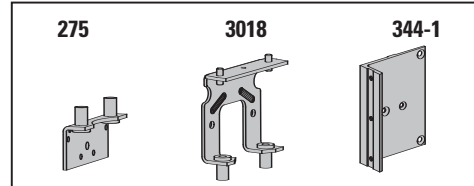
Driving mechanism for operator. Provides 15lbs opening force. Handed.



MOUNTING BRACKET

MOUNTING BRACKET – 2 3/4", 9530-275

Motor gearbox mounting bracket for 2 3/4" offset pivot or butt hinge installations. Front bracket.

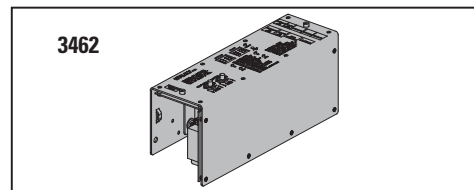


REAR MOUNT BRACKET, 9530-3018

Motor gearbox mounting bracket. Rear bracket.

ANGLED BRACKET, 9530-334-1

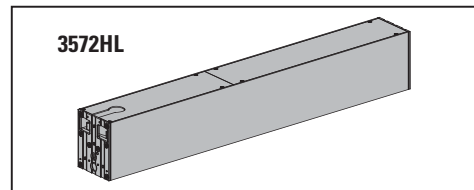
Mounting bracket for surface applications.



CONTROL BOXES

CONTROL BOX – SENIOR SWING, 9530-3462

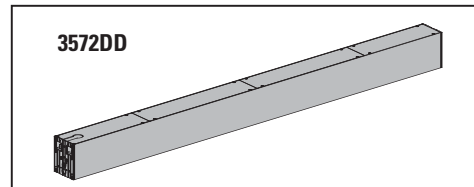
Electronic controlling device for Senior Swing.



HEADERS

Header, 9530-3572HL

Standard, mounting header. Single door, single operator. Specify length 30" to 49" maximum.



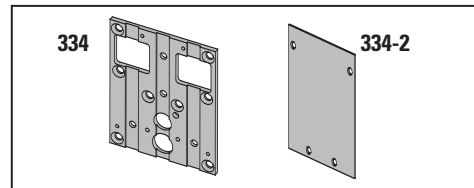
Header, 9530-3572DD

Standard, mounting header. Double door, single operator. Specify length 49" to 98" maximum.

END CAPS

HEADER END CAPS, 9530-334

End cap with openings for wiring.



END DRESS PLATE, 9530-334-2

Metal finish end cap.

LCN 9530 SERIES

ARMS

STANDARD ARM ASSEMBLY, 9530-3077PLCM

Handed arm.

STANDARD ARM, 9530-3077T

Handed arm. Track roller not included.

TRACKS

TRACK 9530-3038

Standard non-handed track.

TRACK END CAP 9530-73

Black plastic end caps.

ROLLER, 9530-3034

Quiet low friction roller assembly.

INSTALLATION ACCESSORIES

SPINDLE PLATE – 2 3/4", 9530-11A

Hides bottom of motor gearbox. Completes header box. Cutout allows for motor gearbox shaft. For 2 3/4" offset pivot or butt hinge installations.

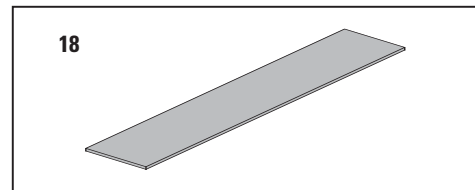
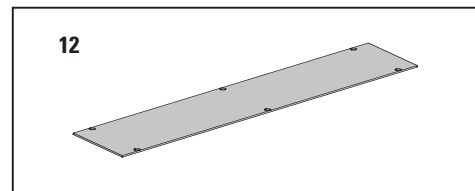
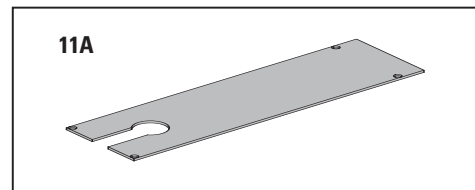
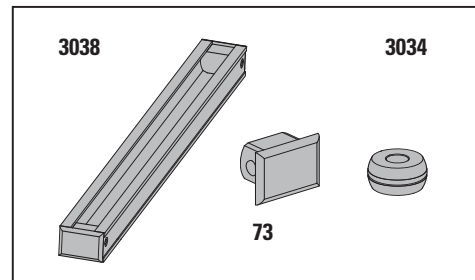
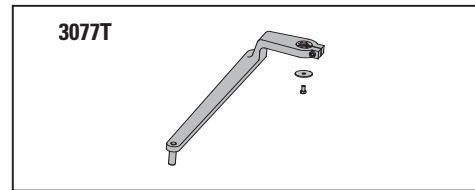
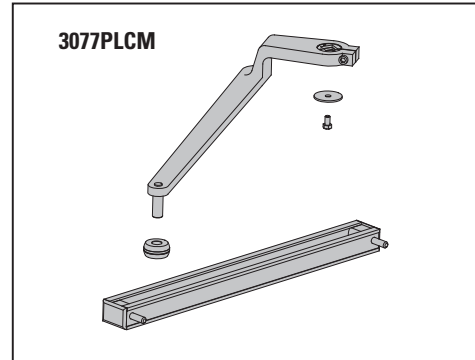
FILLER PLATE BLANK, 9530-12

Completes length of header box. (Specify Length)

MOUNTING PLATE, 9530-18

Optional mounting plate for standard hollow metal door frames. Specify length 33" to 98" maximum.

NOTE: The length of a universal 18 plate will need to be ordered 3 1/2" longer than the supplied header.

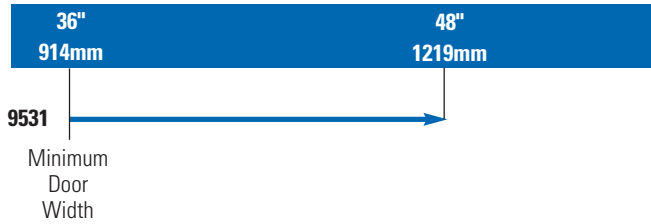


LCN 9530 SERIES

TABLE OF SIZES

→ Indicates recommended range of door width for operator.
Note: For all Senior Swing Series
Single Door - Width per leaf 36" minimum, 48" maximum

DOOR WIDTH



HOW-TO-ORDER 9530 SERIES OPERATORS

1. SPECIFY HAND

- RH
- LH

2. SPECIFY FINISH.

- Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator will be shipped with:

- STANDARD MOTOR GEARBOX (SF)
 - STANDARD CONTROL BOX (SC)
 - 36" HEADER (36HL)
 - STANDARD ARM (3077T)
 - 2 3/4" PIVOT POINT
 - STANDARD TRACK w/TRACK ROLLER
 - MACHINE SCREW PACK
- Unless options listed below are selected.

OPERATOR OPTIONS

HEADER

- HL __ (Specify length 36" to 49")
- DD__ (Specify length 49" to 98")

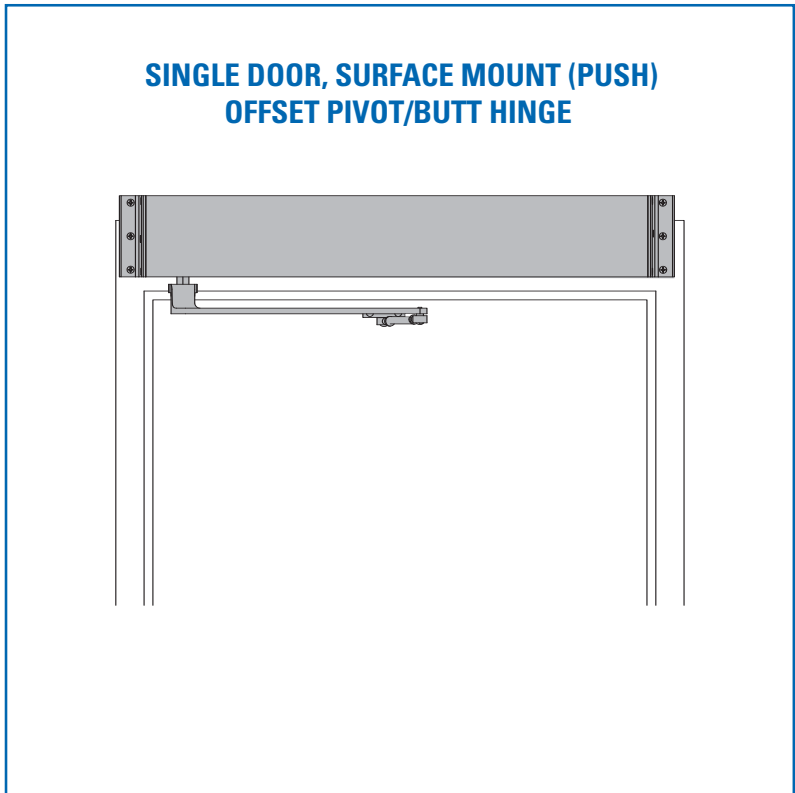
MOUNTING PLATE

- Plate, ____ (Specify Length 30" to 98")

SPECIAL TEMPLATE

- ST-_____

LCN 9540 SERIES



The 9540 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

- ▶ **Push 'N Go permits non-switch activation**
- ▶ **Power Boost provides additional latching force**
- ▶ **Electromechanical unit with microprocessor control**
- ▶ **Digital keypad for easy setup**
- ▶ **Meets International Building Code requirements and ANSI A156.19**
- ▶ **UL approved for fire doors**

- ▶ 9540 series operator is shipped with motor gearbox, control box, regular arm, header, and mounting hardware. Actuators available separately, see page 121.
- ▶ Single door, surface mounted.
- ▶ Meets ADA requirements (power mode only).
- ▶ Handed product.
- ▶ 36" header length is standard. Specify length 33" to 49" max.
- ▶ Double door header available up to 98", specify other length 49" to 98" max. Consult factory regarding this option.
- ▶ Adjustable hold open period of 1 to 32 seconds in automatic or manual mode.

9540 Series is fully compliant with UL 325 & UL 1998 and meets the provisions of ANSI A156.19. The 9540 Series is UL listed for fire-rated applications. The 9540 Series also meets the provisions of the Americans with Disabilities Act.

MOUNTING						HANDING			FINISH			COVER			ARM FUNCTION				
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SURFACE MOUNT SINGLE DOOR						STANDARD ANODIZED			METAL			STANDARD (SINGLE)			REGULAR (DOUBLE)				
SURFACE MOUNT SIMULTANEOUS PAIR						CUSTOM ANODIZED						DOUBLE EGRESS			OFFSET PIVOT ARM				
SURFACE MOUNT INDEPENDENT PAIR						CUSTOM PAINT						OFFSET PIVOT ARM			CENTER PIVOT ARM				
CONCEALED SINGLE DOOR						HANDLED													
CONCEALED SIMULTANEOUS PAIR						NON-HANDED													
CONCEALED INDEPENDENT PAIR																			

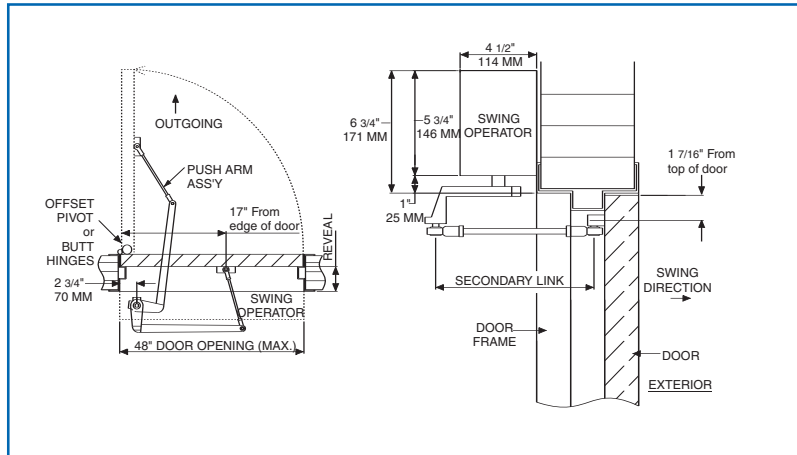
AVAILABLE
 NOT AVAILABLE

LCN 9540 SERIES

MOUNTING DETAILS

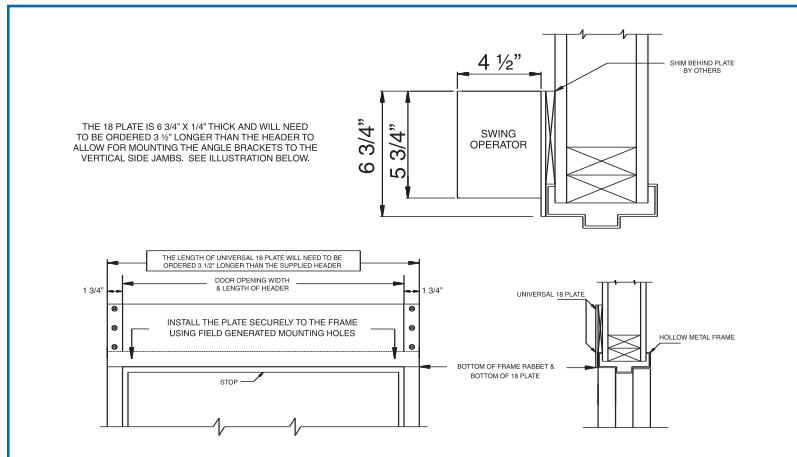
TOP JAMB SINGLE DOOR (OFFSET PIVOT/BUTT HINGE, CENTER PIVOT, PUSH) MOUNT

Consult factory for all balance door installations.



HOLLOW METAL FRAME

Suggested Installation



MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

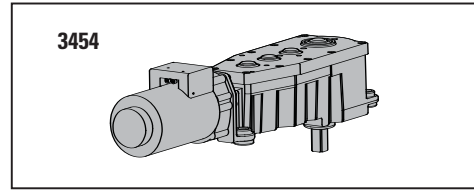
- ▶ **Butt Hinges** should not exceed 5" (127 mm) in width.
- ▶ **Reveal** for push installations should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM.
- ▶ **Head Frame** minimum 1 3/4" (44 mm). Face frame 6 3/4" (171 mm) total operator clearance.
- ▶ **Top Rail** minimum 2 3/4" (70 mm).
- ▶ **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- ▶ **System Diagram** see "AUTOMATIC OPERATORS" section pages 52-54 for typical system wiring and page 55 for electrical data.
- ▶ Please consult your local SSC representative or LCN for assistance with specific installations and material requirements.

LCN 9540 SERIES

MOTOR GEARBOX

MOTOR GEARBOX (STANDARD FORCE) – SENIOR SWING, 9540-3454

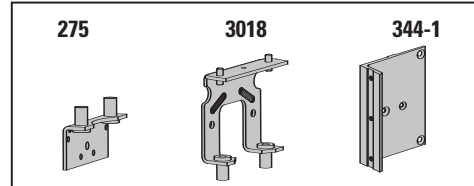
Driving mechanism for operator. Provides 15lbs opening force. Handed.



MOUNTING BRACKET

MOUNTING BRACKET – 2 3/4", 9540-275

Motor gearbox mounting bracket for 2 3/4" offset pivot or butt hinge installations. Front bracket.

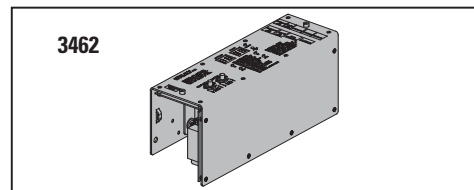


REAR MOUNT BRACKET, 9540-3018

Motor gearbox mounting bracket. Rear bracket.

ANGLED BRACKET, 9540-334-1

Mounting bracket for surface applications.



CONTROL BOXES

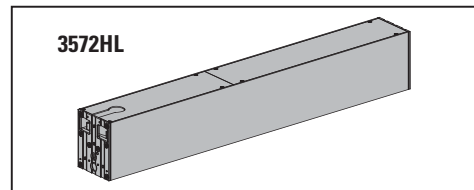
CONTROL BOX – SENIOR SWING, 9540-3462

Electronic controlling device for Senior Swing.

HEADERS

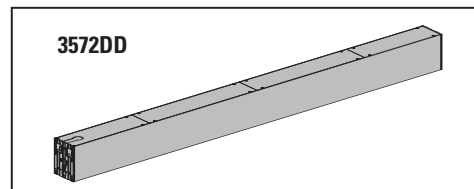
Header, 9540-3572HL

Standard, mounting header. Single door, single operator. Specify length 30" to 49" maximum.



Header, 9540-3572DD

Standard, mounting header. Double door, single operator. Specify length 49" to 98" maximum.



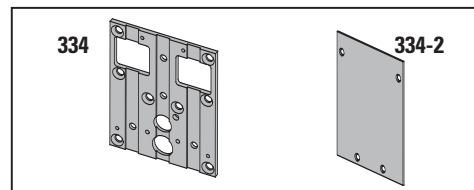
END CAPS

HEADER END CAPS, 9540-334

End cap with openings for wiring.

END DRESS PLATE, 9540-334-2

Metal finish end cap.



LCN 9540 SERIES

ARMS

REGULAR ARM ASSEMBLY, 9540-3077

Handed arm.

REGULAR LONG ARM ASSEMBLY, 9540-3077L

Handed arm.

MAIN ARM, 9540 -77

Handed arm attaches to motor gearbox.

LINKAGE ASSEMBLY – 15", 9540-79

Threaded rod attaches to door. Extends from main arm.

LINKAGE ASSEMBLY – 32", 9540-79LR

Threaded long rod attaches to door. Extends from main arm. Used for reveal 10" to 20".

INSTALLATION ACCESSORIES

SPINDLE PLATE – 2 3/4", 9540-11A

Hides bottom of motor gearbox. Completes header box. Cutout allows for motor gearbox shaft. For 2 3/4" offset pivot or butt hinge installations.

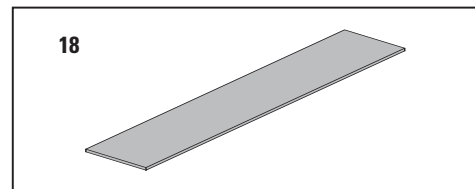
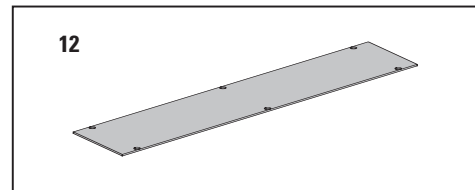
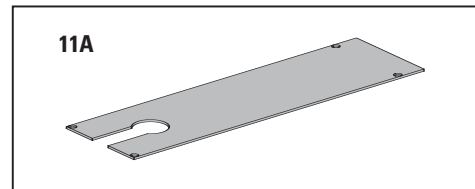
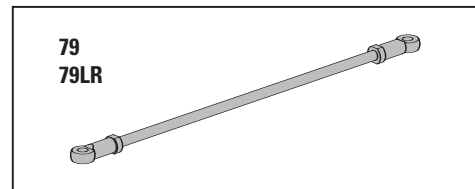
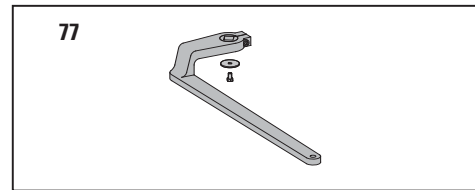
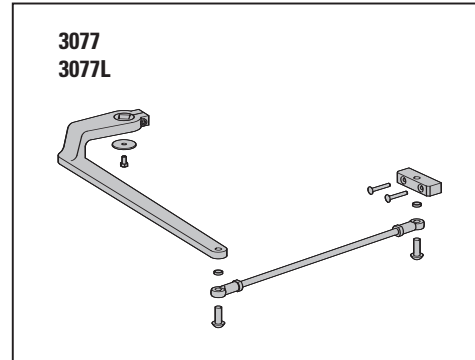
FILLER PLATE BLANK, 9540-12

Completes length of header box. (Specify Length)

MOUNTING PLATE, 9540-18

Optional mounting plate for standard hollow metal door frames. Specify length 33" to 98" maximum.

NOTE: The length of a universal 18 plate will need to be ordered 3 1/2" longer than the supplied header.

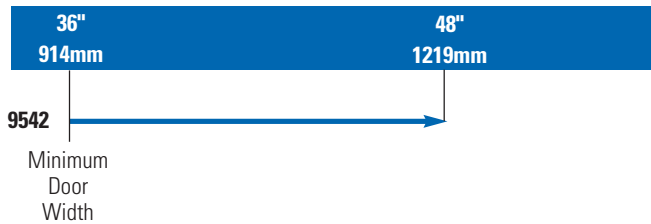


LCN 9540 SERIES

TABLE OF SIZES

→ Indicates recommended range of door width for operator.
Note: For all Senior Swing Series
Single Door - Width per leaf 36" minimum, 48" maximum

DOOR WIDTH



HOW-TO-ORDER 9540 SERIES OPERATORS

1. SPECIFY HAND

- RH
- LH

2. SPECIFY FINISH.

- Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator will be shipped with:

- STANDARD MOTOR GEARBOX (SF)
 - STANDARD CONTROL BOX (SC)
 - 36" HEADER (36HL)
 - REGULAR ARM (3077)
 - 2 3/4" PIVOT POINT
 - WOOD and MACHINE SCREW PACK
- Unless options listed below are selected.

OPERATOR OPTIONS

HEADER

- HL__ (Specify length 36" to 49")
- DD__ (Specify length 49" to 98")

MOUNTING PLATE

- Plate, ____ (Specify Length 30" to 98")

ARM

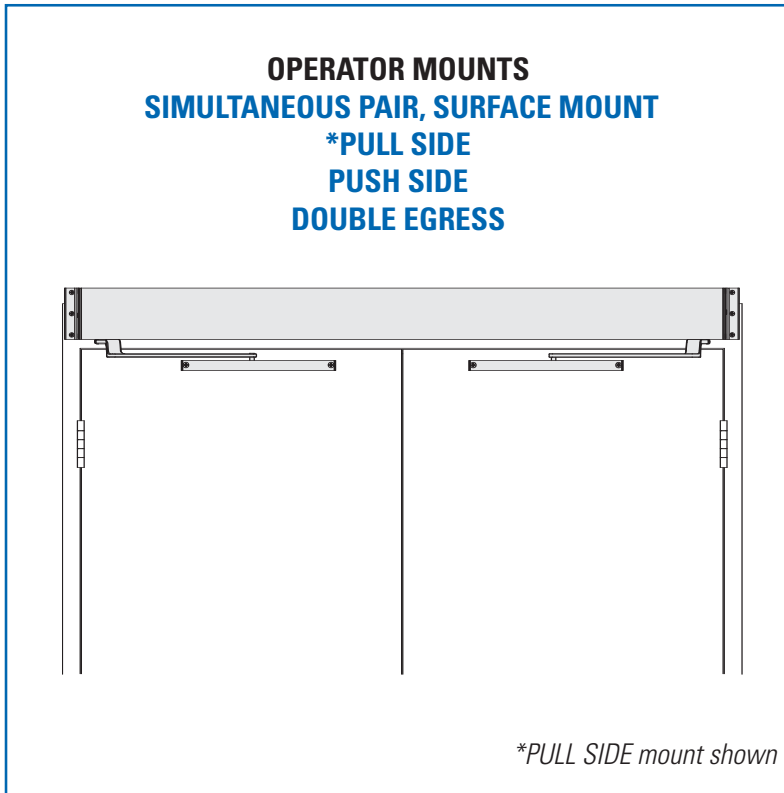
- Long Arm (3077L)

FINISH

SPECIAL TEMPLATE

- ST-_____

LCN 9550 SERIES



The 9550 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

- ▶ **Push 'N Go permits non-switch activation**
- ▶ **Power Boost provides additional latching force**
- ▶ **Electromechanical unit with microprocessor control**
- ▶ **Digital keypad for easy setup**
- ▶ **Meets International Building Code requirements and ANSI A156.19**
- ▶ **UL approved for fire doors**

- ▶ 9550 series operator is shipped with motor gearboxes, control box, arms, header, and mounting hardware. Actuators available separately, see pages 121.
- ▶ Simultaneous pair, surface mounted.
- ▶ Meets ADA requirements (power mode only).
- ▶ Handed product.
- ▶ Pull, Push or Double Egress applications available.
- ▶ 72" header length is standard. Specify other length 60" to 98". Consult factory regarding this option.
- ▶ Adjustable hold open period of 1 to 32 seconds in automatic or manual mode.

9550 Series is fully compliant with UL 325 & UL 1998 and meets the provisions of ANSI A156.19. The 9550 Series is UL listed for fire-rated applications. The 9550 Series also meets the provisions of the Americans with Disabilities Act.

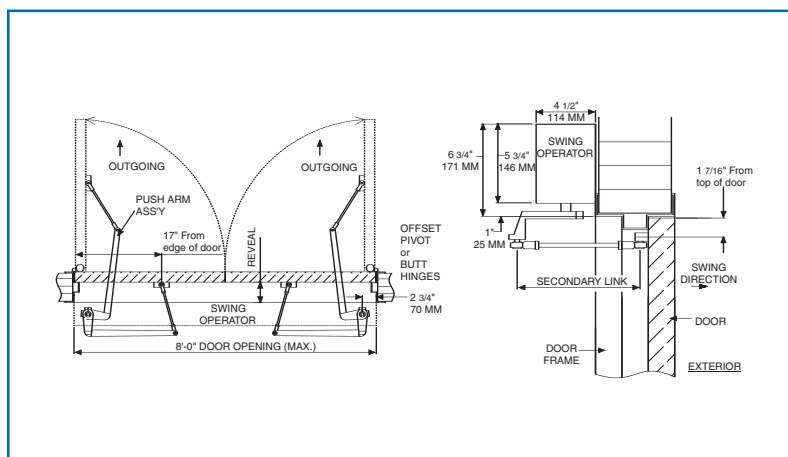
MOUNTING						HANDING		FINISH		COVER		ARM FUNCTION				
SURFACE MOUNT SINGLE DOOR	SURFACE MOUNT SIMULTANEOUS PAIR	SURFACE MOUNT INDEPENDENT PAIR	CONCEALED SINGLE DOOR	CONCEALED SIMULTANEOUS PAIR	CONCEALED INDEPENDENT PAIR	HANDED	NON-HANDED	STANDARD ANODIZED	CUSTOM ANODIZED	CUSTOM PAINT	METAL	STANDARD (SINGLE)	REGULAR (DOUBLE)	DOUBLE EGRESS (PUSH/PULL)	OFFSET PIVOT ARM	CENTER PIVOT ARM
●	○	○	○	○	○	●	○	○	○	○	○	●	●	●	○	○

● AVAILABLE
○ NOT AVAILABLE

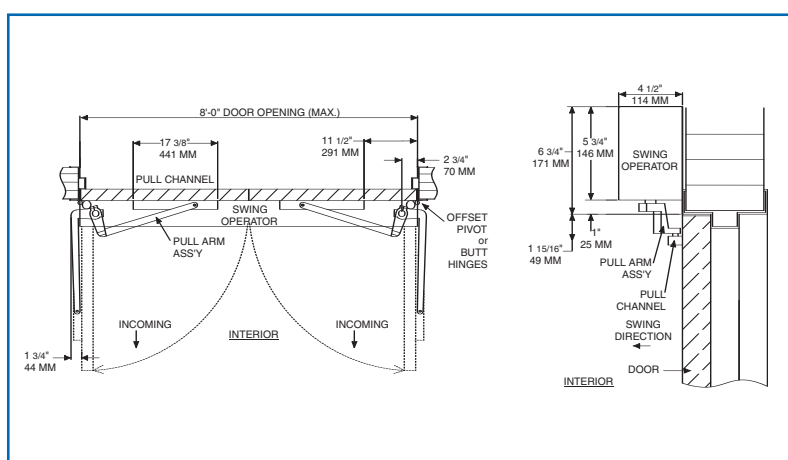
LCN 9550 SERIES

MOUNTING DETAILS

TOP JAMB SIMULTANEOUS PAIR (OFFSET PIVOT/BUTT HINGE, CENTER PIVOT, PUSH) MOUNTING



TOP JAMB SIMULTANEOUS PAIR (OFFSET PIVOT/BUTT HINGE, CENTER PIVOT, PULL) MOUNTING



MAXIMUM OPENING

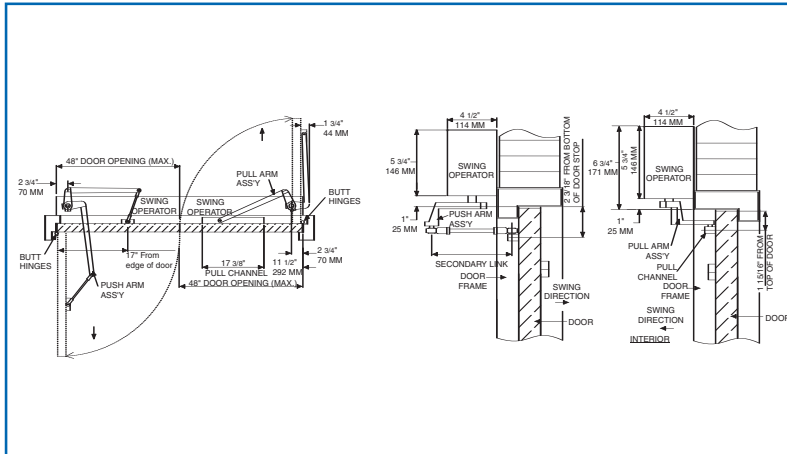
Template allows 90 degree power opening and 90 degree manual opening.

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

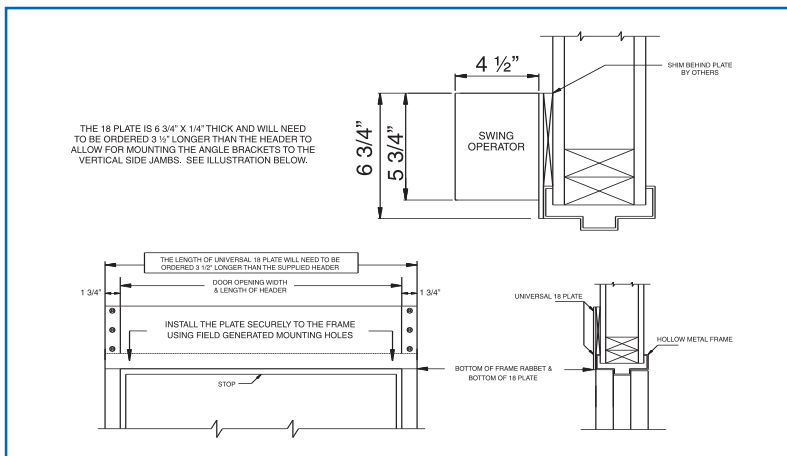
- ▶ **Butt Hinges** should not exceed 5" (127 mm) in width.
- ▶ **Reveal for push** installations should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM.
- ▶ **Reveal for pull** installations should not exceed 4" (102 mm).
- ▶ **Reveal for double egress** installations should not exceed 4" (102 mm).
- ▶ **Head Frame** minimum 1 3/4" (44 mm). Face frame 6 3/4" (171 mm) total operator clearance.
- ▶ **Top Rail** minimum 2 3/4" (70 mm).
- ▶ **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- ▶ **System Diagram** see "AUTOMATIC OPERATORS" section pages 52-54 for typical system wiring and page 55 for electrical data.
- ▶ Please consult your local SSC representative or LCN for assistance with specific installations and material requirements.

LCN 9550 SERIES



TOP JAMB SIMULTANEOUS PAIR (RH DOUBLE EGRESS) MOUNTING

Consult factory for all balance door installations.



HOLLOW METAL FRAME

Suggested Installation

- ▶ **Butt Hinges** should not exceed 5" (127 mm) in width.
- ▶ **Reveal for push** installations should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM.
- ▶ **Reveal for pull** installations should not exceed 4" (102 mm).
- ▶ **Reveal for double egress** installations should not exceed 4" (102 mm).
- ▶ **Head Frame** minimum 1 3/4" (44 mm). Face frame 6 3/4" (171 mm) total operator clearance.
- ▶ **Top Rail** minimum 2 3/4" (70 mm).
- ▶ **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- ▶ **System Diagram** see "AUTOMATIC OPERATORS" section pages 52-54 for typical system wiring and page 55 for electrical data.
- ▶ Please consult your local SSC representative or LCN for assistance with specific installations and material requirements.

MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

LCN 9550 SERIES

MOTOR GEARBOX

MOTOR GEARBOX (STANDARD FORCE) – SENIOR SWING, 9550-3454

Driving mechanism for operator. Provides 15lbs opening force. Handed.

MOUNTING BRACKETS

MOUNTING BRACKET – 2 3/4", 9550-275

Motor gearbox mounting bracket for 2 3/4" offset pivot or butt hinge installations. Front bracket.

REAR MOUNT BRACKET, 9550-3018

Motor gearbox mounting bracket. Rear bracket.

ANGLED BRACKET, 9550-334-1

Mounting bracket for surface applications.

CONTROL BOXES

CONTROL BOX – SENIOR SWING, 9550-3462

Electronic controlling device for Senior Swing.

COMPANION CABLE, 9550-982

Cable that allows one control box to run two motor gear boxes. Companion cable. For use with Senior Swing.

HEADERS

HEADER, 9550-3572HL

Standard, mounting header. Pair door, two operators. Specify length 60" to 98" maximum.

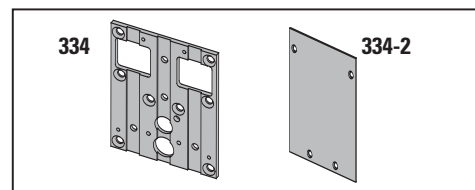
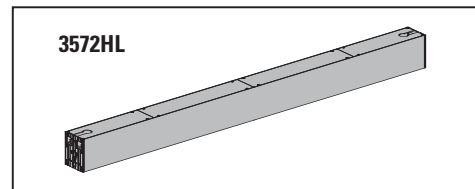
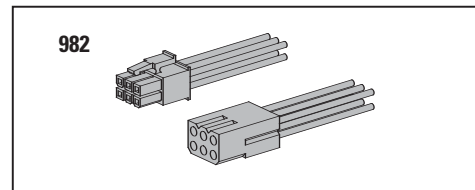
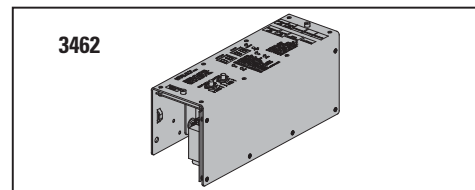
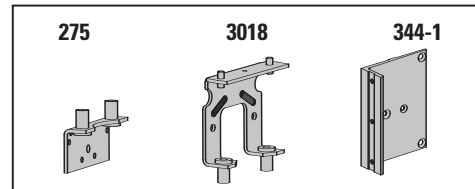
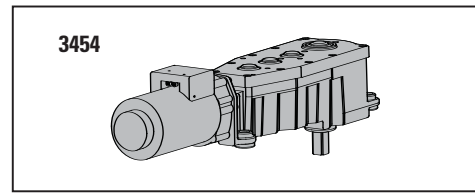
END CAPS

HEADER ENDCAPS, 9550-334

End cap with openings for wiring.

END DRESS PLATE, 9550-334-2

Metal finish end cap.



LCN 9550 SERIES

ARMS

STANDARD ARM ASSEMBLY, 9550-3077PLCM

Handed arm.

REGULAR ARM ASSEMBLY, 9550-3077

Handed arm.

REGULAR LONG ARM ASSEMBLY, 9550-3077L

Handed arm.

STANDARD ARM, 9550-3077T

Handed arm. Track roller not included.

MAIN ARM, 9550 -77

Handed arm attaches to motor gearbox

LINKAGE ASSEMBLY – 15", 9550-79

Threaded rod attaches to door. Extends from main arm.

LINKAGE ASSEMBLY – 32", 9550-79LR

Threaded long rod attaches to door. Extends from main arm.

Used for reveal 10" to 20".

TRACKS

TRACK 9550-3038

Standard non-handed track.

TRACK END CAP 9550-73

Black plastic end caps.

ROLLER, 9550-3034

Quiet low friction roller assembly.

INSTALLATION ACCESSORIES

SPINDLE PLATE – 2 3/4", 9550-11A

Hides bottom of motor gearbox. Completes header box. Cutout allows for motor gearbox shaft. For 2 3/4" offset pivot or butt hinge installations.

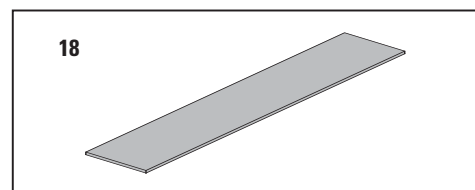
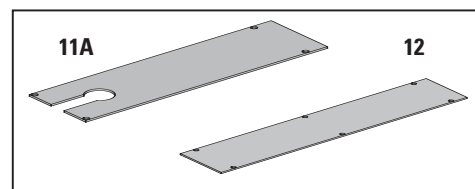
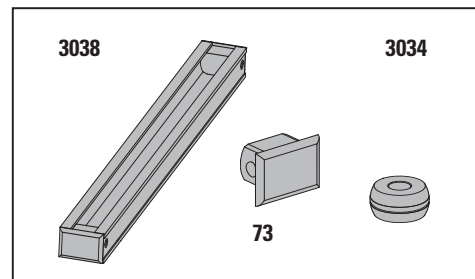
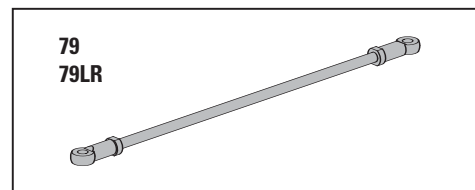
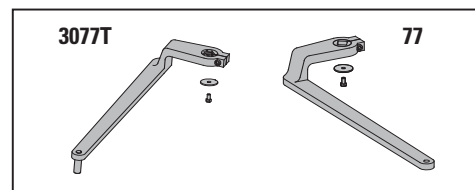
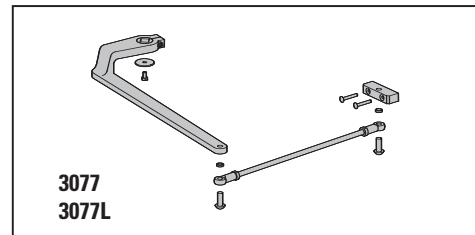
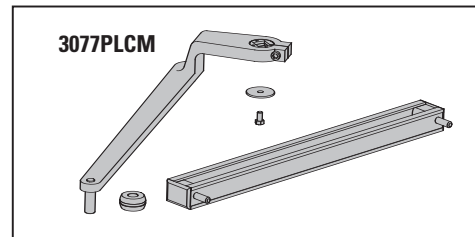
FILLER PLATE BLANK, 9550-12

Completes length of header box. (Specify Length)

MOUNTING PLATE, 9550-18

Optional mounting plate for standard hollow metal door frames. Specify length 33" to 98" maximum.

NOTE: The length of a universal 18 plate will need to be ordered 3 1/2" longer than the supplied header.

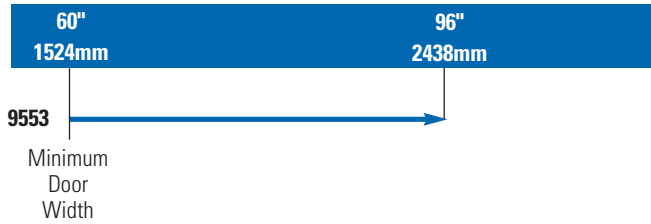


LCN 9550 SERIES

TABLE OF SIZES

→ Indicates recommended range of door width for operator.
 Note: For All Senior Swing Series
 Simultaneous Pair – Width per leaf 30" minimum to 48" maximum

DOOR WIDTH



HOW-TO-ORDER 9550 SERIES OPERATORS

1. SPECIFY HAND

- RH
- LH

2. SPECIFY FINISH.

- Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator will be shipped with:

- STANDARD MOTOR GEARBOX (SF) (2 ea)
- STANDARD CONTROL BOX (SC)
- 72" METAL COVER (72HL)
- REGULAR ARM (2 ea)
- 2 3/4" PIVOT POINT
- MACHINE SCREW PACK

OPERATOR OPTIONS

HEADER

- HL__ (Specify length 60" to 98")

MOUNTING PLATE

- Plate, ____ (Specify Length 30" to 98")

ARM

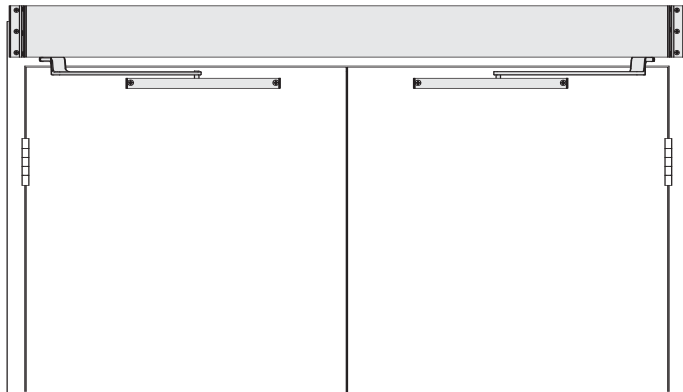
- Standard Arm (2 ea)
w/Standard Track (2 ea)
- Double Egress
Includes Standard Arm w/Track (1 ea)
& Regular Arm (1 ea)
- Long Arm (3077L)

SPECIAL TEMPLATE

- ST-_____

LCN 9560 SERIES

OPERATOR MOUNTS
INDEPENDENT PAIR, SURFACE MOUNT
***PULL SIDE**
PUSH SIDE
DOUBLE EGRESS



*PULL SIDE mount shown

The 9560 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

- ▶ **Push 'N Go permits non-switch activation**
- ▶ **Power Boost provides additional latching force**
- ▶ **Electromechanical unit with microprocessor control**
- ▶ **Digital keypad for easy setup**
- ▶ **Meets International Building Code requirements and ANSI A156.19**
- ▶ **UL approved for fire doors**

- ▶ 9560 series operator is shipped with motor gearboxes, control boxes, arms, header, and mounting hardware. Actuators available separately, see page 121.
- ▶ Independent pair, surface mounted.
- ▶ Meets ADA requirements (power mode only).
- ▶ Handed product.
- ▶ Pull, Push or Double Egress applications available.
- ▶ 72" header length is standard. Specify other length 60" to 98". Consult factory regarding this option.
- ▶ Adjustable hold open period of 1 to 32 seconds in automatic or manual mode.

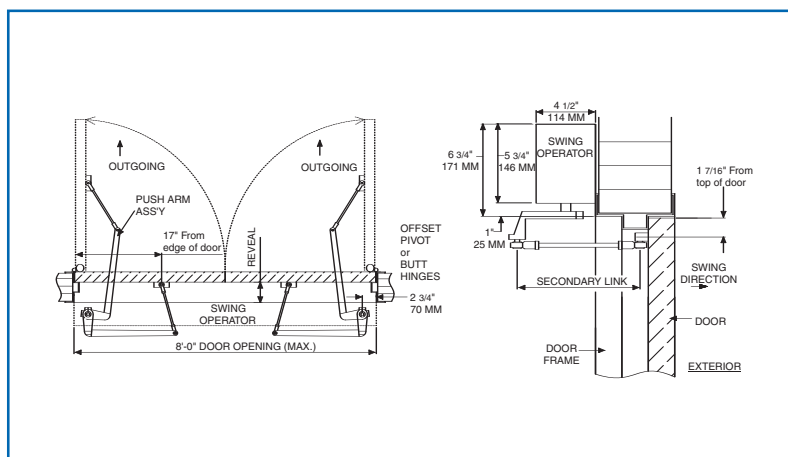
9560 Series is fully compliant with UL 325 & UL 1998 and meets the provisions of ANSI A156.19. The 9560 Series is UL listed for fire-rated applications. The 9560 Series also meets the provisions of the Americans with Disabilities Act.

MOUNTING						HANDING			FINISH		COVER		ARM FUNCTION		
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SURFACE MOUNT SINGLE DOOR						HANDED			STANDARD ANODIZED		STANDARD (SINGLE)		REGULAR (SINGLE)		
SURFACE MOUNT SIMULTANEOUS PAIR						NON-HANDED			CUSTOM ANODIZED		REGULAR (DOUBLE)		DOUBLE EGRESS (PUSH/PULL)		
SURFACE MOUNT INDEPENDENT PAIR									CUSTOM PAINT		DOUBLE EGRESS (PUSH/PULL)		OFFSET PIVOT ARM		
CONCEALED SINGLE DOOR									METAL		DOUBLE EGRESS (PUSH/PULL)		CENTER PIVOT ARM		
CONCEALED SIMULTANEOUS PAIR															
CONCEALED INDEPENDENT PAIR															

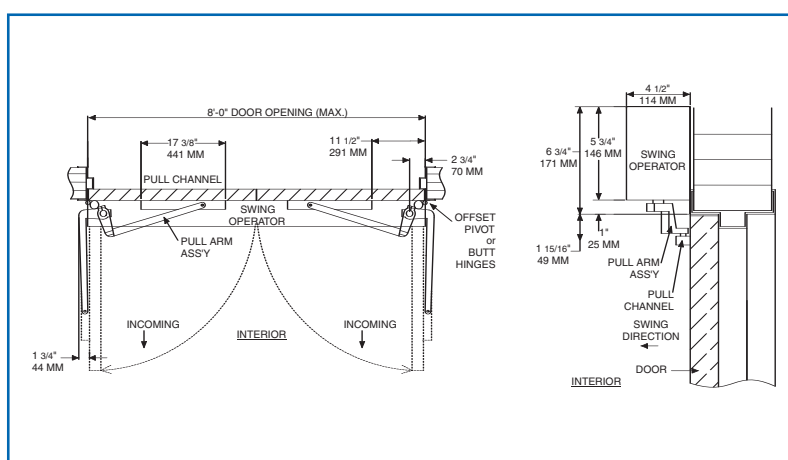
● AVAILABLE
○ NOT AVAILABLE

LCN 9560 SERIES

TOP JAMB INDEPENDENT PAIR (OFFSET PIVOT/BUTT HINGE, CENTER PIVOT, PUSH) MOUNTING



TOP JAMB INDEPENDENT PAIR (OFFSET PIVOT/BUTT HINGE, CENTER PIVOT, PULL) MOUNTING



MAXIMUM OPENING

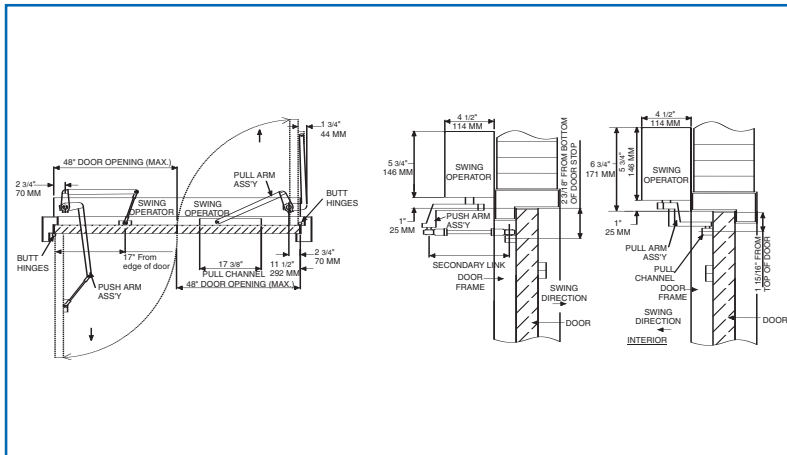
Template allows 90 degree power opening and 90 degree manual opening.

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

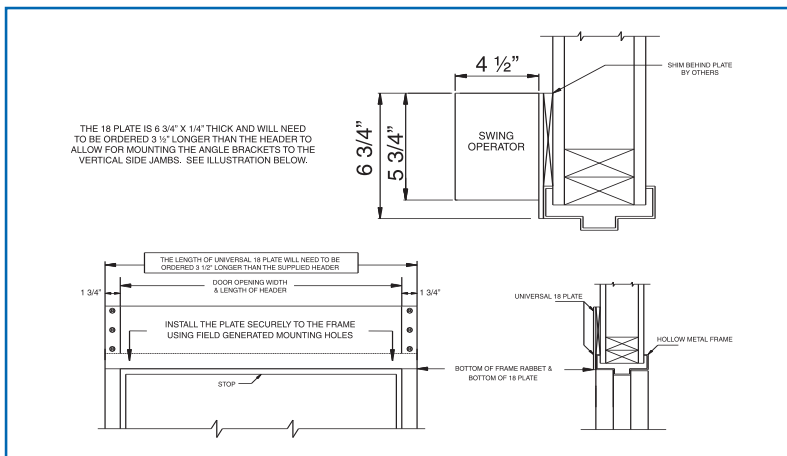
- ▶ **Butt Hinges** should not exceed 5" (127 mm) in width.
- ▶ **Reveal for push** installations should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM.
- ▶ **Reveal for pull** installations should not exceed 4" (102 mm).
- ▶ **Reveal for double egress** installations should not exceed 4" (102 mm).
- ▶ **Head Frame** minimum 1 3/4" (44 mm). Face frame 6 3/4" (171 mm) total operator clearance.
- ▶ **Top Rail** minimum 2 3/4" (70 mm).
- ▶ **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- ▶ **System Diagram** see "AUTOMATIC OPERATORS" section pages 52-54 for typical system wiring and page 55 for electrical data.
- ▶ Please consult your local SSC representative or LCN for assistance with specific installations and material requirements.

LCN 9560 SERIES



TOP JAMB INDEPENDENT PAIR (RH DOUBLE EGRESS) MOUNTING

Consult factory for all balance door installation.



HOLLOW METAL FRAME

Suggested Installation

- ▶ **Butt Hinges** should not exceed 5" (127 mm) in width.
- ▶ **Reveal for push** installations should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM.
- ▶ **Reveal for pull** installations should not exceed 4" (102 mm).
- ▶ **Reveal for double egress** installations should not exceed 4" (102 mm).
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- ▶ **System Diagram** see "AUTOMATIC OPERATORS" section pages 52-54 for typical system wiring and page 55 for electrical data.
- ▶ Please consult your local SSC representative or LCN for assistance with specific installations and material requirements.

MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN for assistance.

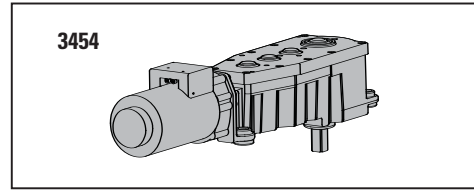
LCN 9560 SERIES

MOTOR GEARBOX

MOTOR GEARBOX (STANDARD FORCE)

–SENIOR SWING, 9560-3454

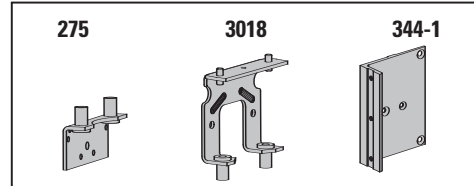
Driving mechanism for operator. Provides 15lbs opening force. Handed.



MOUNTING BRACKETS

MOUNTING BRACKET – 2 3/4", 9560-275

Motor gearbox mounting bracket for 2 3/4" offset pivot or butt hinge installations. Front bracket.

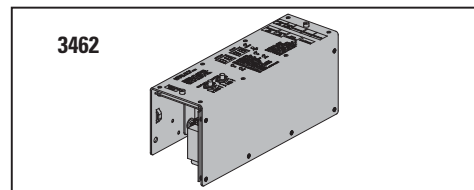


REAR MOUNT BRACKET, 9560-3018

Motor gearbox mounting bracket. Rear bracket.

ANGLED BRACKET, 9560-334-1

Mounting bracket for surface applications.



CONTROL BOXES

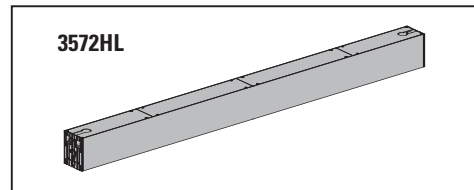
CONTROL BOX – SENIOR SWING, 9560-3462

Electronic controlling device for Senior Swing

HEADERS

HEADER, 9560-3572HL

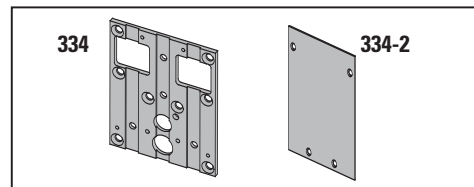
Standard, mounting header. Pair door, two operators. Specify length 60" to 98" maximum.



END CAPS

HEADER END CAPS, 9560-334

End cap with openings for wiring.



END DRESS PLATE, 9560-334-2

Metal finish end cap.

LCN 9560 SERIES

ARMS

STANDARD ARM ASSEMBLY, 9560-3077PLCM

Handed arm.

REGULAR ARM ASSEMBLY, 9560-3077

Handed arm.

REGULAR LONG ARM ASSEMBLY, 9560-3077L

Handed arm.

STANDARD ARM, 9560-3077T

Handed arm. Track roller not included.

MAIN ARM, 9560-77

Handed arm attaches to motor gearbox

LINKAGE ASSEMBLY – 15", 9560-79

Threaded rod attaches to door. Extends from main arm.

LINKAGE ASSEMBLY – 32", 9560-79LR

Threaded long rod attaches to door. Extends from main arm.

Used for reveal 10" to 20".

TRACKS

TRACK 9560-3038

Standard non-handed track.

TRACK END CAP 9560-73

Black plastic end caps.

ROLLER, 9560-3034

Quiet low friction roller assembly.

INSTALLATION ACCESSORIES

SPINDLE PLATE – 2 3/4", 9560-11A

Hides bottom of motor gearbox. Completes header box. Cutout allows for motor gearbox shaft. For 2 3/4" offset pivot or butt hinge installations.

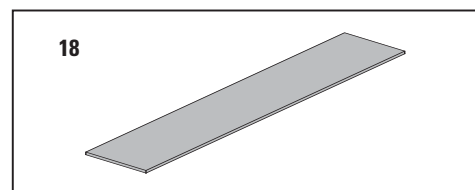
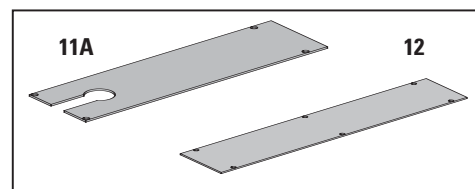
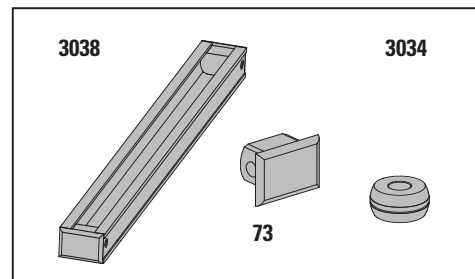
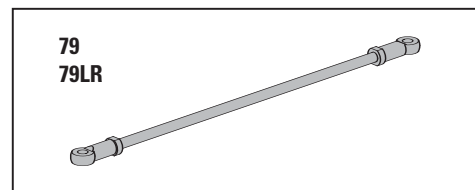
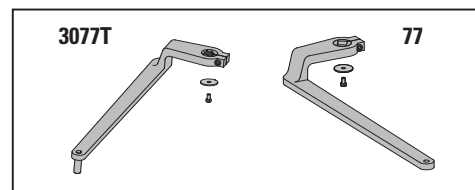
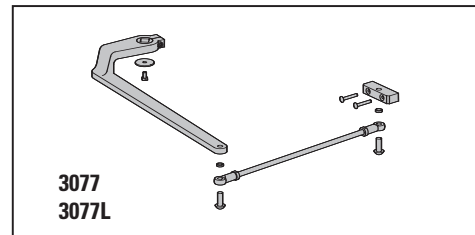
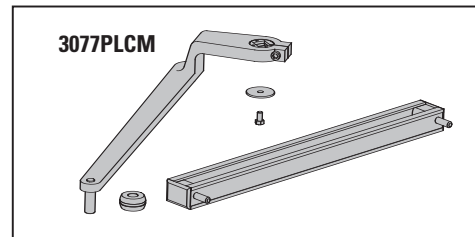
FILLER PLATE BLANK, 9560-12

Completes length of header box. (Specify Length)

MOUNTING PLATE, 9560-18

Optional mounting plate for standard hollow metal door frames. Specify length 33" to 98" maximum.

NOTE: The length of a universal 18 plate will need to be ordered 3 1/2" longer than the supplied header.



LCN 9560 SERIES

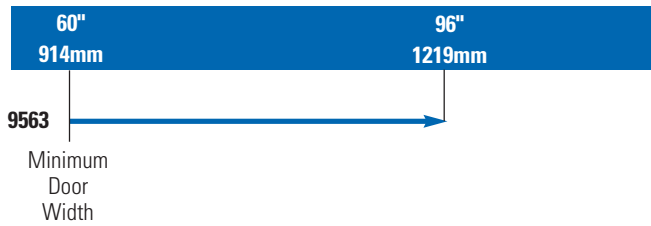
TABLE OF SIZES

→ Indicates recommended range of door width for operator.

Note: For all Senior Swing Series

Independent Pair – Width per leaf 30" minimum to 48" maximum

DOOR WIDTH



HOW-TO-ORDER 9560 SERIES OPERATORS

1. SPECIFY HAND

- RH
- LH

2. SPECIFY FINISH.

- Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator will be shipped with:

- STANDARD MOTOR GEARBOX (SF) (2 ea)
 - STANDARD CONTROL BOX (SC) (2 ea)
 - 72" METAL COVER (72HL)
 - REGULAR ARM (2 ea)
 - 2 3/4" PIVOT POINT
 - MACHINE SCREW PACK
- Unless options listed below are selected.

OPERATOR OPTIONS

HEADER

- HL__ (Specify length 60" to 98")

MOUNTING PLATE

- Plate, ____ (Specify Length 30" to 98")

ARM

- Standard Arm (2 ea)
w/Standard Track (2 ea)
- Double Egress
Includes Standard Arm w/Track (1 ea)
& Regular Arm (1 ea)
- Long Arm (3077L)

SPECIAL TEMPLATE

- ST-_____

AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 4 1/2" Surface and Flush mounts

The actuators and accessories on the following pages are to be used with LCN automatic operators. When using actuators supplied by others, such as card readers, consult the factory.

The desired function, traffic patterns and physical design of the opening will determine the type of actuators used. Generally, for two-way traffic, an actuator is required on both the interior and exterior side of the door. Each actuator is packaged with a decal to be applied to the controlled door. Scanners operate on 12V or 24V AC/DC and may be powered by the LCN electrohydraulic/electromechanical operators. The 7900 series control box requires separate power supply for scanners. Actuators provide normally open (N.O.) dry contacts.

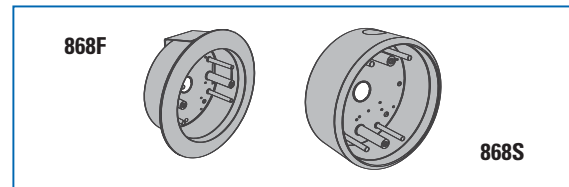
WALL MOUNTED ACTUATOR, 8310-856

Hardwired low voltage actuator with round, stainless steel touch plate in 4 1/2" (114mm) diameter. Engraved blue filled handicap symbol conforms to most accessibility codes. Designed to mount in a flush or surface mount box (sold separately) in/on a vertical surface near the controlled door. Optional mounting in single gang electrical box (by others). Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard.



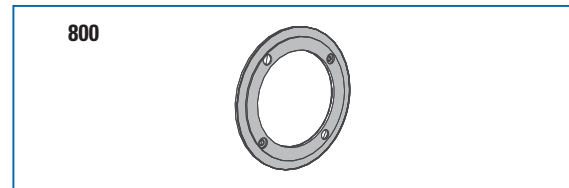
WALL MOUNTED ACTUATOR, 8310-856T

Same as the 3810-856, with the added engraving of "Push to Open"



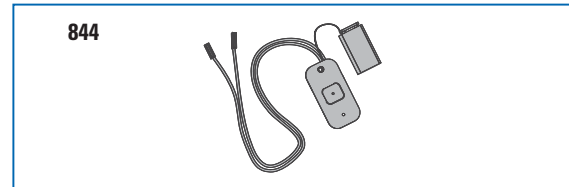
FLUSH MOUNT BOX, 8310-868F

Rugged Plastic Box, 4 1/2" Round, Optional accessory - Can be used w/ any 4 1/2" round actuator



SURFACE MOUNT BOX, 8310-868S

Rugged Plastic Box, 4 1/2" Round, Optional accessory - Can be used w/ any 4 1/2" round actuator

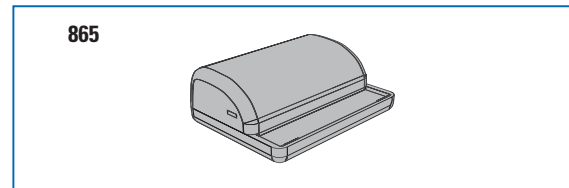


WEATHER RING, 8310-800

Plastic Weather Ring, 4 1/2" Round. Optional accessory - Can be used w/ any 4 1/2" round actuator

TRANSMITTER, 8310-844

Transmitter, Wireless, 1 Channel, 9v battery included. Use to convert standard wall mount actuator to wireless. Requires 8310-865 Receiver

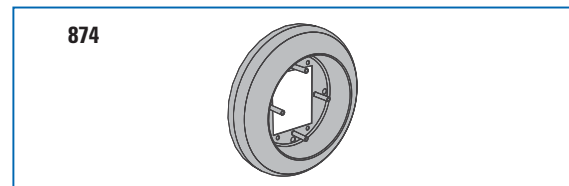


RECEIVER, 8310-865

Receiver, Wireless, 1 Channel, w/Sequencing Feature. Used in conjunction w/ Wireless Actuators & Transmitter(s)

ESCUTCHEON, 8310-874

Tapered stainless steel escutcheon covers the gap between the wall and the back of the wall plate actuators when mounted in electrical boxes (by others) to minimize cart damage or vandalism. Optional accessory - Can be used w/ any 4 1/2" round actuator

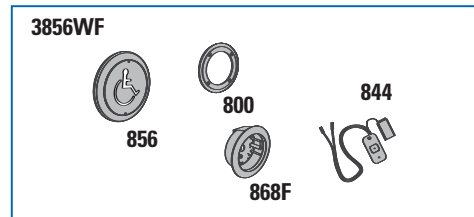


AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 4 1/2" Surface and Flush mounts

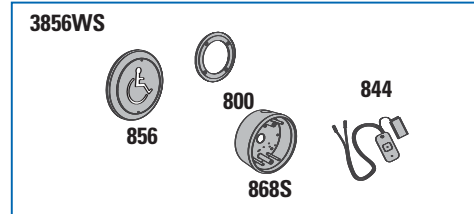
FLUSH MOUNT KIT, 8310-3856WF

Actuator, 4 1/2" Round, Logo, Wireless
Includes 8310-856 Actuator, 8310-844 Transmitter, 8310-868F Flush Box, 8310-800 Weather Ring.
Requires 8310-865 Receiver (not part of kit)



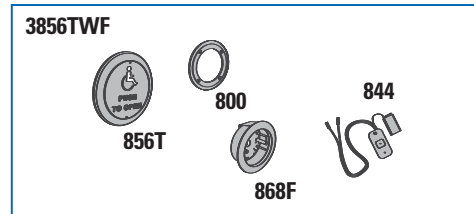
SURFACE MOUNT KIT, 8310-3856WS

Actuator, 4 1/2" Round, Logo, Wireless,
Includes 8310-856 Actuator, 8310-844 Transmitter, 8310-868S Surface Box, 8310-800 Weather Ring.
Requires 8310-865 Receiver (not part of kit)



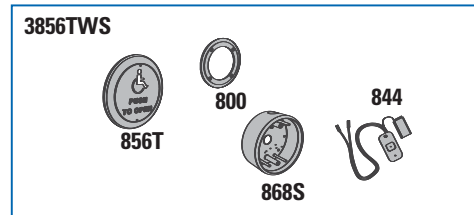
FLUSH MOUNT KIT, 8310-3856TWF

Actuator, 4 1/2" Round, Logo, Text, Wireless,
Includes 8310-856T Actuator, 8310-844 Transmitter, 8310-868F Flush Box, 8310-800 Weather Ring.
Requires 8310-865 Receiver (not part of kit)



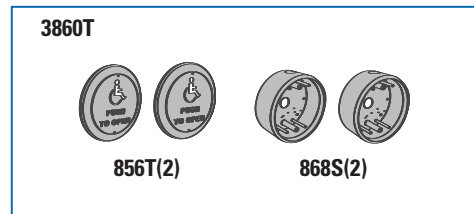
SURFACE MOUNT KIT, 8310-3856TWS

Actuator, 4 1/2" Round, Logo, Text, Wireless,
Includes 8310-856T Actuator, 8310-844 Transmitter, 8310-868S Surface Box, 8310-800 Weather Ring.
Requires 8310-865 Receiver (not part of kit)



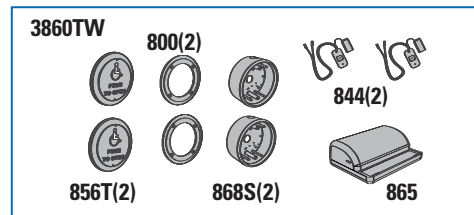
SURFACE MOUNT KIT, 8310-3860T

Actuator Package, 4 1/2" Round,
Includes 8310-856T (2) Wall Mount Actuator, 8310-868S
Surface Mount Box



SURFACE MOUNT KIT, 8310-3860TW

Actuator Package, 4 1/2" Round, Wireless,
Includes 8310-856T (2) Wall Mount Actuator, 8310-868S (2)
Surface Mount Box, 8310-800 (2) Weather Ring, 8310-844 (2)
Transmitter, 8310-865 Receiver



AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 6" Surface and Flush mounts

WALL MOUNTED ACTUATOR, 8310-852

Hardwired low voltage actuator with round, stainless steel touch plate in 6" (152mm) diameter. Engraved blue filled handicap symbol conforms to most accessibility codes. Designed to mount in a flush or surface mount box (sold separately) in/on a vertical surface near the controlled door. Optional mounting in single gang electrical box (by others) or double gang box (4" x 4" by others). Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard.

WALL MOUNTED ACTUATOR, 8310-852T

Same as the 8310-852, with the added engraving of "Push to Open"

WALL MOUNTED ACTUATOR, 8310-852WP

Wireless, low profile, low voltage actuator with round, stainless steel touch plate in 6" (152mm) diameter. Engraved blue filled handicap symbol conforms to most accessibility codes. Surface mount box includes integral transmitter w/ battery and actuator switch. Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard.

WALL MOUNTED ACTUATOR, 8310-852TWP

Same as the 8310-852WP, with the added engraving of "Push to Open"

FLUSH MOUNT BOX, 8310-869F

Rugged Plastic Box, 6" Round. Optional accessory - Can be used w/ any 6" round actuator

SURFACE MOUNT BOX, 8310-869S

Rugged Plastic Box, 6" Round. Optional accessory - Can be used w/ any 6" round actuator

WEATHER RING, 8310-802

Plastic Weather Ring, 6" Round. Optional accessory - Can be used w/ any 6" round actuator

TRANSMITTER, 8310-844

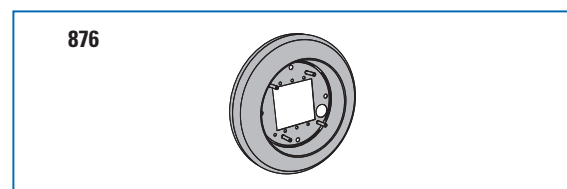
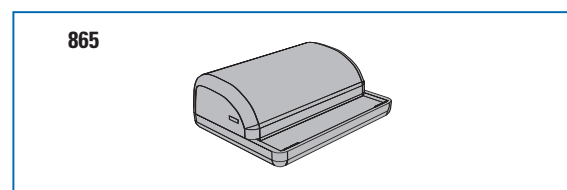
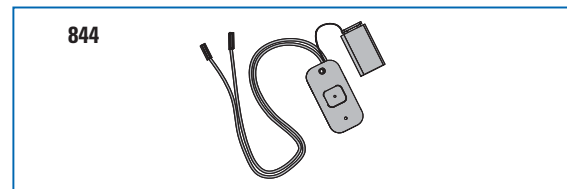
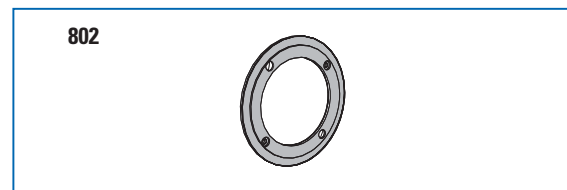
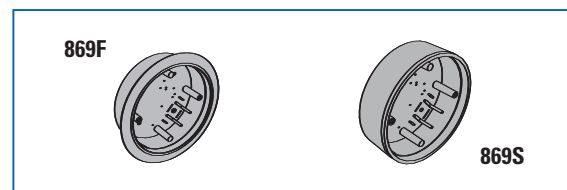
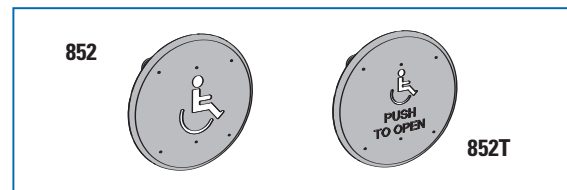
Transmitter, Wireless, 1 Channel, 9v battery included. Use to convert standard wall mount actuator to wireless. Requires 8310-865 Receiver

RECEIVER, 8310-865

Receiver, Wireless, 1 Channel, w/ Sequencing Feature Used in conjunction w/ Wireless Actuators & Transmitter(s)

ESCUTCHEON, 8310-876

Tapered stainless steel escutcheon covers the gap between the wall and the back of the wall plate actuators when mounted in electrical boxes (by others) to minimize cart damage or vandalism. Optional accessory - Can be used w/ any 6" round actuator



AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 6" Surface and Flush mounts

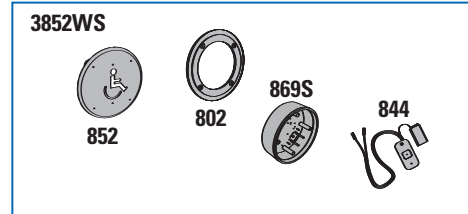
FLUSH MOUNT KIT, 8310-3852WF

6" Round, Logo, Wireless,
Includes 8310-852 Actuator, 8310-844 Transmitter,
8310-869F Flush Box, 8310-802 Weather Ring.
Requires 8310-865 Receiver (not part of kit)



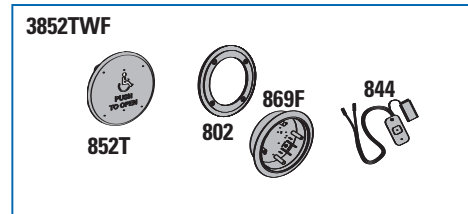
SURFACE MOUNT KIT, 8310-3852WS

6" Round, Logo, Wireless,
Includes 8310-852 Actuator, 8310-844 Transmitter,
8310-869S Surface Box, 8310-802 Weather Ring.
Requires 8310-865 Receiver (not part of kit)



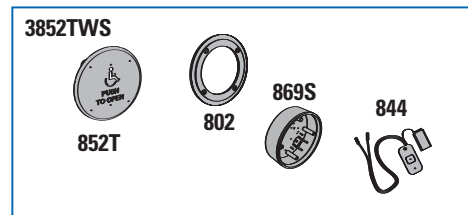
FLUSH MOUNT KIT, 8310-3852TWF

6" Round, Logo, Text, Wireless,
Includes 8310-852T Actuator, 8310-844 Transmitter,
8310-869F Flush Box, 8310-802 Weather Ring.
Requires 8310-865 Receiver (not part of kit)



SURFACE MOUNT KIT, 8310-3852TWS

6" Round, Logo, Text, Wireless,
Includes 8310-852T Actuator, 8310-844 Transmitter,
8310-869S Surface Box, 8310-802 Weather Ring.
Requires 8310-865 Receiver (not part of kit)



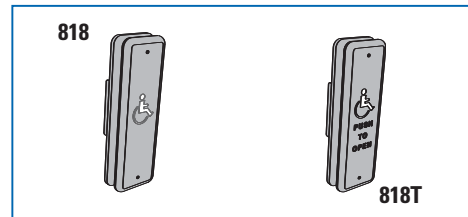
AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 1 1/2" x 4 3/4" Surface and Flush mounts

NOTE: LCN recommends for all jamb mount actuators be used on an interior installation only.

JAMB MOUNTED ACTUATOR, 8310-818

Hardwired low voltage actuator with rectangular stainless steel touch plate. 1 1/2" (38mm) wide by 4 3/4" (121mm). Engraved blue filled handicap symbol conforms to most accessibility codes. Designed to mount in a frame cutout (template provided) projecting approximately 1/2" (12mm) from the frame. Optional mounting in surface or flush mount box (sold separately). Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard.



JAMB MOUNTED ACTUATOR, 8310-818T

Same as the 8310-818, with the added engraving of "Push to Open"

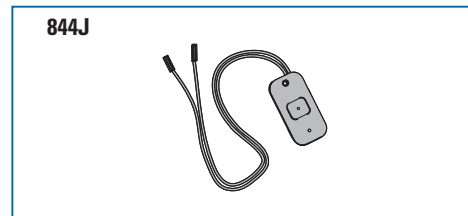


FLUSH MOUNT BOX, 8310-819F

Rugged Plastic Jamb Box, 1 1/2" x 4 3/4" Rectangle, Optional accessory - Can be used w/ any 1 1/2" x 4 3/4" jamb mount actuator

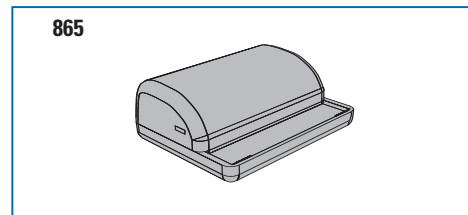
SURFACE MOUNT BOX, 8310-819S

Rugged Plastic Jamb Box, 1 1/2" x 4 3/4", Rectangle, Optional accessory - Can be used w/ any 1 1/2" x 4 3/4" jamb mount actuator



TRANSMITTER, 8310-844J

Transmitter, Wireless, 1 Channel, Jamb Mount, 3v battery included. Used to convert standard jamb mount actuator to wireless when used w/ 819F or 819S boxes. Requires 8310-865 Receiver (interior use only)



RECEIVER, 8310-865

Receiver, Wireless, 1 Channel, w/ Sequencing Feature Used in conjunction w/ Wireless Actuators & Transmitter(s)

AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 1 1/2" x 4 3/4" Surface and Flush mounts

NOTE: LCN recommends for all jamb mount actuators be used on an interior installation only.

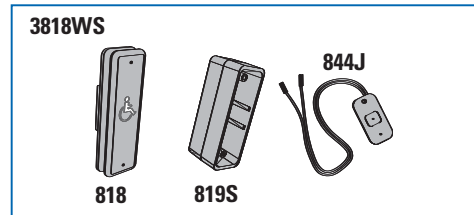
FLUSH MOUNT KIT, 8310-3818WF

Actuator, 1 1/2" x 4 3/4" Rectangle, Logo, Wireless
Includes 8310-818 Actuator, 8310-844J Transmitter, 8310-819F Flush Box. Requires 8310-865 Receiver (not part of kit)



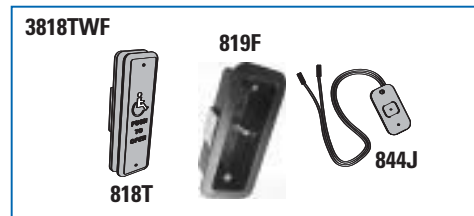
SURFACE MOUNT KIT, 8310-3818WS

Actuator, 1 1/2" x 4 3/4" Rectangle, Logo, Wireless
Includes 8310-818 Actuator, 8310-844J Transmitter, 8310-819S Surface Box. Requires 8310-865 Receiver (not part of kit)



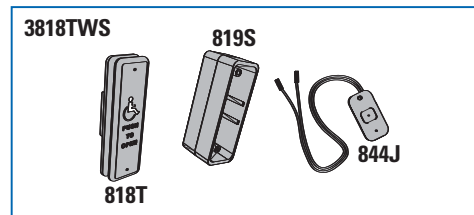
FLUSH MOUNT KIT, 8310-3818TWF

Actuator, 1 1/2" x 4 3/4" Rectangle, Logo, Wireless
Includes 8310-818T Actuator, 8310-844J Transmitter, 8310-819F Flush Box. Requires 8310-865 Receiver (not part of kit)



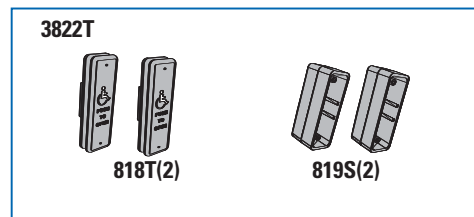
SURFACE MOUNT KIT, 8310-3818TWS

Actuator, 1 1/2" x 4 3/4" Rectangle, Logo, Wireless
Includes 8310-818T Actuator, 8310-844J Transmitter, 8310-819S Surface Box. Requires 8310-865 Receiver (not part of kit)



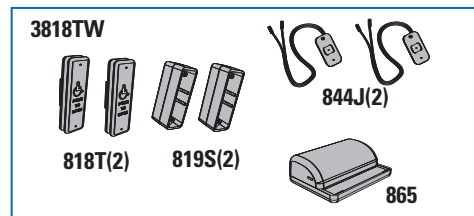
SURFACE MOUNT KIT, 8310-3822T

Actuator Package, 1 1/2" x 4 3/4", Jamb Mount
Includes 8310-818T (2) Jamb Mount Actuator, 8310-819S (2) Surface Mount Box.



SURFACE MOUNT KIT, 8310-3822TW

Actuator Package, 1 1/2" x 4 3/4", Wireless, Jamb Mount
Includes 8310-818T (2) Jamb Mount Actuator, 8310-819S (2) Surface Mount Box, 8310-844J (2) Jamb Mount Transmitter, 8310-865 Receiver.

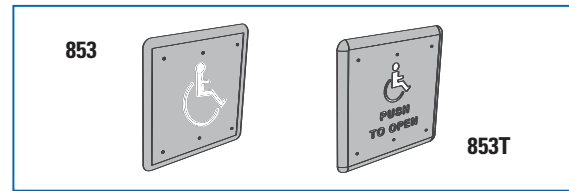


AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 4 3/4" Square Surface and Flush mounts

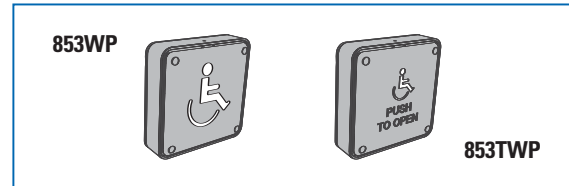
WALL MOUNTED ACTUATOR, 8310-853

Hardwired low voltage actuator with stainless steel touch plate in 4 3/4" (121mm) square. Engraved blue filled handicap symbol conforms to most accessibility codes. Designed to mount in a flush or surface mount box (sold separately) in/on a vertical surface near the controlled door. Optional mounting in single gang electrical box (by others) or double gang box (4" x 4" by others) or on an 8310-866 bollard post. Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard.



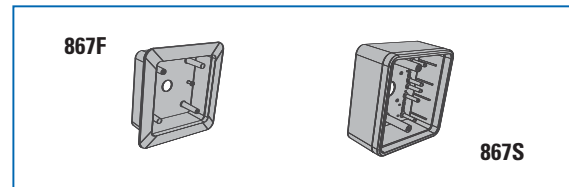
WALL MOUNTED ACTUATOR, 8310-853T

Same as the 8310-853, with the added engraving of "Push to Open"



SURFACE MOUNTED ACTUATOR, 8310-853WP

Wireless, low profile, low voltage actuator with round, stainless steel touch plate in 4 3/4" (121mm) square. Engraved blue filled handicap symbol conforms to most accessibility codes. Surface mount box includes integral transmitter w/ battery and actuator switch. Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard.



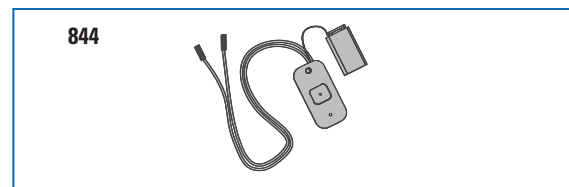
SURFACE MOUNTED ACTUATOR, 8310-853TWP

Same as the 8310-853WP, with the added engraving of "Push to Open"



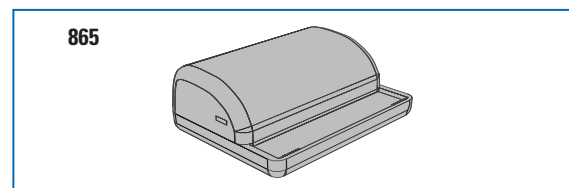
FLUSH MOUNT BOX, 8310-867F

Rugged Plastic Box, 4 3/4" Square
Optional accessory - Can be used w/ any 4 3/4" square actuator



SURFACE MOUNT BOX, 8310-867S

Rugged Plastic Box, 4 3/4" Square
Optional accessory - Can be used w/ any 4 3/4" square actuator

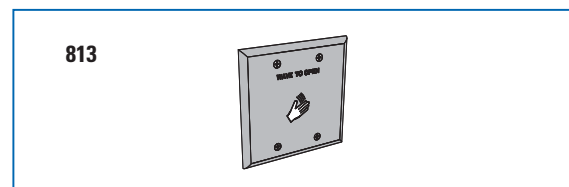


WEATHER RING, 8310-801

Plastic Weather Ring, 4 3/4" Square Optional accessory - Can be used w/ any 4 3/4" square actuator

TRANSMITTER, 8310-844

Transmitter, Wireless, 1 Channel, 9v battery included.
Use to convert standard wall mount actuator to wireless.
Requires 8310-865 Receiver



RECEIVER, 8310-865

Receiver, Wireless, 1 Channel, w/ Sequencing Feature
Used in conjunction w/ Wireless Actuators & Transmitter(s)

TOUCHLESS WALL MOUNTED ACTUATOR, 8310-813

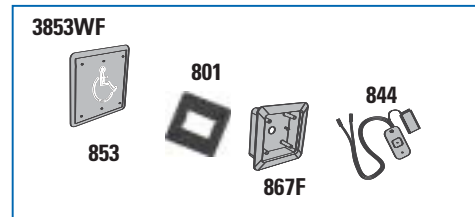
Hardwired low voltage actuator with plastic plate in 4 3/4" (121mm) square. Optional mounting in single gang electrical box (by others) or double gang box (4" x 4" by others).

AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 4 3/4" Square Surface and Flush mounts

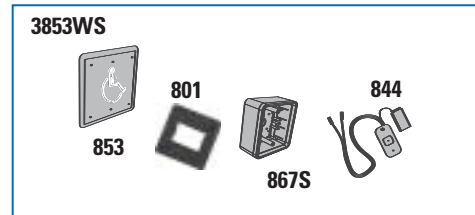
FLUSH MOUNT KIT, 8310-3853WF

Actuator, 4 3/4" Square, Logo, Wireless
Includes 8310-853, 8310-844 Transmitter,
8310-867F Flush Box, 8310-801 Weather Ring.
Requires 8310-865 Receiver (not part of kit)



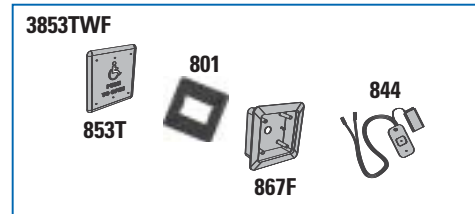
SURFACE MOUNT KIT, 8310-3853WS

Actuator, 4 3/4" Square, Logo, Wireless
Includes 8310-853, 8310-844 Transmitter,
8310-867S Surface Box, 8310-801 Weather Ring.
Requires 8310-865 Receiver (not part of kit)



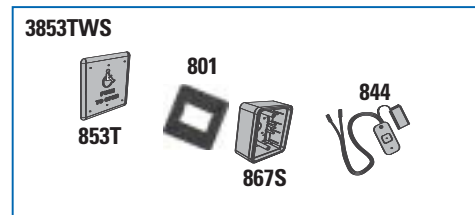
FLUSH MOUNT KIT, 8310-3853TWF

Actuator, 4 3/4" Square, Logo, Text, Wireless,
Includes 8310-853T, 8310-844 Transmitter,
8310-867F Flush Box, 8310-801 Weather Ring.
Requires 8310-865 Receiver (not part of kit)



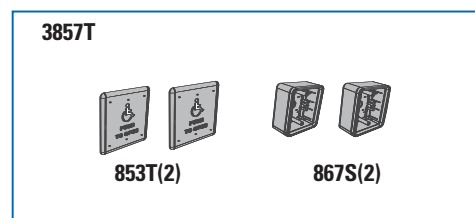
SURFACE MOUNT KIT, 8310-3853TWS

Actuator, 4 3/4" Square, Logo, Text, Wireless
Includes 8310-853T, 8310-844 Transmitter,
8310-867S Surface Box, 8310-801 Weather Ring.
Requires 8310-865 Receiver (not part of kit)



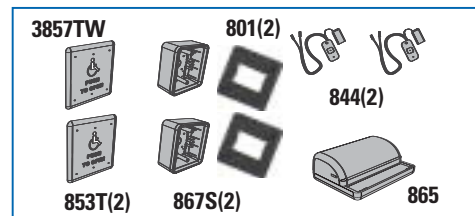
SURFACE MOUNT KIT, 8310-3857T

Actuator Package, 4 3/4" Square
Includes 8310-853T (2) Wall Mount Actuator, 8310-867S (2)
Surface Mount Box



SURFACE MOUNT KIT, 8310-3857TW

Actuator Package, 4 3/4" Square
Includes 8310-853T (2) Wall Mount Actuator, 8310-867S (2)
Surface Mount Box, 8310-801 (2) Weather Ring, 8310-844 (2)
Transmitter, 8310-865 Receiver



AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 4 3/4" Dual Square Surface and Flush mounts

DUAL WALL MOUNTED ACTUATOR, 8310-855

Hardwired low voltage actuator with dual rectangle, stainless steel touch plate in 4 3/4" (121mm) square. Engraved blue filled handicap symbol w/ text, conforms to most accessibility codes. Designed to mount in a flush or surface mount box (sold separately) in/on a vertical surface near the controlled door. Optional mounting in double gang box (4" x 4" by others) or on an 8310-866 bollard post. Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard.

FLUSH MOUNT BOX, 8310-867F

Rugged Plastic Box, 4 3/4" Square
Optional accessory - Can be used w/ any 4 3/4" square actuator

SURFACE MOUNT BOX, 8310-867S

Rugged Plastic Box, 4 3/4" Square
Optional accessory - Can be used w/ any 4 3/4" square actuator

WEATHER RING, 8310-801

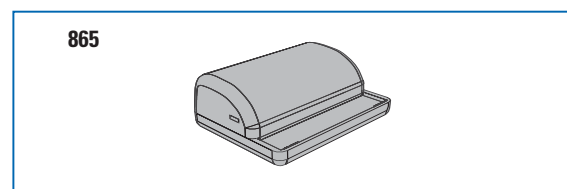
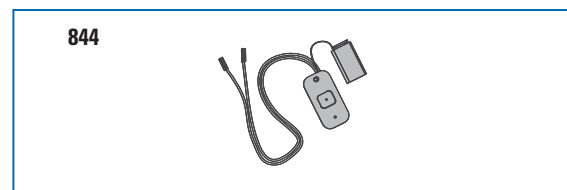
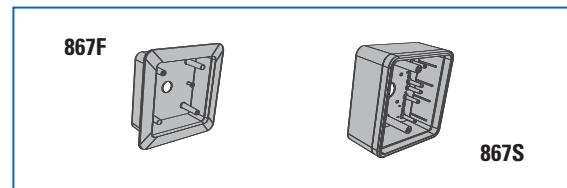
Plastic Weather Ring, 4 3/4" Square
Optional accessory - Can be used w/ any 4 3/4" square actuator

TRANSMITTER, 8310-844

Transmitter, Wireless, 1 Channel, 9v battery included.
Use to convert standard wall mount actuator to wireless.
Requires 8310-865 Receiver

RECEIVER, 8310-865

Receiver, Wireless, 1 Channel, w/ Sequencing Feature
Used in conjunction w/ Wireless Actuators & Transmitter(s)

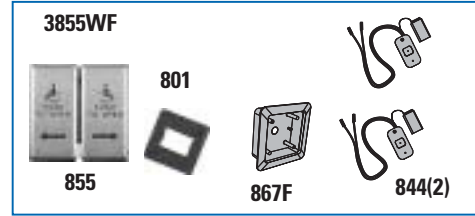


AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 4 3/4" Dual Square Surface and Flush mounts

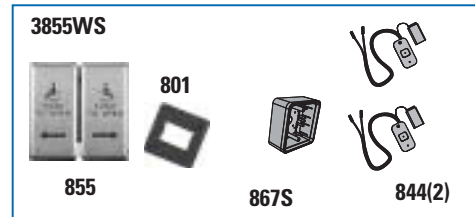
FLUSH MOUNT KIT, 8310-3855WF

Actuator, 4 3/4" Square, Logo, Text, Dual Vestibule, Wireless.
Includes 8310-855 Actuator, 8310-844 Transmitter (2),
8310-867F Flush Box, 8310-801 Weather Ring.
Requires 8310-865 Receiver (2) (not part of kit)



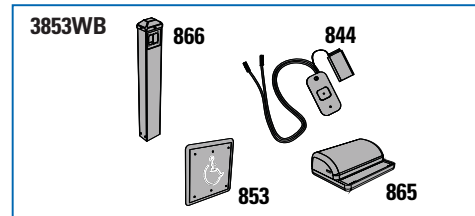
SURFACE MOUNT KIT, 8310-3855WS

Actuator, 4 3/4" Square, Logo, Text, Dual Vestibule,
Wireless. Includes 8310-855 Actuator, 8310-844 Transmitter
(2), 8310-867S Surface Box, 8310-801 Weather Ring.
Requires 8310-865 Receiver (2) (not part of kit)



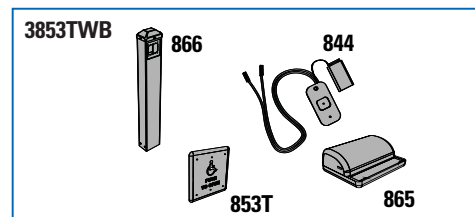
ACTUATOR, BOLLARD MOUNT, 8310-3853WB

4 3/4" Square w/ Logo, Wireless actuator
Use w/ 8310-866 Bollard - Includes 8310- 853 actuator, 8310-
844 Transmitter requires 8310-865 Receiver.



ACTUATOR, BOLLARD MOUNT, 8310-3853TWB

4 3/4" Square w/ Logo, Text, Wireless actuator
Use w/ 8310-866 Bollard - Includes 8310- 853T actuator,
8310-844 Transmitter requires 8310-865 Receiver



AUTOMATIC OPERATOR SENSORS & ACCESSORIES

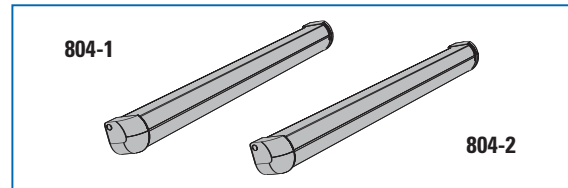
8310 Series

The sensors and accessories on the following pages are to be used only with LCN automatic operators. When using sensors supplied by others, consult the factory.

The desired function, traffic patterns and physical design of the opening will determine the type of sensors used.

DOOR MOUNT SAFETY SENSOR, 8310-804-1

Contains one active sensor module to detect obstruction(s) on leading edge of door.



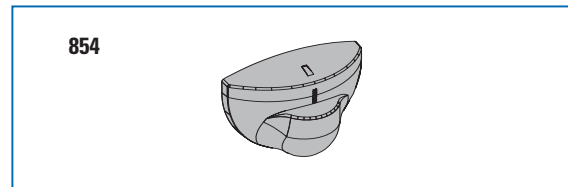
DOOR MOUNT SAFETY SENSOR, 8310-804-2

Contains two active sensor modules to detect obstruction(s) on full face of door.

HEADER MOUNT ACTIVATION SENSOR, 8310-854

Header Mount Activation Sensor, 'K' Band Technology Used to detect objects either approaching or moving away from sensor. Uses standard 'one way' detection but additional detection can be programmed.

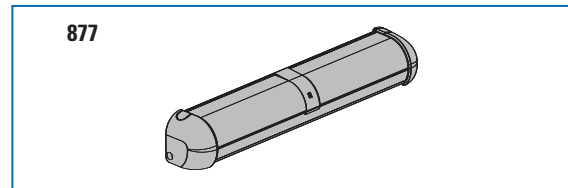
Optional 8310-859 Handheld Remote Control can be used to program 8310-854 sensor from a distance.



HEADER MOUNT SAFETY SENSOR, 8310-877

Header Mount Safety Sensor, 'Diffused Infrared' Technology. Used to detect obstructions during door open and door closed position. Nine selectable patterns.

Optional 8310-859 Handheld Remote Control can be used to program 8310-877 sensor from a distance. Includes 8310-846 Harness.



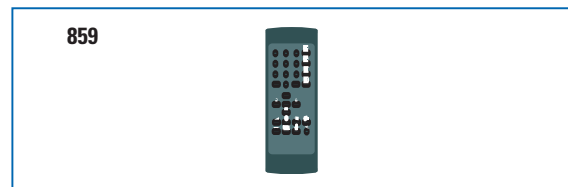
HEADER MOUNT SAFETY SENSOR SPACER, 8310-877S

Required when 8310-804-1 or 8310-804-2 Door Mount Safety Sensors are used w/ 8310-877 Header Mount Safety Sensor.



REMOTE CONTROL, HANDHELD, 8310-859

Used to program 8310-877 Header Mount Safety Sensor or 8310-854 Header Mount Motion Sensor.

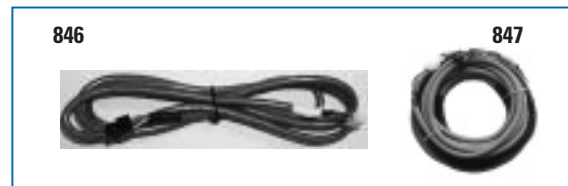


HARNESS, HEADER MOUNT, 8310-846

Used w/ 8310-877 Header Mount Safety Sensor.

HARNESS, DOOR MOUNT, 8310-847

Used w/ 8310-804-1 or 8310-804-2 Door Mount Safety Sensor.

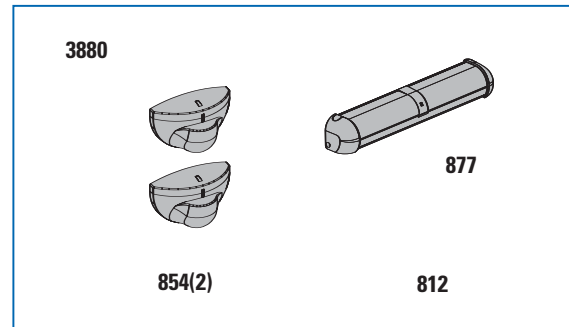


AUTOMATIC OPERATOR SENSORS & ACCESSORIES

8310 Series

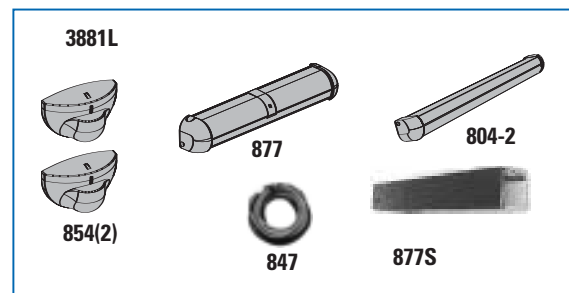
SAFETY SENSOR PACKAGE, 8310-3880

Activation/Safety Sensor Package, High Energy, Single Door Includes 8310-854 (2) Header Mount Activation Sensor, 8310-877 Header Mount Safety Sensor, 8310-812 Safety Beam Set. Requires LCN Safety/Guide Rails. Used w/ Astro Swing High Energy Operators



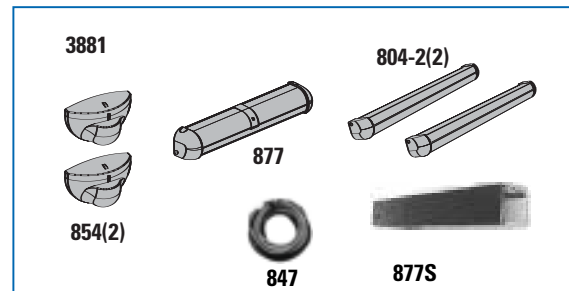
SAFETY SENSOR PACKAGE, 8310-3881L

Activation/Safety Sensor Package, Single Door Includes 8310-854 (2) Header Mount Activation Sensor, 8310-877 Header Mount Safety Sensor, 8310-877S Header Mount Spacer, 8310-804-2 Door Mount Safety Sensor (approach side), 8310-847 Harness



SAFETY SENSOR PACKAGE, 8310-3881

Activation/Safety Sensor Package, Single Door Includes 8310-854 (2) Header Mount Activation Sensor, 8310-877 Header Mount Safety Sensor, 8310-877S Header Mount Spacer, 8310-847 Harness, 8310-804-2 (2) Door Mount Safety Sensor (approach/safety side)



SAFETY SENSOR PACKAGE, 8310-3883

Activation/Safety Sensor Package, Low Energy Convenience, Single Door, Includes 8310-804-1 Door Mount Safety Sensor (approach side), 8310-805C Door Position Switch (Concealed), 8310-845 Programmable Relay Module

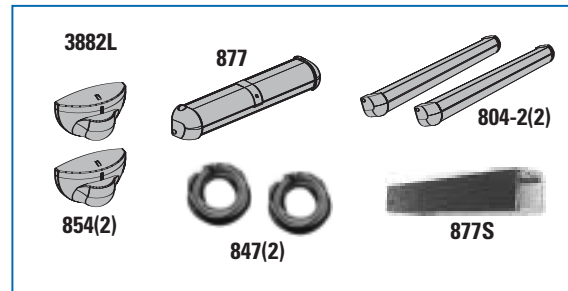


AUTOMATIC OPERATOR SENSORS & ACCESSORIES

8310 Series

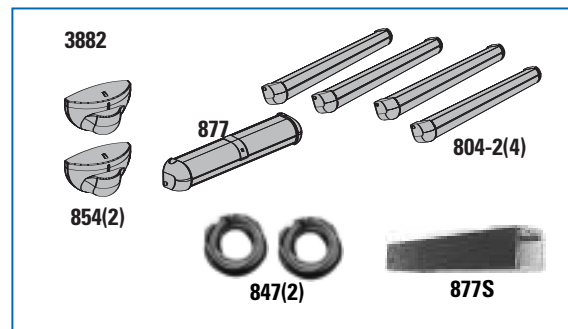
SAFETY SENSOR PACKAGE, 8310-3882L

Activation/Safety Sensor Package, Double Door
Includes 8310-854 (2) Header Mount Activation Sensor,
8310-877 Header Mount Safety Sensor,
8310-877S Header Mount Spacer, 8310-847 (2) Harness,
8310-804-2 (2) Door Mount Safety Sensor (approach side).



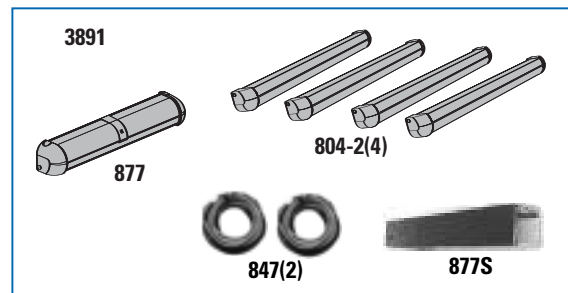
SAFETY SENSOR PACKAGE, 8310-3882

Activation/Safety Sensor Package, Double Door
Includes 8310-854 (2) Header Mount Sensor, 8310-877
Header Mount Sensor, 8310-877S Header Mount Spacer,
8310-847 (2) Harness, 8310-804-2 (4) Door Mount Safety
Sensor (approach/safety side).



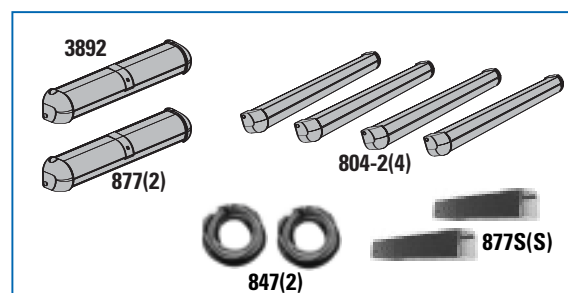
SAFETY SENSOR PACKAGE, 8310-3891

Activation/Safety Sensor Package, Health Care I,
Simultaneous Pair, Includes 8310-877 Header Mount Sensor,
8310-877S Header Mount Spacer,
8310-804-2 (4) Door Mount Sensor (approach/safety side),
8310-847 (2) Harness.



SAFETY SENSOR PACKAGE, 8310-3892

Activation/Safety Sensor Package, Health Care II,
Independent Pair, Includes 8310-877 (2) Header Mount
Sensor, 8310-877S (2) Header Mount Spacer,
8310-804-2 (4) Door Mount Sensor (approach/safety side),
8310-847 (2) Harness



AUTOMATIC OPERATOR SENSORS & ACCESSORIES

8310 Series

SWITCH, DOOR POSITION, SURFACE MOUNT, 8310-805

Used when 8310-804-1 or 8310-804-2 Door Mounted Safety Sensor is installed in conjunction w/ either a electrohydraulic or pneumatic Automatic Operator. Disables approach side sensor when door is closed.

805

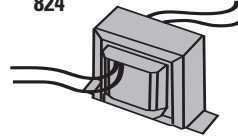


805C

SWITCH, DOOR POSITION, CONCEALED, 8310-805C

Used when 8310-804-1 or 8310-804-2 Door Mounted Safety Sensor is installed in conjunction w/ either a electrohydraulic or pneumatic Automatic Operator. Disables approach side sensor when door is closed.

824



824P

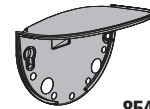
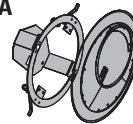
TRANSFORMER, 24V, HARDWIRED, 8310-824

Optional accessory - Used to remotely power any 24v sensor/receiver

TRANSFORMER, 24V, PLUG IN, 8310-824P

Optional accessory - Used to remotely power any 24v sensor/receiver

854ECA



854ERA

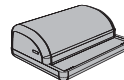
BRACKET, DROP CEILING, 8310-854ECA

Optional bracket used w/ 8310-854 Header Mount Activation Sensor

COVER, PROTECTIVE, 8310-854ERA

Optional cover used w/ 8310-854 Header Mount Activation Sensor

3803



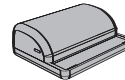
865

844J(2)

WIRELESS CONVERSION KIT, JAMB MOUNT, 3V, 8310-3803

Converts standard jamb actuator to wireless version
Requires 8310-819S or 8310-819F Jamb Box - Includes 8310-865 Receiver, 8310-844J (2) Jamb Mounted Transmitter

3809



865

844(2)

WIRELESS CONVERSION KIT, WALL MOUNT, 9V, 8310-3809

Converts standard wall mount actuator to wireless version
Requires Surface or Flush Box & Weather Ring - Includes 8310-865 Receiver, 8310-844 (2) Wall Mount Transmitter

3889



SAFETY MODULE & KIT, 8310-3889

Used w/ 7901, 7902, 7981, 7982 Control Boxes
Includes 8310-3888 Safety Module Harness. Required when 8310-877 Header Mount Safety Sensor is used w/ Pneumatic Automatic Operators (2610, 4810, 4820 or 4840 Series)

HARNESS, SAFETY MODULE, SERVICE PART, 8310-3888

Safety Module Harness for pneumatic control box.

AUTOMATIC OPERATOR SENSORS & ACCESSORIES

8310 Series

TRANSMITTER, WIRELESS, 8310-861

1 Channel, Handheld, 9v. Requires 8310-865 Receiver

TRANSMITTER, WIRELESS, 8310-862

2 Channel, Handheld, 9v. Requires 8310-865 Receiver

TRANSMITTER, WIRELESS, 8310-863

3 Channel, Handheld, 9v. Requires 8310-865 Receiver

TRANSMITTER, WIRELESS, 8310-864

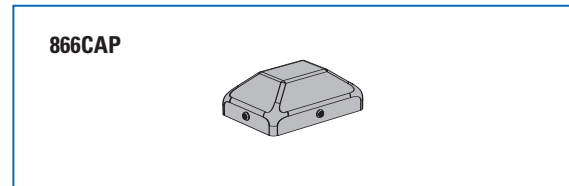
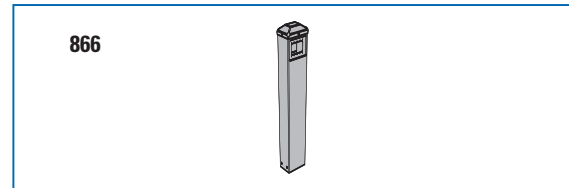
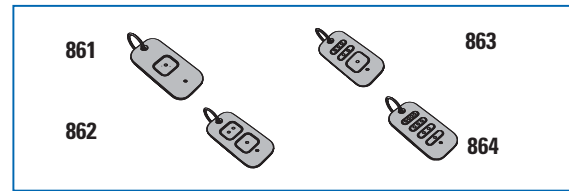
4 Channel, Handheld, 9v. Requires 8310-865 Receiver

BOLLARD POST, 8310-866

A powder coated steel, 42" x 4" x 6" Bollard Post, Mounting Base, Actuator Cut-Out Requires 8310-3853WB Bollard Actuator or 8310-3853TWB Bollard Actuator. Accepts any 4 3/4" square actuators. Includes 8310-866CAP.

BOLLARD POST, 8310-866CAP

Plastic Cap, Protective Cover, Service Part for 8310-866 Bollard Post

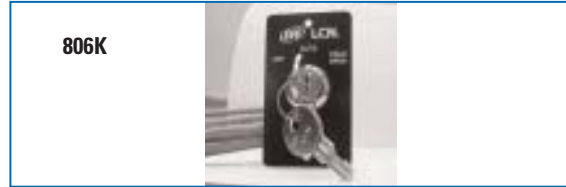


AUTOMATIC OPERATOR SENSORS & ACCESSORIES

8310 Series

SWITCH, KEY, 8310-806K

Type, 3 Position (On/Off/Hold-Open)
Optional switch used w/ Senior Swing, Benchmark, or 4630/4640 Operators with (CS) option



SWITCH, ROCKER, 8310-806R

Type, 3 Position (On/Off/Hold-Open)
Optional switch w/ Senior Swing or Benchmark Operators.

LINE FILTER, 8310-807

AC, 120v, Optional filter used w/ Senior, Middle, Astro Swing Operators to reduce 'line noise'



SWITCH ADAPTER HARNESS, 8310-808

Used w/ 8310-806K or 8310-806R on Senior Swing, Middle Swing and Astro Swing Operators manufactured prior to 9/06

PROGRAMMABLE RELAY & SEQUENCER MODULE, 8310-845

Used to sequence door operation in Senior Swing and Benchmark for hard wired applications.