

LCN®



EXIT



Automatic Operators

Introduction

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TAKING CONTROL.

Since 1877, LCN has been a pioneer in the door control industry, delivering innovative solutions known for their meticulous engineering, durability and reliable quality.



Durability

LCN strives to exceed customer expectations with high-quality construction, unique product functionality and robust testing protocols.



Precision

LCN's dedication to and investment in accuracy results in consistent performance—from installation through daily operation.



Trust

Since creating the first door control more than a century ago, LCN continues to use its expertise and pioneering spirit to ensure quality, life safety and customer satisfaction.

Introduction

Improving Accessibility Through Superior Door Control

Since 1877, LCN has been the trusted leader in door control. Offering safety and security through superior products, we equip door hardware professionals with the tools and the expertise they need to get the job done right.

Meticulous engineering and rigorous quality control set us apart, ensuring reliable performance and consistent operation, saving you time and money. Our deep understanding of field challenges drives us to exceed expectations with premium materials, robust testing, and exceptional customer service. From installation to daily operation, you can count on LCN.

Manufactured with pride in Princeton, Illinois, our LCN automatic operators have been improving accessibility for over 30 years in schools, hospitals, offices, and many other commercial and residential settings across North America and across the globe.

From heavy, historic wooden doors to lightweight aluminum storefronts and from new construction specifications to renovations and retrofits, our auto operators provide the performance required to meet ANSI/BHMA building codes, accommodate ADA requirements, and equip our customers with the solutions they need.

Automatic Operators

Selecting an Automatic Operator

When choosing which automatic operator is best for each opening, there are a handful of key questions to consider, such as:

- Will this door be primarily used manually with an automatic option, or will it be opened automatically most of the time?
- What level of traffic will this door receive?
- Could this door be impacted by environmental factors such as wind or HVAC stack pressure?

The following pages serve as a guide to help understand and determine the key factors in choosing which auto operator is correct for each opening. To begin, there are a few key definitions to know.

- Low Energy Operator: Low Energy, or LE, operators are a type of automatic operator. These are differentiated from full-energy, or high-energy, operators through a variety of code and safety implications. The primary differences are that LE operators require a knowing act for operation, but do not require safety sensors or guide rails. In addition, LE operators do not require a specific certification to install or maintain, making them a more accessible option for in-house facility teams and

locksmiths or integrators. All LCN automatic operators are LE operators.

- Electrohydraulic: These operators are best for primarily manual applications and feature a heavy duty closer to handle the closing function and electronics to perform the automatic opening. Electronic open + Mechanical close.
- Electromechanical: These operators are best for primarily automatic applications and manage both the opening and closing cycle using electronics. Electronic open + Electronic close.
- Pneumatic: These operators are best for primarily manual operation. Because they leverage the power of pressurized air, not electronics, they're an ideal solution for areas that contain either hazardous materials or a need to minimize or restrict high-voltage wiring. Pneumatic open + Mechanical close.

Mounting the Operator

With those definitions in mind, the first step is to determine how the auto operator will be installed, or mounted, onto your opening. As you'll see in the chart below, there are four options to choose from, which will help narrow the product choices.

Low energy powered systems	Concealed Mount	Surface Mounted Pull Side	Surface Mounted Push Side	Surface Mounted Double Egress
	2610 ³ 2850IQ ² 2810IQ ² 2860IQ ²	4630 ¹ 9530IQ ² 4810 ³ 9550IQ ² 6440XP ¹ 9560IQ ² 9130 ²	4640 ¹ 9150 ² 4820 ³ 9540IQ ² 4840 ³ 9550IQ ² 6440XP ¹ 9560IQ ² 9140 ²	9550IQ ² 9560IQ ²
1. Electrohydraulic 2. Electromechanical 3. Pneumatic				

Product Selection Guide

Door Usage

With the mounting style determined, the next step is to identify how the door will primarily be used – manually or automatically – and account for any special building requirements, which could lead to our pneumatic products.

- Primarily Manual Operation = Electrohydraulic
- Primarily Manual Operation and/or special building requirements = Pneumatic
- Primarily Automatic Operation = Electromechanical

Building Codes and the ADA

Now that the mounting style and expected primary use have been established, the list of product choices should be narrowing. Before moving to the individual product sections of this catalog, it's important to also consider how operators and openings are evaluated in terms of both ADA and code requirements.

ANSI/BHMA A156.19

Low Energy Operators must adhere to the A156.19 standard set by the American National Standards Institute (ANSI) and the Building Hardware Manufacturers Association (BHMA). The requirements in ANSI/BHMA A156.19 include:

- Cycle test standard of 300,000 full load operating cycles
- Power opening plus full door control
- Open to back check 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° for 10° is no faster than 3 seconds
- Less than 15 lb to stop door's motion
- Kinetic energy must not exceed 1.25 lb-ft
- In event of power failure, less than 15 lb to release latch, less than 30 lb to put door in motion, less than 15 lb to fully open door system

Americans with Disabilities Act

The American with Disabilities Act (ADA) is a civil rights law, not a building code. The section of this law that most impacts door hardware is Public Accommodations Title III. Essentially, businesses of all types must comply with accessible design standards to provide people with disabilities with access equal to, or similar to, that available to the general public.

The ADA requires an (accessible) opening, which means providing a door with a minimum 32" (813mm) clear width opening, easily manipulated handles, a maximum opening force, a minimum closing time, and the capability to open at least 90°.

There are openings—more commonly in historic buildings but also in new construction—where the ADA requirements are not attainable with a mechanical closer. Automatic operators can be used in these situations to achieve ADA compliance without needing to alter the opening itself. All LCN operators are ADA compliant with actuated opening.

Choosing a Finish

The final step in selecting an auto operator is choosing the finish. LCN auto operators are available in a variety of finish colors and styles, with additional custom coatings available upon request.

- LCN's powder coat finishes surpass 100 hours of salt spray, which is over four times the ANSI standard for corrosion resistance.
- For installations where a higher level of corrosive resistance is required, LCN offers an optional Special Rust Inhibitor (SRI) pretreatment. This can also be combined with the powder coat for additional corrosion resistance.
- Plated finishes are also available as an option to accent the door and frame.

Contact Allegion for Help

We hope this guide has made selecting an automatic operator a smooth and clear process. However, should you have any additional questions regarding which operator is right for your doors, please don't hesitate to reach out to us via our website, LCNClosers.com, or by calling our customer service line at 1-877-671-7011 for US customers, and 1-800-900-4734 for Canadian customers.

PNEUMATIC OPERATORS

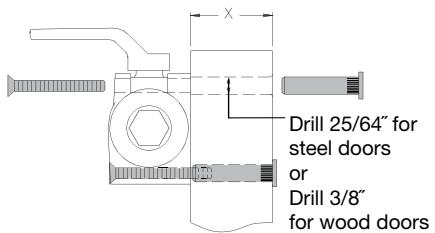


Pneumatic Powered Systems

LCN Pneumatic Auto Equalizer systems use the power of pressurized air to do the work of automatically opening the door. 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.

Pneumatic Fasteners

Standard Wood and Machine Screws (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.



Multi-Door and Single-Door Solutions

A single control box may power up to two pairs of doors simultaneously making pneumatic automatic operators 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 so 3/16" metal tubing (by others) can be used in fire rated plenums).

Standards, Listings and Approvals

- Meets ADA opening force requirements
- Consult the factory for other listings

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.

Blow-Open (Smoke Evacuation Systems)

An auxiliary "blow-open" box is available and is controlled by the building smoke evacuation system. When activated, the normal pneumatic automatic operator functions are not available. The 7949 Series "blow-open" box works with or without the 7900 Series control boxes. (Limited to 50 linear foot of tubing).

Warranty

2 year limited warranty. See General Information catalog for complete details.

Maintenance

- For best performance, mount operators according to the LCN installation instructions
- Periodic visual inspections are recommended
- Inspect and service filter assembly in 7900 Series control boxes as required
- No service contracts required

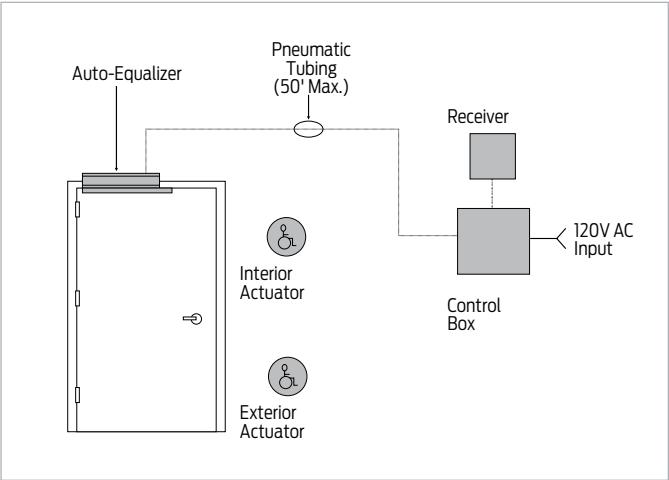
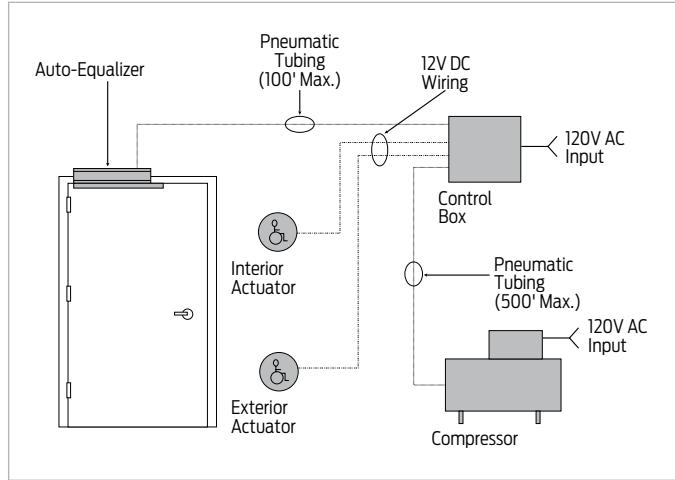
Pneumatic Product Comparison

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

	Mounting	Finish	Cover	Cylinder	Arm Function*
2610	Top lomb (pull) side Top lomb (push) side Parallel arm Concealed Door (pull) side	Powder coat Plated	Plastic Metal	Non-handed Non-sized Accessibility Automatic operator Hold open DPS	90° 90° 90° 90° 90° 90°
4810	● ● ● ● ●	● ●	● ●	● ● ● ● ●	● ● ● ● ●
4820	● ● ● ● ●	● ●	● ●	● ● ● ● ●	● 90° ● ● ● ●
4840	● ● ● ● ●	● ●	● ●	● ● 90° 90° 90°	● ● 90° 90° 90°

Wiring Diagrams

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



Single Interior Door System (Wired)

- 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 Number	Description
1	4811	Auto equalizer
1	8310-856	Hard wired wall mount, logo
1	8310-856	Hard wired wall mount, logo
1	7901	Control box
1		Compressor*
As needed	925	Tubing

* Contact Technical Support to verify compressor requirements.

Single Interior Door System (Wireless)

- Slow opening automatic door on door leaf
- Wireless 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 wireless transmitter in the actuator sends a signal to the wireless 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

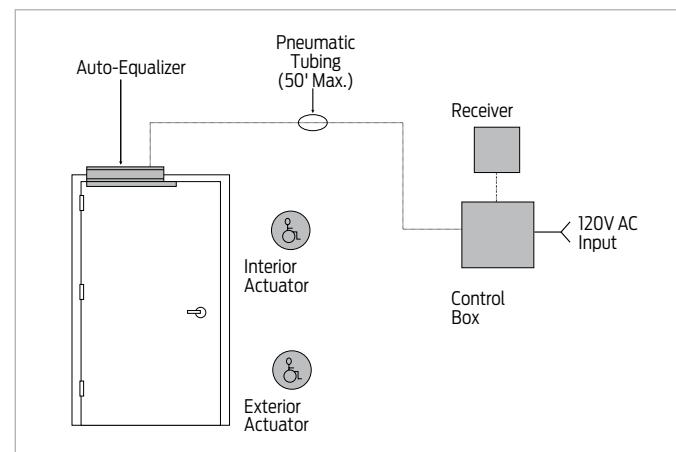
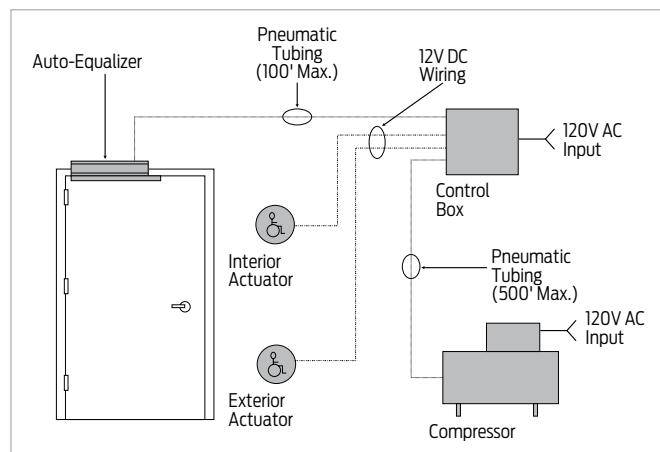
Bill of Materials

Qty	Part number	Description
1	4811	Auto equalizer
2	8310-3856WS	Wireless actuator, wall mount and surface, logo, 4-1/2" round
1	8310-865	Wireless receiver
1	7981	Control box
As needed	925	Tubing

Pneumatic Systems

Wiring Diagrams

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



Alternate Vestibule Door System (Wired)

- 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 number	Description
2	4822	Auto equalizer (exterior)
2	4811	Auto equalizer (interior)
1	7902S	Control box with sequencer card
1		Compressor*
4	8310-856	Hard wired wall mount, logo
As needed	925	Tubing

* Contact Technical Support to verify compressor requirements.

Vestibule Door System (Wireless)

- 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 number	Description
1	4822	Auto equalizer (exterior)
1	4811	Auto equalizer (interior)
1	7902S	Control box with sequencer card
4	8310-3856WS	Wireless actuator, wall mount and surface, logo, 4-1/2" round
2	8310-865	Wireless receiver
As needed	925	Tubing

2610 Series

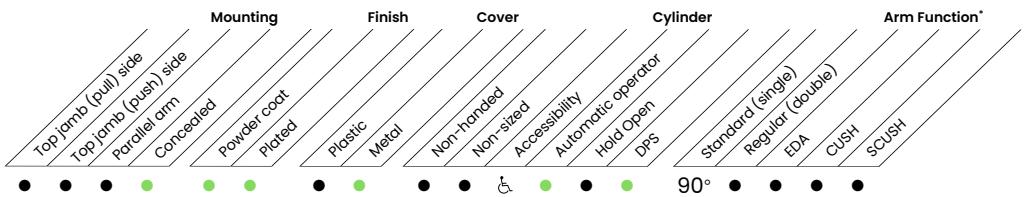


The 2610 Auto Equalizer™ is LCN's pneumatically powered multi-door solution. This low-energy automatic operator provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

Features

Certifications	ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Mounting	Concealed in frame
Body construction	<ul style="list-style-type: none"> Cast iron body Full complement bearing 1-1/2" diameter piston 11/16" diameter double heat treated pinion journal 	Arms	Single lever arm, mounting/finish plate, standard track
Fluid	All weather fluid	Finishes/colors/powder coat	<ul style="list-style-type: none"> 689 - Aluminum 690 - Statuary bronze 691 - Light bronze 693 - Black 695 - Dark bronze 696 - Brass Custom colors optional
Handing	Handed		<ul style="list-style-type: none"> Optional SRI primer - powder coat only Optional plated finishes
Size	Sized 3 and 4		
Warranty	2 years		
Fasteners	Wood and machine screws (WMS)		

Product Configurations



● Available

● Not available

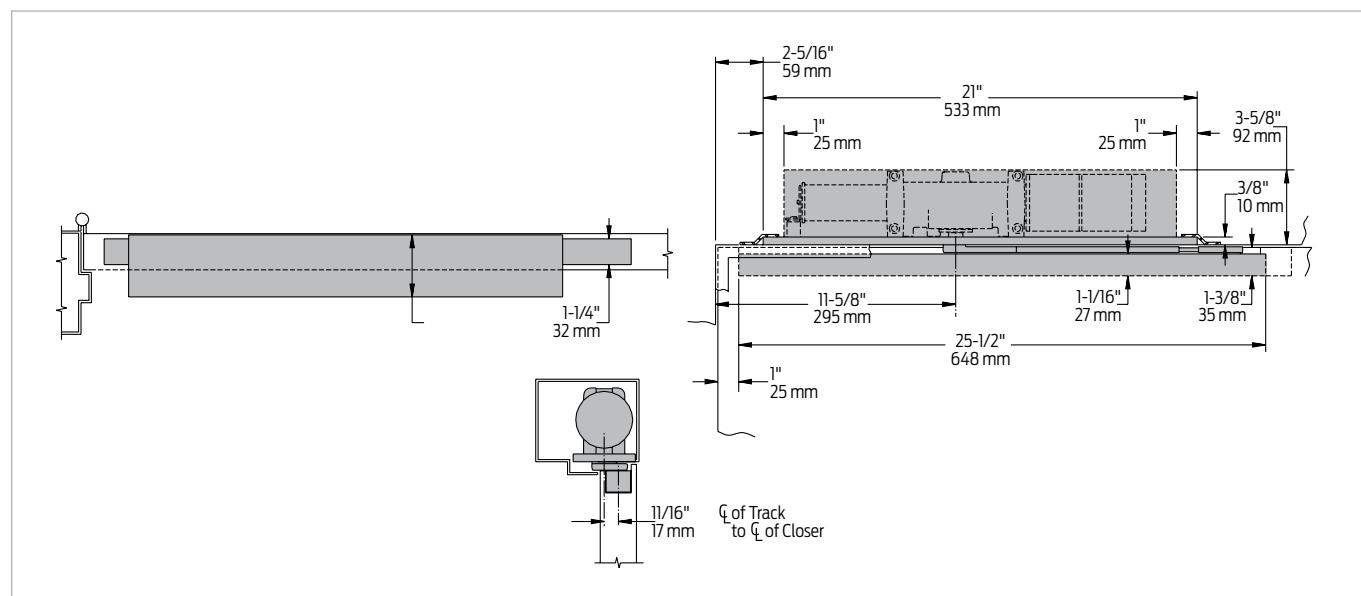
● Meets ADA requirements (power mode)

* See individual series for maximum manual opening

Note: Special Templates - Customized installation templates or products may be available to solve non-standard applications. Contact LCN Product Support for assistance.

Pneumatic Systems

Concealed Mounting Details



Pneumatic Systems	Butt hinges	Should not exceed 5" (127 mm) in width
	Auxiliary stop	Recommended
	Top rail	<ul style="list-style-type: none"> 1-3/8" (35 mm) mortise required 5/16" (8 mm) cutout required at top of the door, push side only
	Head frame	Minimum 4" (102 mm) x 4" for hollow metal or aluminum tube construction
	System diagram	See pages 9-10 for typical system wiring, and pages 27-28 for pneumatic control boxes
	Maximum opening	<ul style="list-style-type: none"> 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 Track style closers are at their weakest closing force at 180° Consult factory for applications where exterior or large/heavy door must swing 180° Consult factory for all pivot mounted installations

Notes:

- For interior or exterior doors
- Single acting cylinder in head frame
- Concealed arm and track in door top rail
- Requires control box with integral compressor or control box using auxiliary air supply (see control box pages 27-28 and actuators and accessories, pages 110-129)
- Guard rails/safety mats not required

Accessories

Cylinders



2610-3971
Cast Iron Cylinder Assembly
(CYL)

- Handed
- Standard



2610-3971 DPS
Cast Iron Cylinder Assembly
(CYL)

- Handed
- With door position switch (DPS) which sends signal when door is closed
- Standard



2610-3071
Cast Iron Cylinder Assembly
(CYL)

- Handed
- Mounting plate
- Standard



2610-3071 DPS
Cast Iron Cylinder Assembly
(CYL)

- Handed
- Mounting plate with door position switch (DPS) which sends signal when door is closed
- Standard

Arms



2610-3077T
Standard Arm (STDTRKARM)

- Handed
- Track roller not included with arm

Tracks



2610-3038
Standard Track (STDTRK)

- Non-handed
- Standard

Installation Accessories



2610-3034

Track roller

- Quiet, low friction roller assembly
- Shoulder dimension "X" = 1/16" (2 mm)

Pneumatic Systems

Ordering Information

Product Selection Guide	How to Order 2610 Series Operators	Pneumatic Systems Auto equalizers 2610/4810/4820/4840/7900 Series	Operator will be shipped with:
1	Select cylinder size 2613 2613 DPS 2614 2614 DPS		
2	Specify hand Right Hand (RH) Left Hand (LH)		
3	Select finish (standard powder coat) 689 - Aluminum 690 - Statuary bronze 691 - Light bronze 693 - Black 695 - Dark bronze 696 - Brass		
4	Custom finish Custom powder coat (RAL) Plated finish		Optional
5	Screw pack Wood and machine screws (WMS)		
6	Special template (ST) ST - Designate while ordering		

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%

Exterior (and Vestibule) Door Width



Interior Door Width



→ Indicates recommended range of door width for operator.
Note: Minimum door width 30" (762mm).

4810 Series

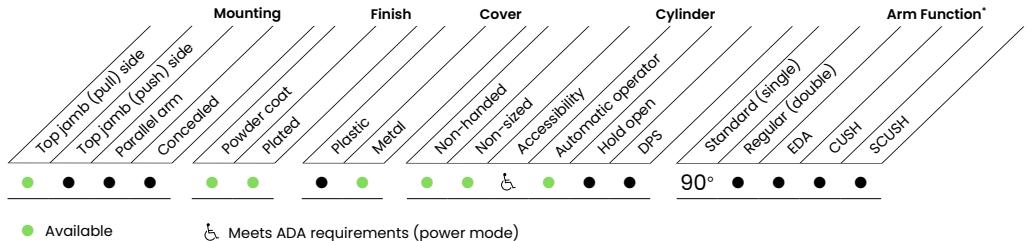


The 4810 Auto Equalizer™ is LCN's pneumatically powered multi-door solution. This low-energy automatic operator provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

Features

Certifications	ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	Metal cover (MC)
Body construction	<ul style="list-style-type: none"> Cast iron body Full complement bearing 1-1/2" diameter piston 3/4" diameter double heat treated pinion journal 	Fasteners	Wood and machine screws (WMS)
Fluid	All weather fluid	Mounting	Top jamb (pull side)
Handing	Non-handed	Arms	Single lever arm with standard track
Size	Adjustable spring size 1-4	Finishes/colors/powder coat	<ul style="list-style-type: none"> 689 - Aluminum 690 - Statuary bronze 691 - Light bronze 693 - Black 695 - Dark bronze 696 - Brass Custom colors optional
Warranty	2 years		<ul style="list-style-type: none"> Optional SRI primer - powder coat only Optional plated finishes

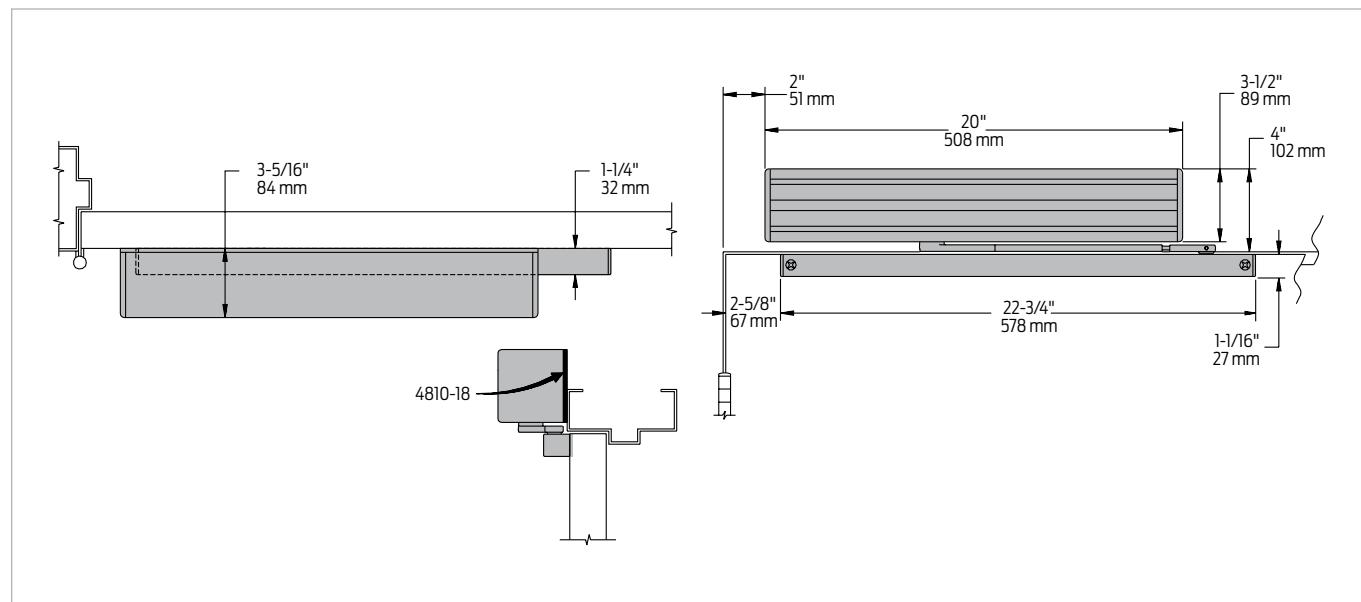
Product Configurations



Note: Special Templates - Customized installation templates or products may be available to solve non-standard applications. Contact LCN Product Support for assistance.

Pneumatic Systems

Top Jamb (Pull Side) Mounting Details



Butt hinges	Should not exceed 5" (127 mm) in width
Auxiliary stop	Recommended
Reveal	Should not exceed 1/8" (3 mm)
Top rail	Minimum 1-1/8" (29 mm)
Head frame	Minimum 2" (51 mm)
System diagram	See pages 9-10 for typical system wiring, and pages 27-28 for pneumatic control boxes
Maximum opening	<ul style="list-style-type: none"> 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 Track style closers are at their weakest closing force at 180° Consult factory for applications where exterior or large/heavy door must swing 180°

Notes:

- Requires control box with integral compressor or control box using auxiliary air supply
- See control box pages 27-28 and actuators and accessories, pages 110-129
- Guard rails/safety mats not required

Accessories

Cylinders



4811-3971

Cast Iron Cylinder Assembly (CYL)

- Non-handed
- Standard

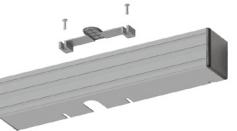


4811-3071

Cast Iron Cylinder Assembly (CYL)

- Non-handed
- Mounting plate
- Standard

Covers



4810-72MC

Metal Cover (MC)

- Non-handed
- With black end caps
- Standard

Arms



4810-3077T

Standard Arm (STDTRKARM)

- Non-handed
- Track roller not included with arm

Tracks



4810-3038

Standard Track (STDTRK)

- Non-handed
- Standard

Installation Accessories



4810-3034

Track Roller

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

Pneumatic Systems

Ordering Information

How to Order 4810 Series Operators

1	Select finish (standard powder coat)	689 - Aluminum 690 - Statuary bronze 691 - Light bronze 693 - Black 695 - Dark bronze 696 - Brass
2	Custom finish	Custom powder coat (RAL) Plated finish
3	Screw pack	Through Bolt ¹ Wood and Machine Screws (TBWMS)
4	Special template (ST)	ST - Designate while ordering

Optional

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

Operator will be shipped with:

- Standard cylinder
- Metal cover
- Standard arm
- Track roller
- Standard track
- Wood and machine screws

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%

Exterior (and Vestibule) Door Width

28"	30"	36"
711mm	762mm	914mm

4811 | size 3 | size 4 |

Minimum door width

Interior Door Width

28"	34"	38"	48"
711mm	864mm	965mm	1219mm

4811 | size 2 | size 3 | size 4 |

Minimum door width

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

4820 Series



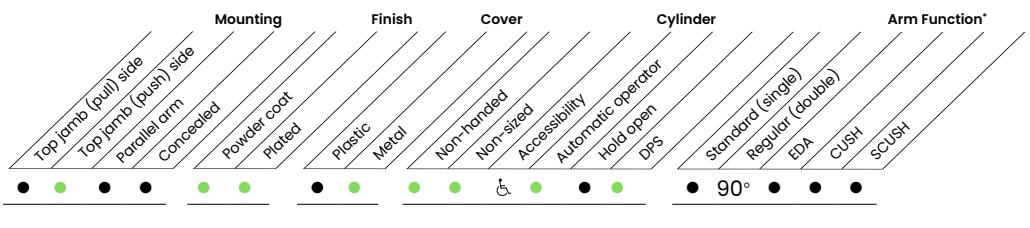
The 4820 Auto Equalizer™ is LCN's pneumatically powered multi-door solution. This low-energy automatic operator provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

Features

Certifications	ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act
Body construction	<ul style="list-style-type: none"> Cast iron body Full complement bearing 1-1/2" diameter piston 3/4" diameter double heat treated pinion journal
Fluid	All weather fluid
Handing	Non-handed
Size	Adjustable spring size 2-5
Warranty	2 years

Cover	Metal cover (MC)
Fasteners	Wood and machine screws (WMS)
Mounting	Top jamb (push side)
Arms	<ul style="list-style-type: none"> Regular Arm (REGARM), standard Long Arm (LONG), optional
Finishes/colors/powder coat	<ul style="list-style-type: none"> 689 - Aluminum 690 - Statuary bronze 691 - Light bronze 693 - Black 695 - Dark bronze 696 - Brass Custom colors optional <ul style="list-style-type: none"> Optional SRI primer - powder coat only Optional plated finishes

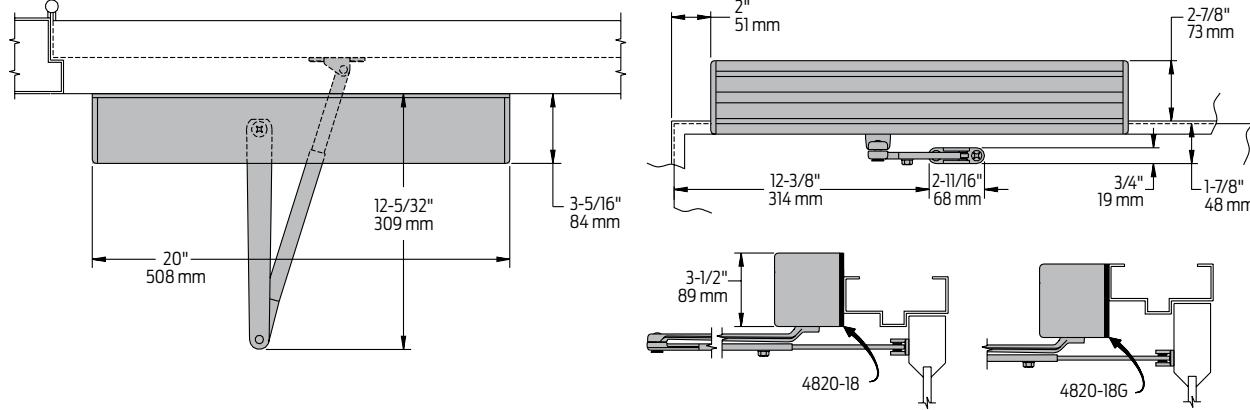
Product Configurations



Note: Special Templates - Customized installation templates or products may be available to solve non-standard applications. Contact LCN Product Support for assistance.

Pneumatic Systems

Top Jamb (Push Side) Mounting Details



Butt hinges	Should not exceed 5" (127 mm) in width
Auxiliary stop	Recommended
Reveal	<ul style="list-style-type: none"> 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
Top rail	<ul style="list-style-type: none"> Minimum 1-3/4" (44 mm) Closer on 4820-18G plate requires 3" (76 mm) minimum
Head frame	<ul style="list-style-type: none"> Minimum 1-3/4" (44 mm) With flush ceiling use plate, 4820-18G substituted for standard plate
System diagram	See pages 9-10 for typical system wiring, and pages 27-28 for pneumatic control boxes
Maximum opening	Templating allows 90° power opening and 100° manual opening
Options	Door position switch (DPS) kit that signals when the door has reached the open position

Notes:

- Requires control box with integral compressor or control box using auxiliary air supply
- See control box pages 27-28 and actuators and accessories, pages 110-129
- Guard rails/safety mats not required

Accessories

Cylinders



4822-3971
Cast Iron Cylinder Assembly (CYL)

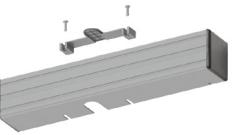
- Non-handed
- Standard



4822-3071
Standard Cylinder with 18G Mounting Plate (CYL18G)

- Non-handed
- Includes; 4820-18 Mounting Plate or 4820-18G Mounting Plate (must specify)
- Standard

Covers



4820-72MC
Metal Cover (MC)

- Non-handed
- With black end caps
- Standard

Arms



4820-3077
Regular Arm (REGARM)

- Non-handed
- Standard



4820-3077L
Long Arm (Long)

- Includes long rod and shoe, 4820-79LR for deep reveals
- Optional

Installation Accessories



4820-18
Plate

- Requires minimum 1-3/4" (44 mm) minimum head frame and 2" (51 mm) top rail
- Standard



4820-18G
Plate

- Requires minimum 1-3/4" (44 mm) minimum head frame and 2" (51 mm) top rail
- Standard



4820-3377
Door Position Switch Kit

- Provides feedback when the door reaches the fully opened position
- Specify RH or LH when ordering

Pneumatic Systems

Ordering Information

How to Order 4820 Series Operators

1	Select finish (standard powder coat)	689 - Aluminum 690 - Statuary bronze 691 - Light bronze 693 - Black 695 - Dark bronze 696 - Brass
2	Custom finish	Custom powder coat (RAL) Plated finish
3	Arm	Long arm (LONG)
4	Screw pack	Through Bolt ¹ Wood and Machine Screws (TBWMS)
5	Installation accessories	Plate, 4820-18 Plate, 4820-18G Door position switch kit, 4820-3377 LH Door position switch kit, 4820-3377 RH
6	Special template (ST)	ST - Designate while ordering

Optional

Operator will be shipped with:

- Standard cylinder
- Metal cover
- Regular arm
- Wood and machine screws

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

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%

Exterior (and Vestibule) Door Width

24"	30"	36"	42"
610mm	762mm	914mm	1067mm

4822 | size 3 | size 4 | size 5 →

Minimum door width

Interior Door Width

24"	34"	38"	48"	54"
610mm	864mm	965mm	1219mm	1372mm

4822 | size 2 | size 3 | size 4 | size 5 →

Minimum door width

→ Indicates recommended range of door width for operator.

4840 Series

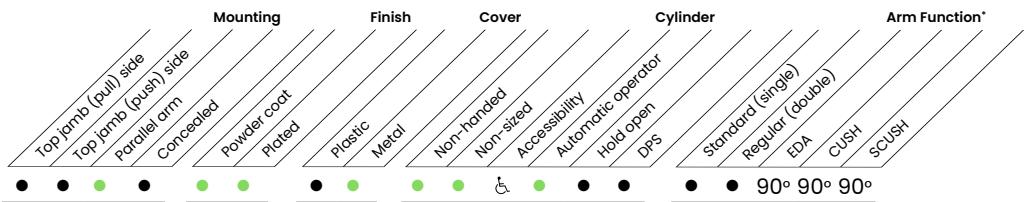


The 4840 Auto Equalizer™ is LCN's pneumatically powered multi-door solution. This low-energy automatic operator provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

Features

Certifications	ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Fasteners	Adjustable spring size 1-5
Body construction	<ul style="list-style-type: none"> Cast iron body Full complement bearing 1-1/2" diameter piston 3/4" diameter double heat treated pinion journal 	Mounting	Parallel arm (push side)
		Arms	Extra duty, standard; cushion-n-stop and spring cushion-n-stop, optional
Fluid	All weather fluid	Finishes/colors/powder coat	<ul style="list-style-type: none"> 689 - Aluminum 690 - Statuary bronze 691 - Light bronze 693 - Black 695 - Dark bronze 696 - Brass Custom colors optional
Handing	Non-handed		<ul style="list-style-type: none"> Optional SRI primer - powder coat only Optional plated finishes*
Size	Adjustable spring size 1-5		*End caps are black
Warranty	2 years		
Cover	Metal cover (MC)		

Product Configurations



● Available

● Not available

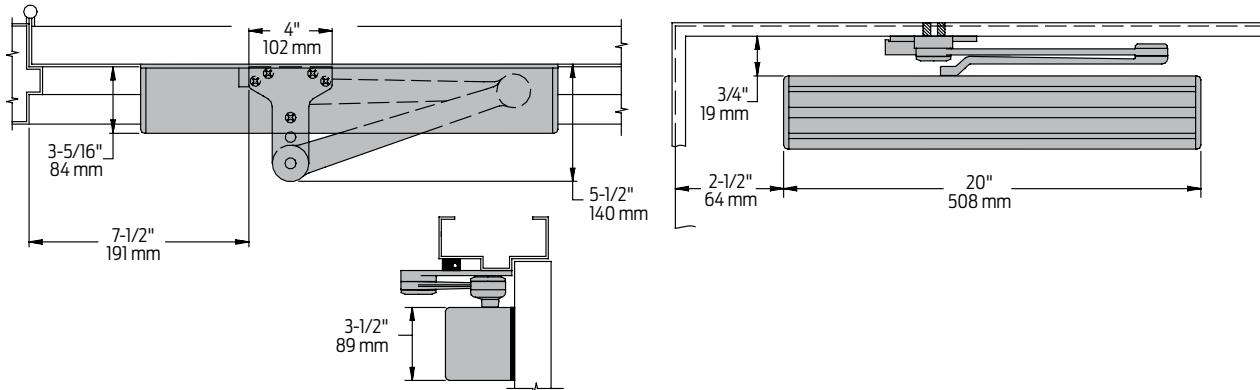
● Meets ADA requirements (power mode)

* See individual series for maximum manual opening

Note: Special Templates - Customized installation templates or products may be available to solve non-standard applications. Contact LCN Product Support for assistance.

Pneumatic Systems

Parallel Arm (Push Side) Mounting Details



Butt hinges	Should not exceed 5" (127 mm) in width
Auxiliary stop	Recommended when CUSH or SCUSH arms are not used
Clearance	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 shoe 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 pages 9-10 for typical system wiring, and pages 27-28 for pneumatic control boxes
Maximum opening	<ul style="list-style-type: none"> Maximum power opening is 90° with all arms Maximum manual opening is 105° with EDA or SCUSH arms Maximum manual opening is 100° with CUSH arm

Notes:

- For CUSH or SCUSH arm installations with maximum opening less than listed above, consult factory for special template
- Requires control box with integral compressor or control box using auxiliary air supply
- See control box pages 27-28 and actuators and accessories, pages 110-129
- Guard rails/safety mats not required

Accessories

Cylinders



4841-3971
Cast Iron Cylinder Assembly
(CYL)

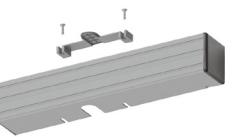
- Non-handed
- Standard



4841-3071
Cast Iron Cylinder Assembly
(CYL)

- Non-handed
- Mounting plate
- Standard

Covers



4840-72MC
Metal Cover (MC)

- Non-handed
- With black end caps
- Standard

Arms



4840-3077EDA
Extra Duty Arm (EDA)

- Non-handed
- Features forged solid steel main arm and forearm for potentially abusive installations
- Standard



4840-3077CNS
Cush-n-Stop Arm (CUSH)

- Non-handed
- Features forged solid steel main arm and forearm with stop in soffit shoe
- Optional



4840-3077SCNS
Spring Cush-n-Stop Arm (SCUSH)

- Non-handed
- For abusive applications features forged solid steel main arm and forearm with spring loaded stop in soffit shoe
- Optional

Installation Accessories



4840-30
CUSH Shoe Support

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



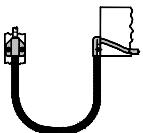
4840-61
Blade Stop Spacer

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



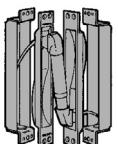
4840-41
PA Flush Panel Adapter

- Provides horizontal mounting surface for parallel arm shoe on single rabbeted or flush frame



4840-459
Door Loop Kit

- Surface mounted, flexible metal loop transfers pressurized air via pneumatic tubing from frame to door leaf for fully concealed installations
- Extra caps allow tubing to run on frame surface or concealed in the frame



4840-460
Pneumatic Transfer Hinge

- 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

Pneumatic Systems

Ordering Information

How to Order 4840 Series Operators

1	Select finish (standard powder coat)	689 - Aluminum 690 - Statuary bronze 691 - Light bronze 693 - Black 695 - Dark bronze 696 - Brass
2	Custom finish	Custom powder coat (RAL) Plated finish
3	Arm	Cush-n-stop arm (CUSH) Spring cushion-n-stop arm (SCUSH)
4	Screw pack	Through Bolt ¹ Wood and Machine Screws (TBWMS)
5	Installation accessories	CUSH shoe support, 4840-30 Blade stop spacer, 4840-61 PA flush panel adapter, 4840-419 Door loop kit, 4840-459 Pneumatic transfer hinge, 4840-460
6	Special template (ST)	ST - Designate while ordering

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

Optional

Operator will be shipped with:

- Standard cylinder
- Metal cover
- Extra duty arm
- Wood and machine screws

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%

Exterior (and Vestibule) Door Width

	24"	30"	36"	42"
610mm	610mm	762mm	914mm	1067mm
4841	size 3	size 4	size 5	→

Minimum door width

Interior Door Width

	24"	34"	38"	48"	54"
610mm	610mm	864mm	965mm	1219mm	1372mm
4841	size 2	size 3	size 4	size 5	→

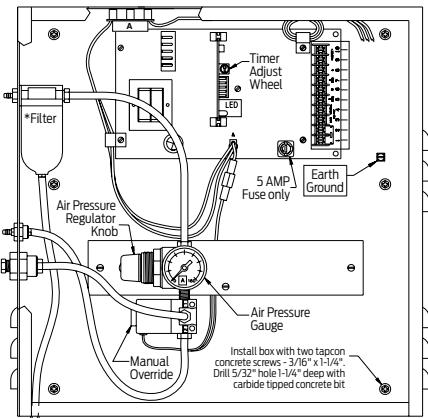
Minimum door width

→ Indicates recommended range of door width for operator.

7900 Series Control Boxes

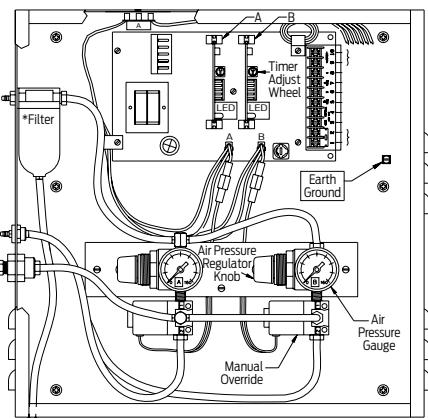
A heavy duty, surface mounted control box contains one or two electrically controlled pneumatic circuits. Air filtration, pneumatic regulation, and system timing is performed by the control box. 7980 Series control boxes also contain a built-in air pump to power the system. Each pneumatic circuit can 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.



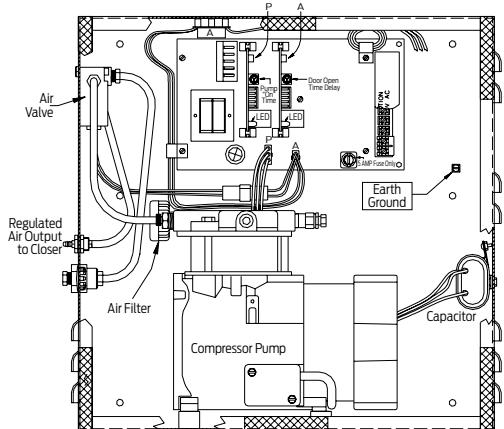
7901 and ES7901 Control Box

- 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



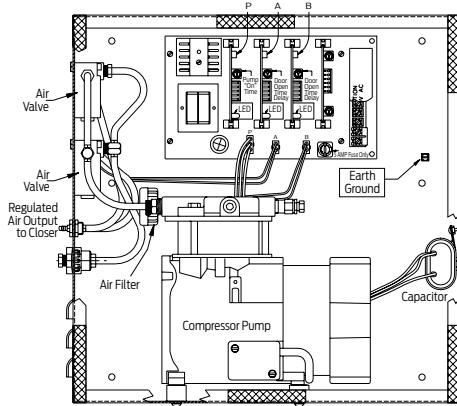
7981 and ES7981 Control Box

- 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

Introduction	Pneumatic Systems
Product Selection Guide	
Pneumatic Systems	Auto equalizers 2610/4810/4820/4840/7900 Series
Electrohydraulic Systems	Auto equalizers 6400/4630/4640 Series
Electromechanical Systems	Senior Swing 2810Q/2850Q/2860Q/9530Q/9550Q/Q/9560Q Series
Electromechanical Systems	Benchmark 9130/9140/9150 Series
Actuators and Accessories	

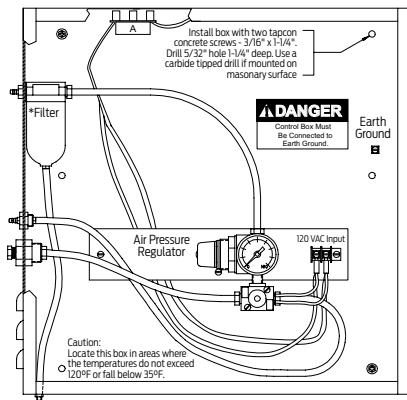
Pneumatic Systems

7900 Series Control Boxes



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



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 "blowopen" box is activated

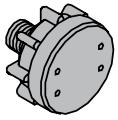
Optional "ES" Boxes

- 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

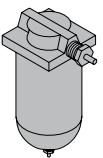
- Locate a 7900 Series control box so no more than 100 linear feet of LCN 925 pneumatic tubing is required between the control box and door. Maximum 50 linear feet for a 7980 and 7949 Series
- Locate a 7900/7980/7949 Series control box where the temperatures do not exceed 120°F or fall below 35°F
- 7901,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

Accessories



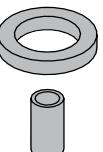
-329
Air Filter

- Replacement inlet air filter for 7981 or 7982 Series control boxes



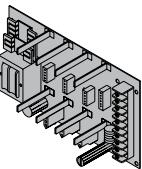
-329G
Air Filter

- Replacement inlet air filter assembly for 7901 or 7902 Series control boxes



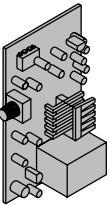
-929
Filter and Seal

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



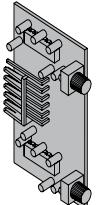
-900
Power Supply Board

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



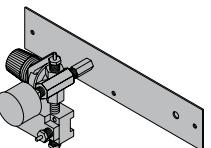
-903
Timer Card

- 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



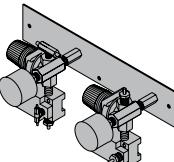
-3426
Sequencer Card

- 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



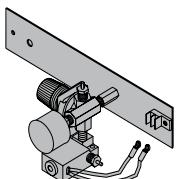
-941
Valve Assembly

- Regulator valve assembly for 7901 Series control box



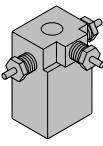
-942
Valve Assembly

- Regulator valve assembly for 7902 Series control box



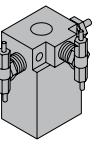
-941C
Valve Assembly

- Regulator valve assembly for 7949 Series blow open control box



-3299A
Solenoid Valve Assembly

- Air valve assembly for 7981 Series control box or the 'A' circuit valve assembly for the 7982 Series control box

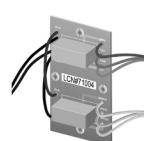
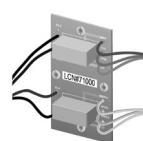


-3299B
Solenoid Valve Assembly

- Air valve assembly for the 'B' circuit in the 7982 Series control box

Pneumatic Systems

Accessories


-3390A
Relay Package "A"

- 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

-3390B
Relay Package "B"

- 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

-3390C
Relay Package "C"

- 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

-962
Isolator

- Rubber isolators for 7981/7982 Compressor Assembly, -3960

Pneumatic Systems	Auto equalizers
	2610/4810/4820/4840/7900 Series

Electrohydraulic Systems	Auto equalizers
	6400/4630/4640 Series

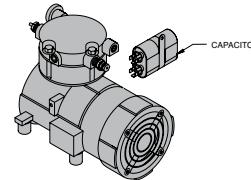
Electromechanical Systems	Senior Swing
	95550Q/Q/95601Q Series

Electromechanical Systems	Benchmark
	9130/9140/9150 Series

Actuators and Accessories	
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-293G
Muffler

- Exhaust muffler for 7901, 7902, 7949, 7981 and 7982 Series control boxes


-3960
Compressor Assembly

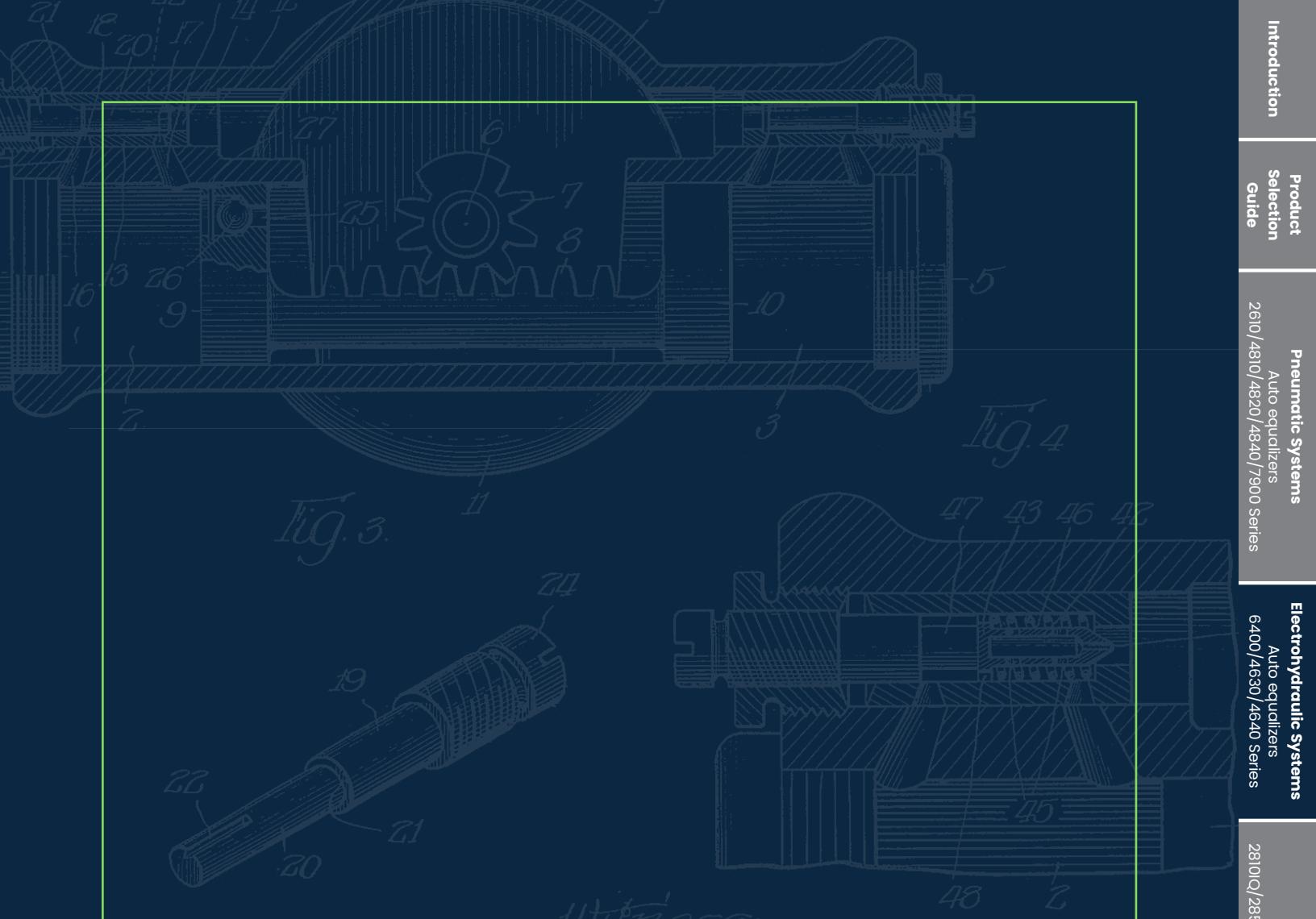
- Internal air pump assembly for 7981 or 7982 Series control box
- Includes starter capacitor, -962 isolators, and -329 Air Filter


-3592
Compressor Service Kit

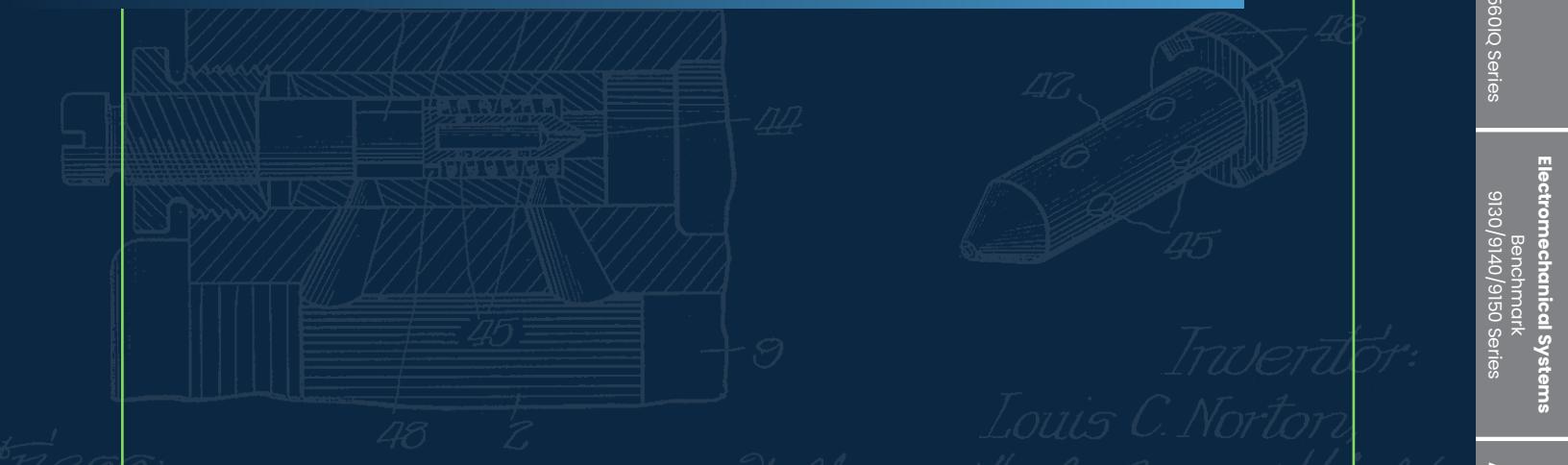
- Internal component for pressure release valve on
 - 3960 Compressor Assembly


925
Pneumatic Tubing

- 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
- 925 tubing is not plenum rated
- Contact LCN for applications where tubing must run through rated plenums



ELECTROHYDRAULIC OPERATORS



Inventor

Louis C. Norton

Introduction

Product Selection

Pneumatic Systems
Auto equalizers
2610/4810/4820/4840/7900

Electrohydraulic Systems

Electromechanical Systems
Senior Swing
1/286010/953010/954010/955010

Electromechanical System
9130/9140/9150 Series
Benchmark

Actuators
and
Accessories

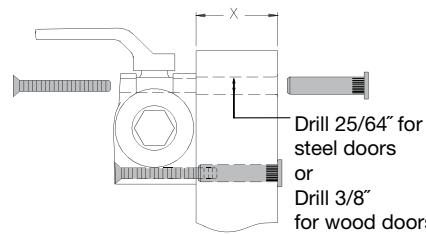
Electrohydraulic Systems

Electric Auto Equalizers

In addition to the original pneumatic drive system, LCN offers Automatic Electronic Equalizers. People moving through a door can use it as a normal rack and 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. 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 4040XP Series cast iron cylinder.

Electrohydraulic Fasteners

Standard Wood and Machine Screws (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.



Electric Auto Equalizer Systems

- Exceeds proposed ANSI cycle test standard of 300,000 full load automatic operating cycles
- Power operation plus full door control
- For all applications, single or multi-door projects
- Opening time to back check 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

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

A sophisticated built-in diagnostics program monitors the system microprocessor, power supplies, drive system and actuators circuitry. This 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 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 has improved control because the heavy duty 4040XP closer is always operable.

Electronic Circuit Protection

The high voltage input circuit is protected by a one amp slow blow fuse. 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

Electrohydraulic Systems

Programming Mode

Allows tailoring of 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

Standards, Listings and Approvals

- UL listed for Fire Door Operator (GUJY) and Door Operator System (FDDR) file R18222
- 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
- Listed for positive pressure plus UL 10B and UL 10C
- Wiring is compliant with both UL 325 and the NEC (Separation of high and low voltage)
- Consult the factory for other listings such as; State and Local Government regulations
- UL 10 C Listed for Fire Rated Door Operators with Automatic Closers, File No. (GUJY)

Warranty

2 year limited warranty. See General Information catalog for complete details.

Maintenance

- For best performance, mount operators according to the LCN installation instructions
- Periodic visual inspections are recommended
- No service contracts

Electrohydraulic Product Comparison

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

	Mounting	Finish	Cover	Cylinder	Arm Function*
4630	Top jamb (pull) side Top jamb (push) side Parallel arm Concealed Door (pull) side	Powder coat Plated	Plastic Metal	Non-handed Non-sized Accessibility Automatic operator Hold open DPS	90° 90° 90° 90° 110°
4630CS	Top jamb (pull) side Top jamb (push) side Parallel arm Concealed Door (pull) side	Plated	Plastic Metal	Non-handed Non-sized Accessibility Automatic operator Hold open DPS	• • • • •
4640	Top jamb (pull) side Top jamb (push) side Parallel arm Concealed Door (pull) side	Plated	Plastic Metal	Non-handed Non-sized Accessibility Automatic operator Hold open DPS	• • • • •
4640CS	Top jamb (pull) side Top jamb (push) side Parallel arm Concealed Door (pull) side	Plated	Plastic Metal	Non-handed Non-sized Accessibility Automatic operator Hold open DPS	• • • • •
6440XP	Top jamb (pull) side Top jamb (push) side Parallel arm Concealed Door (pull) side	Plated	Plastic Metal	Non-handed Non-sized Accessibility Automatic operator Hold open DPS	• • • • •

● Available

● Not available

♿ Meets ADA requirements (power mode)

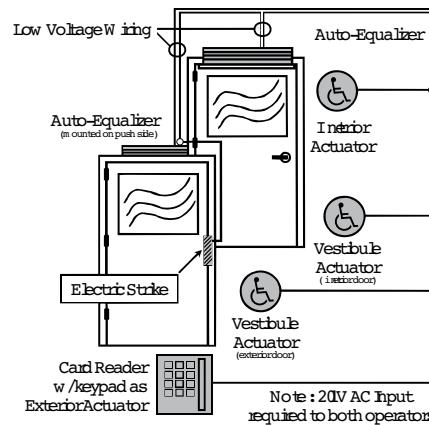
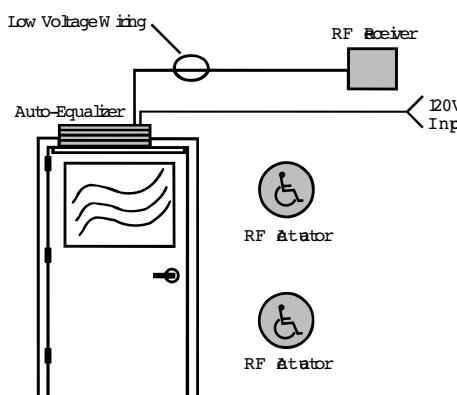
* See individual series for maximum manual opening

** Switch provided for continuous Hold Open (4630 and 4640 only)

Electrohydraulic Systems

Wiring Diagrams

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



Single Door System (Wireless)

- An Interior Door
- No guide rails or safety devices
- Free swinging (or dogged) door

How it Works

- Wireless RF actuators and 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 number	Description
1	4631	Auto equalizer
2	8310-3856WS	Wireless actuator, wall mount and surface, logo, 4-1/2" round
1	8310-865	Wireless receiver

Vestibule Door System (Wired)

- Exterior and 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

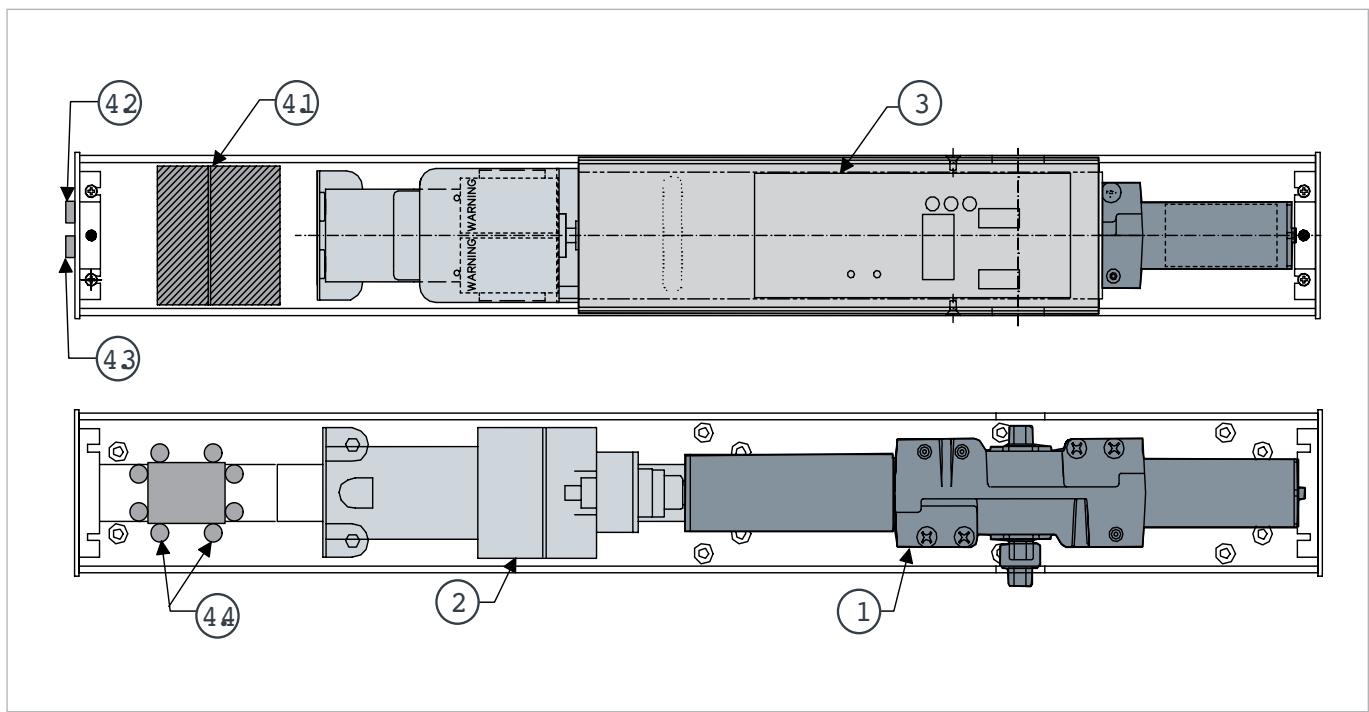
Bill of Materials

Qty	Part number	Description
1	4642	Auto equalizer (exterior)
1	4631	Auto equalizer (interior)
3	8310-856	Hard wired wall mount, logo, 4-3/4" x 4-3/4"

Other products from Von Duprin and Locknetics

Note: An EL device requires a separate power supply. If not actuated, the auto equalizer functions as a full featured door closer.

Electrohydraulic Powered Systems



1. Door Closer Assembly

- Based on a heavy duty 4040XP, cast iron cylinder with allweather 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 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
- Slow blow and self-resetting fuses protect input and output power from voltage spikes
- Terminal strips simplify field wiring

4.2

- On/Off switch

4.3

- Hold open switch

4.4

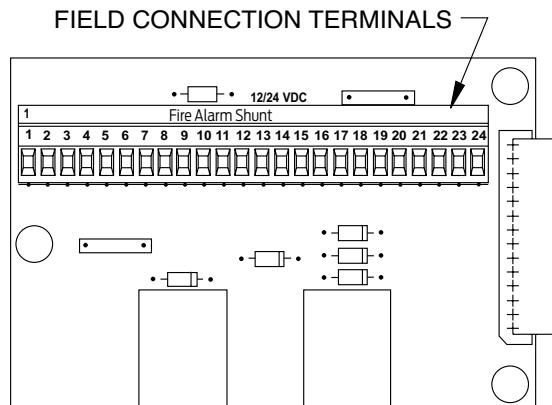
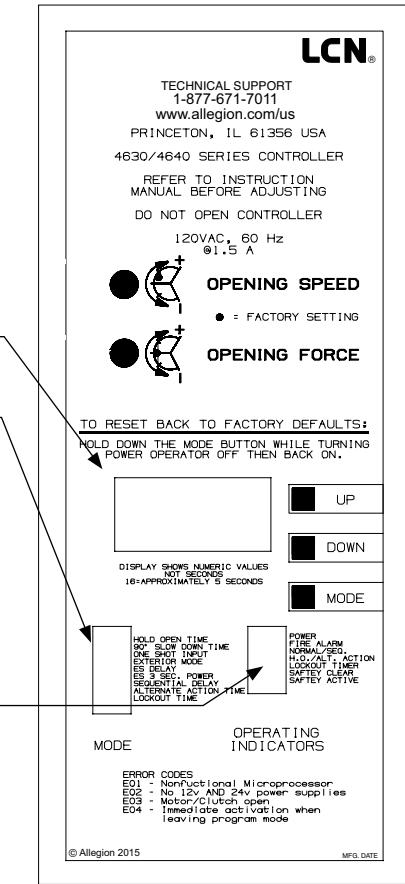
- Separate conduits for high voltage power and low voltage power and signal wiring meet UL and National Electrical Code requirements

Electrohydraulic Systems

Control Box and Electrical Connections

Digital Control Box

Opening speed adjustment	Limited to a minimum of 3 seconds to back check (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



Low Voltage (Class 2 NEC) Electrical Connections

Function	Terminal
Actuator - normal input (N.O.)	16 and 17 or 18 and 1
Actuator - sequential input (N.O.)	8 and 19
Actuator - alternate action (N.O.)	15 and 17
Actuator - continuous (N.O.)	6 and 17
Sequential output	9
Stop side safety (N.O.)	19 and 2
Swing side safety (N.O.)	19 and 21
Fire alarm contact (N.C.)	13 and 14 (fire shunt)
Auxiliary relay contacts (5 amp max)	10 - Common 11 - N.O. 12 - N.C.
E.S. Relay contacts (5 amp max)	22 - Common 23 - N.O. 24 - N.C.
12V DC and 24V DC negative*	2, 4, 13, 17, and 19
12V DC positive*	5 and 7
24V DC positive*	1 and 3

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

4630 Series



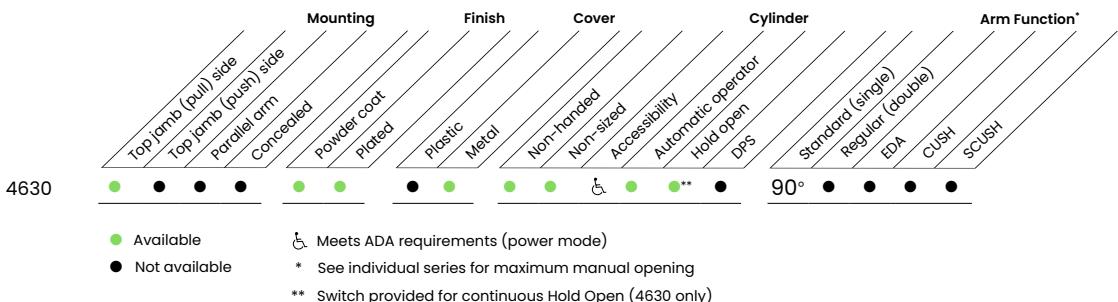
The 4630 auto equalizer is LCN's smart and reliable electrically powered low-energy automatic operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally required automatic opening.

Features

Certifications	Grade 1 – ANSI A117.1, A156.19, UL 10C, UL 325/228, ADA, 100 Hour Salt Spray, Meets BAA – Buy American Act
Body construction	<ul style="list-style-type: none"> Cast iron body Full complement bearing 1-1/2" diameter piston 3/4" diameter double heat treated pinion journal
Fluid	All-weather Liquid X hydraulic fluid
Handing	Non-handed
Size	Adjustable spring size 1-4
Warranty	2 years

Cover	Metal cover (MC)
Fasteners	Wood and machine screws (WMS)
Mounting	Top jamb (pull side)
Arms	Standard single lever arm and track
Finishes/colors/powder coat	<ul style="list-style-type: none"> 689 – Aluminum 690 – Statuary bronze 691 – Light bronze 693 – Black 695 – Dark bronze 696 – Brass Custom colors optional Optional SRI primer – powder coat only Optional plated finishes* <p>*End caps are black</p>

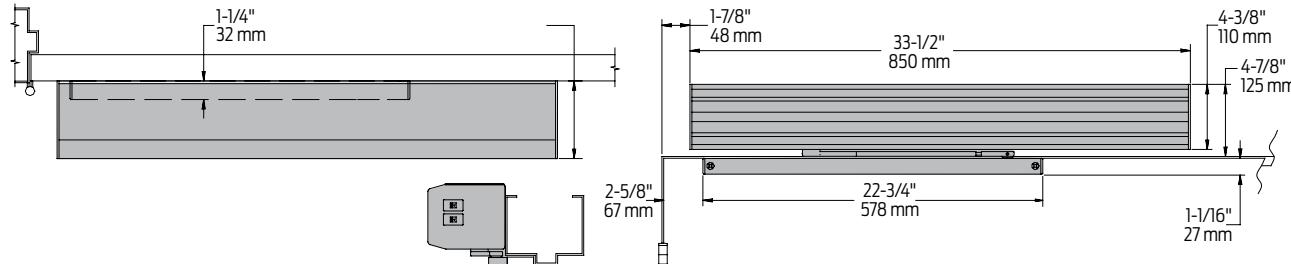
Product Configurations



Note: Special Templates – Customized installation templates or products may be available to solve non-standard applications. Contact LCN Product Support for assistance.

Electrohydraulic Systems

Top Jamb (Pull Side) Mounting Details



Electrohydraulic Systems	Auto equalizers 6400/4630/4640 Series	Butt hinges Should not exceed 5" (127 mm) in width
Auxiliary stop	Recommended	
Reveal	Should not exceed 1/8" (3 mm)	
Top rail	Minimum 1-1/8" (29 mm)	
Head frame	Minimum 2" (51 mm)	
Opening time and force	<ul style="list-style-type: none"> • 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 pages 34-36 for typical system wiring and electrical data	
Maximum opening	<ul style="list-style-type: none"> • 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 • Track style closers are at their weakest closing force at 180° • Consult factory for applications where exterior or large/heavy door must swing 180° 	

Notes:

- Actuators are sold separately, see pages 110-129
- Comes with a digital control box utilizing a 4040XP heavy duty door closer with on-board diagnostics and power supply
- Has a factory default memory that include "No Destruct" drive system
- Guard rails or safety mats not required
- 4630 has easily accessible switches to provide on/off and continuous hold open functions
- CS options provides concealed on/off power switch
- Control module provides timing and sequential door functions, electric strike controls and adjustments for opening speed and force

Electrohydraulic Systems

Accessories

Cylinders



4631-3971
Cast Iron Cylinder Assembly (CYL)
• Non-handed
• Standard



4631-3071
Cast Iron Cylinder Assembly (CYL)
• Non-handed
• Mounting plate
• Includes 4630-3454 motor clutch, 4630-3180 I/O board assembly and 4630-3462 controller
• Standard



4631-3071CS
Cast Iron Cylinder Assembly (CYL)
• Non-handed
• 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)
• Optional



4630-72MC
Metal Cover (MC)
• Non-handed
• Standard

Arm



4630-3077T
Standard Arm (STDTRKARM)
• Non-handed
• Track roller not included with arm

Tracks



4630-3038
Standard Track (STDTRK)
• Non-handed
• Standard

Installation Accessories

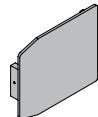


4630-3034
Track roller
• Quiet low friction roller assembly
• Shoulder dimension "X" = 1/8" (3mm)

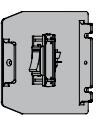


4630-334
Switch End Cap
• End cap (black powder coat finish only) with cut outs for installing on/off and hold open switches

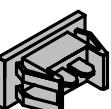
Installation Accessories



4630-334-2
Blank End Cap
• Black powder coat only



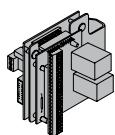
4630-334CS
Switch End Cap
• End cap and switch (black powder coat only) for concealed switch option



4630-3179-1
On/Off Switch Assembly
• Black rocker switch (plugs into high voltage PC board)



4630-3179-2
Hold Open Switch Assembly
• Black rocker switch
• Field wired to low voltage PC board



4630-3180
PC Board Assembly
• High and low voltage PC boards connected to mounting bracket



4630-3454
Motor/Clutch Assembly
• A geared assembly in an LCN automatic operator that incorporates a "no destruct" feature



4630-3462
Control Box Assembly
• Digital controller with built-in 12/24 VDC power supply
• Programming and timing functions are adjusted on controller



4630-3498-1
Ribbon Cable Connector
• 16 wire ribbon cable connecting PC board assembly to controller



4630-3498-2
AC Power Cable
• 2 wire cable to connect 120 VAC from PC board assembly to controller

Electrohydraulic Systems

Ordering Information

How to Order 4630 Series Operators		
1	Select finish (standard powder coat)	689 - Aluminum 690 - Statuary bronze 691 - Light bronze 693 - Black 695 - Dark bronze 696 - Brass
2	Cylinder assembly	Cast Iron cylinder assembly (CYL) (concealed on/off switch) (separate key switches suggested)
3	Custom finish	Custom powder coat (RAL) Plated finish
4	Screw pack	Through Bolt ¹ Wood and Machine screws (TBWMS) Torx machine screws (TORX) Through bolt ¹ and Torx machine screw (TBTRX)
7	Special template (ST)	ST - Designate while ordering

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

Optional

Operator will be shipped with:

- Standard cylinder
- Metal cover
- Standard arm
- Track roller
- Standard track
- Wood and machine screws

Electrohydraulic Systems	
Auto equalizers 6400/4630/4640 Series	2610/4810/4820/4840/7900 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%

Exterior (and Vestibule) Door Width		Interior Door Width		
36"	914mm	36"	914mm	size 2
4631	Minimum door width	38"	965mm	size 3
		48"	1219mm	Minimum door width

→ Indicates recommended range of door width for operator.
Note: Minimum door width 36" (914mm).

Electromechanical Systems	
Benchmark 9130/9140/9150 Series	2810Q/2850Q/2860Q/9530Q/9540Q/9550Q/Q/9560Q Series

Actuators and Accessories	
	40

4640 Series



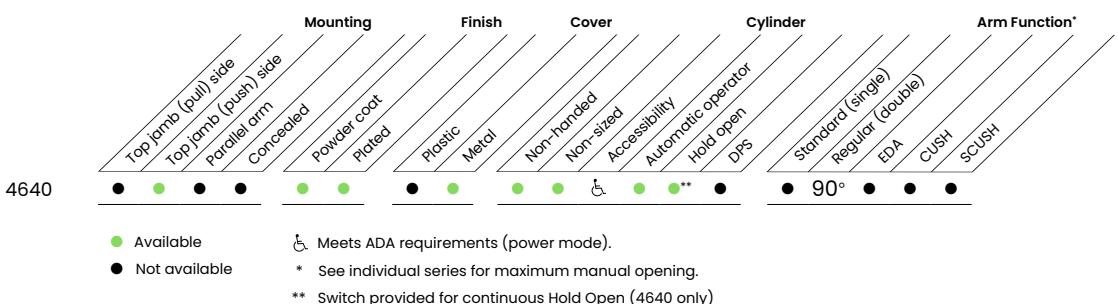
The 4640 auto equalizer is LCN's smart and reliable electrically powered low-energy automatic operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally required automatic opening.

Features

Certifications	Grade 1 - ANSI A117.1, A156.19, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act
Body construction	<ul style="list-style-type: none"> Cast iron body Full complement bearing 1-1/2" diameter piston 3/4" diameter double heat treated pinion journal
Fluid	All-weather Liquid X hydraulic fluid
Handing	Non-handed
Size	Adjustable spring size 2-5
Warranty	2 years

Cover	Metal cover (MC)
Fasteners	Wood and machine screws (WMS)
Mounting	Top jamb (push side)
Arms	<ul style="list-style-type: none"> Regular arm (REGARM), standard Long arm (LONG), optional
Finishes/colors/powder coat	<ul style="list-style-type: none"> 689 - Aluminum 690 - Statuary bronze 691 - Light bronze 693 - Black 695 - Dark bronze 696 - Brass Custom colors optional <p>Optional SRI primer - powder coat only Optional plated finishes*</p> <p>*End caps are black</p>

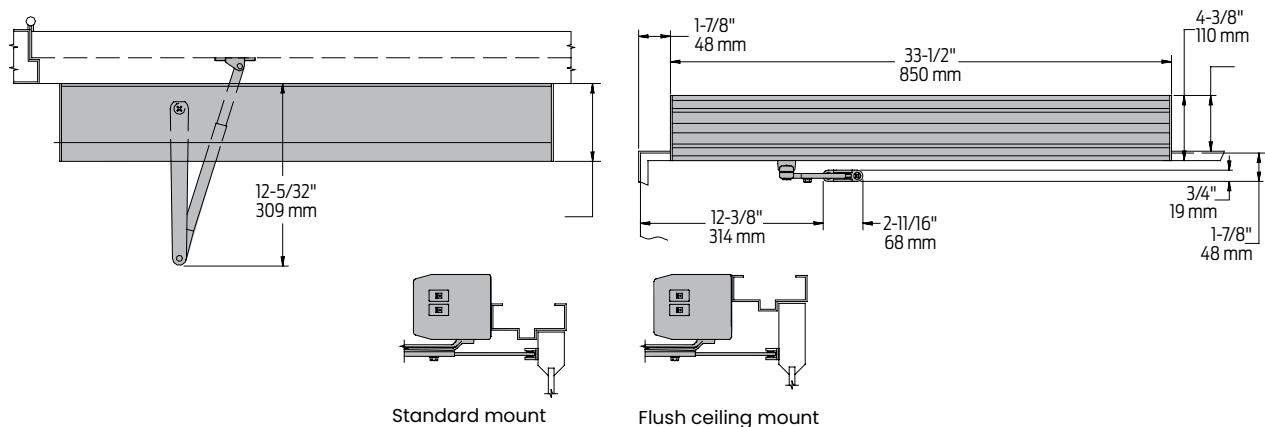
Product Configurations



Note: Special Templates - Customized installation templates or products may be available to solve non-standard applications. Contact LCN Product Support for assistance.

Electrohydraulic Systems

Top Jamb (Push Side) Mounting Details



Butt hinges	Should not exceed 5" (127 mm) in width
Auxiliary stop	Recommended
Reveal	<ul style="list-style-type: none"> 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
Top rail	<ul style="list-style-type: none"> Minimum 1-3/4" (44 mm) Flush ceiling installation requires 3-3/4" (95 mm) minimum
Head frame	Minimum 1-3/4" (44 mm) (the standard mounting plate is also used to meet flush ceiling conditions)
System diagram	See pages 34-36 for typical system wiring and electrical data
Maximum opening	<ul style="list-style-type: none"> Templating allows 90° power opening and 100° manual opening Consult factory for all pivot mounted installations

Notes:

- Actuators are sold separately, see pages 110-129
- Comes with a digital control box utilizing a 4040XP heavy duty door closer with on-board diagnostics and power supply
- Has a factory default memory that include "No Destruct" drive system
- Guard rails or safety mats not required
- 4640 has easily accessible switches to provide on/off and continuous hold open functions
- CS options provides concealed on/off power switch
- Control module provides timing and sequential door functions, electric strike controls and adjustments for opening speed and force



Accessories

Cylinders



4642-3971
Cast Iron Cylinder Assembly (CYL)
• Non-handed
• Standard



4642-3071
Cast Iron Cylinder Assembly (CYL)
• Non-handed
• Mounting plate
• Includes; 4640-3454 motor clutch, 4640-3180 I/O board assembly and 4640-3462 controller
• Standard



4642-3071CS
Cast Iron Cylinder Assembly (CYL)
• Non-handed
• 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)
• Optional

Covers



4640-72MC
Metal Cover (MC)
• Non-handed
• Standard

Arm



4640-3077
Regular Arm (REGARM)
• Non-handed



4640-3077L
Long Arm (LONG)
• Includes long rod and shoe, 4640-79LR for deep reveals



4640-79
Rod and Shoe
• For use with regular arm

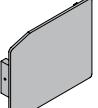


4640-79LR
Long Rod and Shoe
• Used for long arm with deep reveals

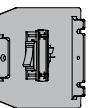
Installation Accessories



4640-334
Switch End Cap
• End cap (black powder finish coat only) with cut outs for installing on/off and hold open switches



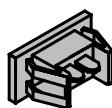
4640-334-2
Blank End Cap
• Black powder coat only



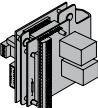
4640-334CS
Switch End Cap
• End cap and switch (black powder coat only) for concealed switch option



4640-3179-1
On/Off Switch Assembly
• Black rocker switch
• Plugs into high voltage PC board



4640-3179-2
Hold Open Switch Assembly
• Black rocker switch
• Field wired to low voltage PC board



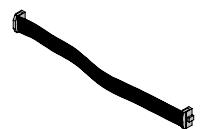
4640-3180
PC Board Assembly
• High and low voltage PC boards connected to mounting bracket



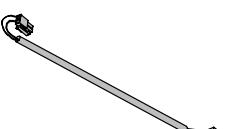
4640-3454
Motor/Clutch Assembly
• A geared assembly in an LCN automatic operator that incorporates a "no destruct" feature



4640-3462
Control Box Assembly
• Digital controller with built-in 12/24 VDC power supply
• Programming and timing functions are adjusted on controller



4640-3498-1
Ribbon Cable Connector
• 16 wire ribbon cable connecting PC board assembly to controller



4640-3498-2
AC Power Cable
• 2 wire cable to connect 120 VAC from PC board assembly to controller

Electrohydraulic Systems

Ordering Information

How to Order 4640 Series Operators

1	Select finish (standard powder coat)	689 - Aluminum 690 - Statuary bronze 691 - Light bronze 693 - Black 695 - Dark bronze 696 - Brass
2	Cylinder assembly	Cast Iron cylinder assembly (CYL) (concealed on/off switch) (separate key switches suggested)
3	Custom finish	Custom powder coat (RAL) Plated finish
4	Screw pack	Through bolt ¹ wood and machine screws (TBWMS) Torx machine screws (TORX) Through bolt ¹ and torx machine screw (TBTRX)
7	Special template (ST)	ST - Designate while ordering

Optional

Operator will be shipped with:

- Standard cylinder
- Metal cover
- Regular arm
- Wood and machine screws

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

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%

Exterior (and Vestibule) Door Width

36"	42"
914mm	1067mm

4642 | size 5 |

Minimum door width

Interior Door Width

36"	38"	48"	54"
914mm	965mm	1219mm	1372mm

4642 | size 3 | size 4 | size 5 |

Minimum door width

→ Indicates recommended range of door width for operator.
Note: Minimum door width 36" (914mm).

6400 COMPACT™ Series

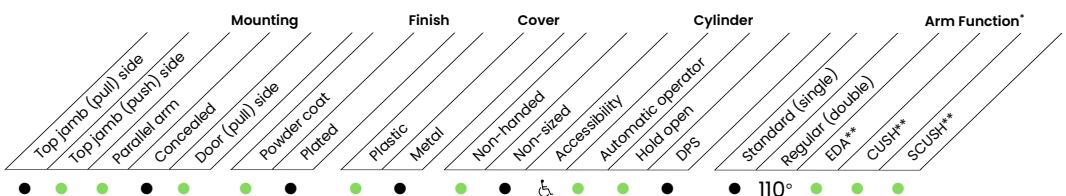


Discover the LCN 6400 COMPACT™—a game-changing, cost-effective solution for automating more openings with touchless access and instant accessibility. This innovative, modular design allows the reuse of an existing LCN 4040XP saving the time and money of replacement. The electrified module connects with a mounting plate and just four screws and drives open the existing mechanical closer – a simple solution reducing the cost, labor and complexity required to automate any opening.

Features

Certifications	ADA, ANSI/BHMA A156.19, A117.1, UL 10C, UL 325, UL228, FCC, ADA Compliant	Finishes/colors/powder coat	<ul style="list-style-type: none"> 689 Aluminum 695 Dark bronze
Body construction	Cast iron cylinder body ²	Power input	2.0A @ 24VDC (supplied adapter) ¹
Fluid	All weather Liquid X hydraulic fluid ²	Power output	24VDC (75mA to power RF receiver)
Handing	Non-handed	Door width	33" to 48"
Size	Compatible with spring sizes 2-4	Door weight	Up to 185lbs
Cover	Painted system cover	Cylinder compatibility	<ul style="list-style-type: none"> 4040XP standard cylinder (CYL) 4041 delayed action cylinder (CYLDEL)³
Fasteners	Wood and machine screws (WMS), through bolts	Warranty ²	<ul style="list-style-type: none"> Motor gearbox assembly: 2 year 4040XP mechanical closer: 30 year <p><small>*Attaching motor gearbox to an existing 4040XP does not impact the existing warranty.</small></p>
Mounting	Door mount or top jamb	<p>1. If using other power supply, ensure voltage is regulated to +/- 10% power output 2. Please reference price book for complete terms and conditions 3. Must order separately from standard module kit</p>	
Arms	Compatible with: <ul style="list-style-type: none"> Regular arm (REGARM) Regular arm with parallel shoe (RwPA) Extra duty arm (EDA)³ Cush-n-stop arm (CUSH)³ Spring cushion-n-stop arm (SCUSH)³ 		

Product Configurations



● Available

● Meets ADA requirements (power mode)

● Not available

* See individual series for maximum manual opening

** Note: EDA, CUSH, SCUSH must be ordered separately from 6440 module kit

Note: Special Templates - Customized installation templates or products may be available to solve non-standard applications. Contact LCN Product Support for assistance.

Electrohydraulic Systems

Simple and Intuitive

- The unique and modular design makes the COMPACT operator easy to install
- Motor gearbox assembly connects to a standard 4040XP with a mounting plate and just 4 screws
- Electrified module drives open mechanical closer
- First of its kind, modular solution, enables reuse of existing hardware

Cost-Effective Solution for Interior Openings

- Modular, intuitive design, minimizes complexity of installation and maintenance
- Low voltage design reduces need for skilled labor coordination
- Fraction of the cost of traditional solutions with features that meet basic requirements of interior, non-latching door

Performance You Can Trust

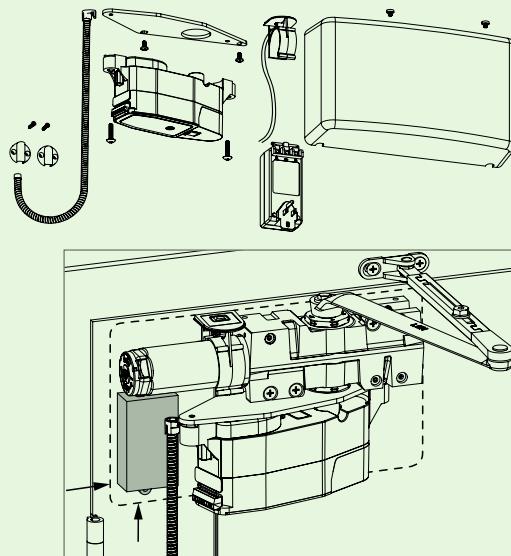
- The COMPACT operator leverages the trusted 4040XP mechanical closer
- Adjustments can be made to the 4040XP mechanical closer
- It can be adjusted normally using the regulation valves for main and latch speed
- This enables standardization of maintenance operations

Features and Benefits

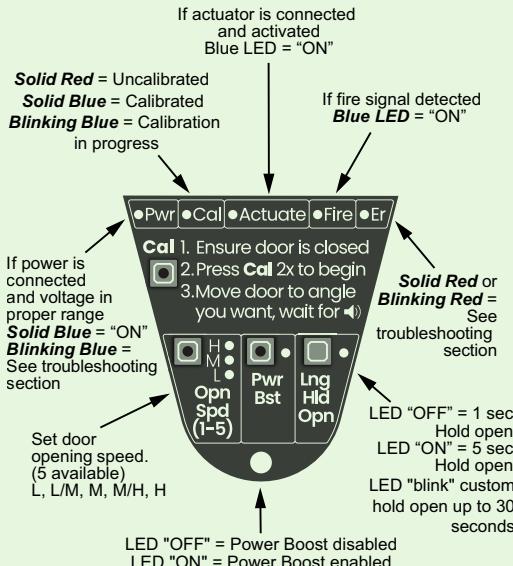
- 24V input for safe door-mount applications
- Configurable power input to allow for simple wall plug-in or external power supply
- Compact user interface for electronic feature adjustments
- Simple calibration set-up with visible and audible feedback
- Adjustments via mechanical closer to meet closing force preferences
- Power boost to overcome interior stack pressure and allow for lower spring settings

- Compatible with 3 different 4040XP mounting configurations
- Fire input to deactivate actuation upon signal
- Dedicated input for actuation signal (hardwired or wireless receiver)
- Optional drop plates available for aesthetic preferences, see page 126
- Custom extended hold open time of up to 30 seconds.

Modular System

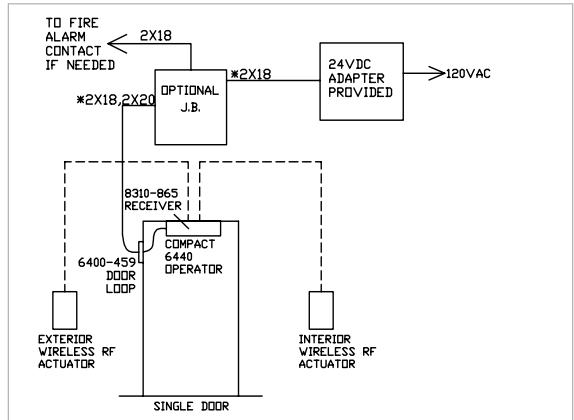


User Interface

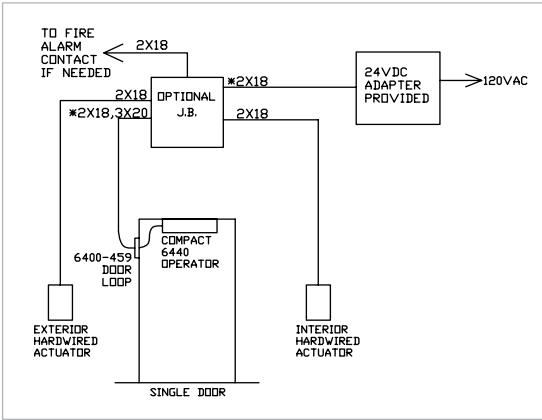


Wiring Diagrams

Wireless Interior and Exterior Actuators, Non-Latching Single Door



Hardwired Interior and Exterior Actuators, Non-Latching



Operation

- Interior and exterior wireless RF wall actuators to operate door
- Fire alarm activation to disable operator from opening door (if fire alarm is not needed, apply jumper wire to terminals)

Module Kit Information

Features	
Certifications	ADA, BHMA A156.19, UL 325, UL 10C, FCC
Body construction	Cast iron cylinder body ²
Fluid	All weather fluid in the 4040XP ²
Handing	Non-handed
Size	<ul style="list-style-type: none"> Compatible with spring size 2-4 Adjustable spring size 2-4²
Cover	Painted system cover
Fasteners	Wood and machine screws, through bolts
Mounting	Door mount or top jamb
Arms	Compatible with: <ul style="list-style-type: none"> Regular Arm (REGARM) Regular Arm with Parallel Shoe (RwPA) Extra Duty Arm (EDA)³ Cush-n-Stop Arm (CUSH)³ Spring Cush-n-Stop Arm (SCUSH)³
Finishes	689 Aluminum or 695 Dark bronze

Technical Specifications	
Power input	2.0A @ 24VDC (supplied adapter) ¹
Maximum powered opening	70° to 110°
Spring size	Compatible with sizes 2 through 4 (Size 3 default)
Door weight	Up to 185 lb door width 36"
Features	Power boost, fire input, motor enable switch
Warranty ²	Motor gear-box assembly: 2 year warranty 4040XP mechanical closer: 30 year warranty The mechanical and electronic components of the COMPACT operator have different warranty periods
Clearance	3-3/4" (95mm) behind door required for 90° installation

- If using other power supply, ensure voltage is regulated to +/- 10% power output 75mA @ 24VDC (for wireless receiver).
- Please reference the price book for complete terms and conditions.
- Must order module kit separately.

Electrohydraulic Systems

Replacement Parts


**6440-MD
Module**

- Motor gearbox assembly to power 4040XP closer


**6440-10
Mounting Plate**

- Plate to attach module to 4040XP
- Fasteners included

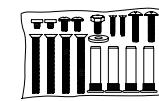
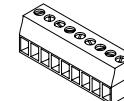

**6440-549
Door Loop**

**6440-470
50W Wall Adapter**

- Basic wall power adapter included with each module kit


**6440-471
65W Wall Adapter**

- Wall power adapter add-on to power motorized latch retraction or e-strokes


**6440-72
Cover**

**6440-20
Screw Bag**

**6440-441
I/O Block**

Cylinders

Arms


**6440-54B
Cover Insert with
Switch and Harness
Assembly**

**4040XP-3071
Standard Cylinder
Assembly**

**4040-3071DEL
Delayed Action
Cylinder Assembly**

**4040XP-3077
Regular Arm
(REGARM)**

Arms


**4040XP-3077/PA
Regular Arm with
Parallel Shoe (RwPA)**

**4040XP-3077EDA
Extra Duty Arm (EDA)**

**4040XP-3077CUSH
Cush-n-Stop Arm**

**4040XP-3077SCUSH
Spring Cush-n-Stop
Arm**

Electrohydraulic Systems

Ordering Information

How to Order 6400 Series Operators

1	Select model number	See kits below
2	Select finish	689 - Aluminum 695 - Dark bronze

6440 Module Kit

The 6440 is a module kit for simple upgrades to a 4040XP. The flexibility of the 6440 allows for custom actuator selection when upgrading an existing, installed 4040XP.

What's Included

- Gearmotor assembly, mounting plate and screws
- Cover and switch insert
- Wall adapter
- Door loop
- 30 ft of copper wire (not pictured)



6440XP Module and Closer Kit

The 6440XP is a module and closer Kit for new installations. The flexibility of the 6440XP allows for custom actuator selection in an installation.

What's Included

- 6440 Module kit components
- 4040XP Standard cylinder
- RwPA arm



6440-2210 Module and Actuator Kit

The 6440-2210 is a module and actuator kit for simple, all-in-one box upgrades to a 4040XP. The simplicity of the 6440-2210 provides everything that is needed to upgrade a 4040XP to an automated, touchless opening. The battery-powered actuators minimize the amount of wire that is needed in an installation.

What's Included

- 6440 Module kit components
- 8310-2210 Touchless, battery-powered, RF actuator kit, which includes:
 - (2) Single gang face plates and built-in transmitters; 2-3/4" x 4-1/2" stainless steel; battery-powered
 - (2) Surface mount boxes
 - (1) 915 MHz receiver (ONLY compatible with the included actuators. Will not be compatible with other LCN 900MHz products)



6440-3813W Module and Actuator Kit

The 6440-3813W is a module and actuator kit for simple, all-in-one box upgrades to a 4040XP. The simplicity of the 6440-3813W provides everything that is needed to upgrade a 4040XP to an automated, touchless opening. The line-powered actuators minimize the amount of maintenance required once installed.

What's Included

- 6440 Module kit components
- 8310-3813W Touchless, line-powered, RF actuator kit, which includes:
 - (2) Standard duty, double gang, black 8310-813 Series touchless actuators
 - (2) 885 Transmitters
 - (1) 880 Receiver



Electromechanical Systems

Introduction

Selection
Guide

Auto equalizers
2610/4810/4820/4840/7900 Series

Auto equalizers
6400/4630/4640 Series

2810/288510/286010/953010/954010/955010/956010 Series
Senior Swing

9130/9140/9150 Series Benchmark

and
Accessories

ELECTROMECHANICAL OPERATORS

Invention

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 with two standard anodized finishes – aluminum and dark bronze.

Electromechanical Product Comparison

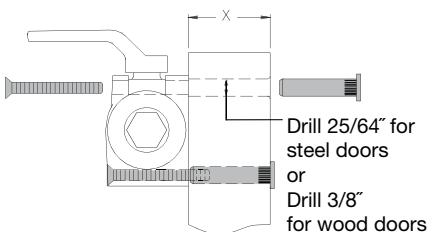
This chart shows a basic features comparison of the LCN electromechanical automatic operator systems designed to provide easy access without sacrificing closing power. Refer to the specific operator chapter for complete details.

	Mounting	Handing	Finish	Cover	Arm Function
2810IQ	Surface mount single door Surface mount simultaneous pair Concealed single door Concealed simultaneous pair	Handed [*] Non-handed	Standard anodized Metal	Standard (single lever) Regular (double lever) Double egress (push/pull) Offset pivot arm Center pivot arm	
2850IQ	Surface mount simultaneous pair Concealed independent pair				
2860IQ	Concealed independent pair				
9130					
9140					
9150					
9530IQ					
9540IQ					
9550IQ					
9560IQ					

● Available
● Not available
* Handed for 2850 and 2860, double egress only.

Electromechanical Fasteners

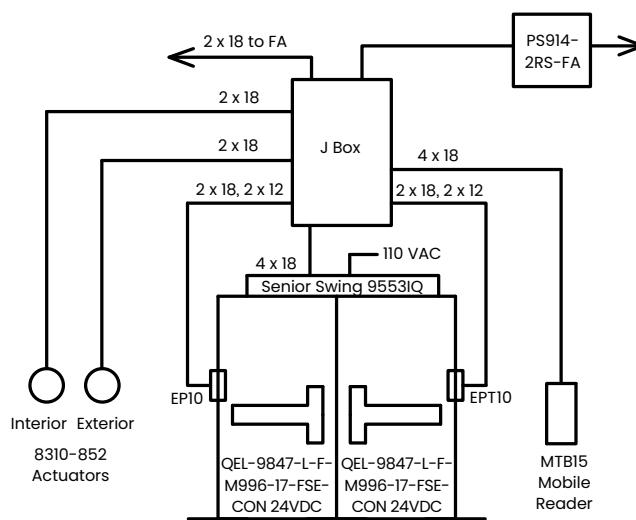
Typically installed 1/4-20 machine screw for aluminum/steel frames. Wood screws included for wood door mounting. Consult factory for additional information



Electromechanical Systems

Sample Application

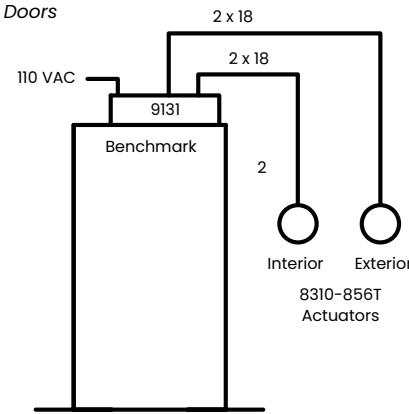
Secure Hospital Hallway



Operation: MTB15 Mobile Reader to signal EL latch retraction and enable exterior actuator through LX switches in panic device. Interior actuator always active.

Fire alarm to extend EL latch and disable automatic operator.

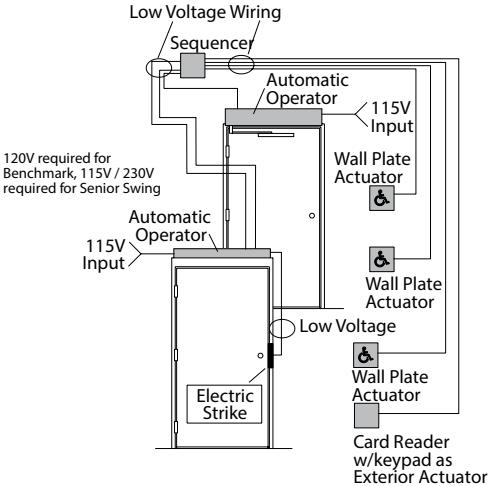
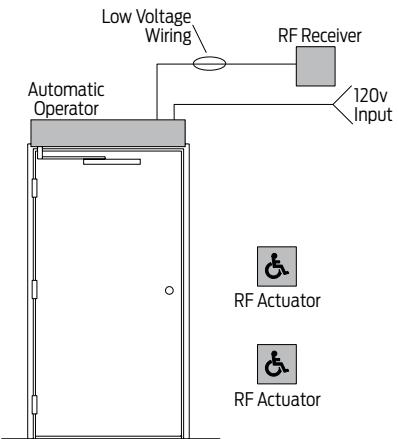
Restroom Doors



Operation: No latching at this door. For a single occupancy restroom. Either actuator will open door at any time.

Wiring Diagrams

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



Single Door System (Wireless)

- An interior door
- Guide rails or safety devices not required
- Free swinging (or dogged) door

How it Works

- Wireless actuators with receiver, powered by the transformer allows for easy installation
- For automatic door operation, touching either actuator signals the receiver and automatic 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 automatic operator functions as a manual door

Bill of Materials

Qty	Part Number	Description
1	953IIQ	Auto operator (RH)
2	8310-3853WS	Wireless actuator, wall mount and surface, logo, 4-3/4" x 4-3/4"
1	8310-865	Wireless receiver

Vestibule Door System (Wired)

- Exterior and vestibule doors
- Sequential operation
- Guide rails or safety devices not required
- 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 automatic operator functions as a manual door

Bill of Materials

Qty	Part Number	Description
1	9542IQ	Auto operator (RH)
1	953IIQ	Auto operator (RH)
3	8310-853	Hard wired wall mount, logo, 4-3/4" x 4-3/4"
1	8310-849	Sequencer
		Other products from Von Duprin and Schlage Electronics

Introduction	
Product Selection Guide	
Pneumatic Systems	
Auto equalizers	2610/4810/4820/4840/7900 Series
Electrohydraulic Systems	
Auto equalizers	6400/4630/4640 Series
Electromechanical Systems	
Senior Swing	9550IQ/Q/9560IQ/Q/9560IQ Series
Electromechanical Systems	
Benchmark	2810IQ/2850IQ/2860IQ/9530IQ/9540IQ Series
Actuators and Accessories	

Electromechanical Systems

LCN Senior Swing - 9500IQ and 2800IQ Series



AdaptivIQ
TECHNOLOGY

Overview

The LCN Senior Swing 9500IQ and 2800IQ series are LCN's premier electromechanical automatic operators. Designed specifically for heavy duty use in primarily automatic applications, the Senior Swing series delivers the reliability and durability expected from any LCN product.

Key Features

Single-person mechanical installation

- Our motor gearbox and controller are each mounted to a specially designed hook-and-cleat, allowing them to simply hook onto the backplate to provide a hand-free holding option while each component is secured.

Fully-loaded controller

- With 23 total programmable settings all accessible through a user-friendly LCD screen, a self-calibration cycle that establishes default settings based on the physical aspects of the door and the opening area, and real-time error code and diagnostic information, this loaded control box provides users with complete control of our automatic operator.

AdaptivIQ

- This built-in technology allows our operator to automatically adjust to external pressures and resistance during both opening and closing cycles. Through a combination of dynamic braking, responsive motor control, and Smart Power Boost technology, our operator compensates for wind, carpet drag, and HVAC stack pressure, allowing the door to latch securely and minimize the risk of slamming.

Sleek industrial design

- Designed to blend in as part of any environment, the rounded corners, sleek edges, and multiple finish options allow architects and end users alike to better curate their aesthetic vision without being interrupted by the necessary hardware.

Additional Benefits

- Capability to operate and control doors of up to 600 pounds
- Power Assist and Push and Go to allow for easy manual operation
- Auto Reverse on Closing to minimize potential damage from obstructions
- Opening Speed and Force programmed separately for further customization
- Off / Auto / Hold-Open switch hidden outside the cover to easy yet discreet access
- On-board power supply (24VDC Output) to power actuators, card readers, and safety circuits.
- Built-in support for up to four (single door) or six (double door) optional safety sensors

Certifications

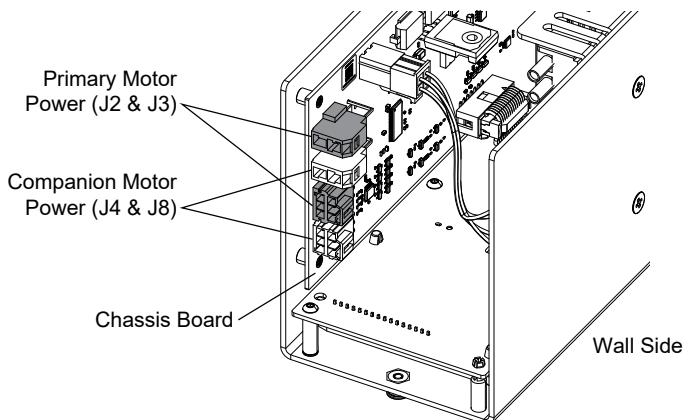
- ADA Certified
- ANSI/BHMA 156.19
- UL 325, 228, 10C, CA
- Buy America Act

Finishes

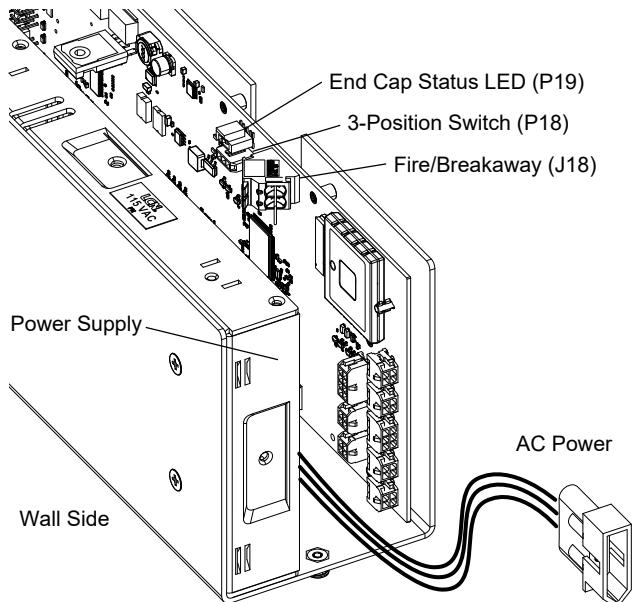
- 628 Aluminum, anodized
- 710 Dark bronze, anodized
- 711 Matte black, anodized

Senior Swing Control Box Diagrams

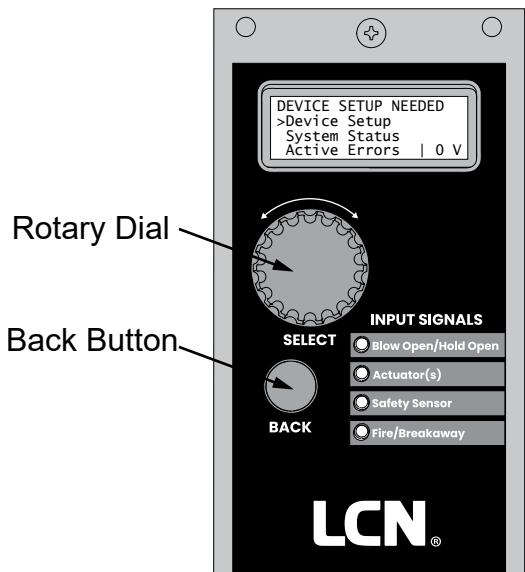
Control Box Gearmotor Headers



Control Box Peripheral Headers



Closeup of Senior Swing IQ User Interface



Introduction	<h2>Electromechanical Systems</h2>
Product Selection Guide	<h3>Programmable Settings</h3> <ul style="list-style-type: none"> Opening Speed: The speed of the door opening from closed to the backcheck angle. If Opening Force setting is too low, it can limit the Opening Speed. Opening Force: This adjusts the max opening force allowed by the operator. High settings may be needed for external doors which may need to drive open against strong winds. Hold Open Delay: The time the door is held at a full open position following an actuation signal. Time starts when the door reaches the hold open or an actuation signal disables. Time is restarted if an actuation is received while in hold open. The hold open time is unlimited if the 3-way switch is set to Hold Open. Backcheck Speed: Opening speed from the backcheck angle to a full open position. Set to lower speeds for heavier doors. Backcheck Angle: Angle at which the door begins to decelerate to backcheck speed. Set to lower angles for heavier doors. Closing Speed of Door 1: Closing speed for Door 1. Set to lower speeds for heavier doors. Closing Speed of Door 2: Closing speed for Door 2. Set to lower speeds for heavier doors. Latch Angle: Angle at which the door begins to decelerate near the full closed position. Set to higher angles for heavier or faster doors. Smart Power Boost: When on, this will increase closing force when needed as the door is closing. It can be used if latching or drag issues prevent the door from fully closing. Set to "Cont" Continuous mode to drive door into frame continually in the case of door with no latch. "Cont" mode should utilize a Power Boost Disable sensor to briefly turn off power boost as a user approaches door. Smart Power Boost Angle: Angle at which Power Boost is eligible to engage if door has trouble closing. Smart Power Boost Force: Adjusts the max power boosting closing force allowed by the operator. Higher settings may be needed for doors which have high winds, stack pressure, or substantial latch, threshold, hinge or door warp problems. Power Assist: When activated, this will assist door opening while the user manually opens door. The door will feel lighter by reducing the opening resistance. Power Assist Force: The force applied to assist the user when opening the door manually. Lower the force setting if the door is drifting away or taking too much time to stop during a manual opening.
Pneumatic Systems Auto equalizers 2610/4810/4820/4840/7900 Series	<ul style="list-style-type: none"> Push & Go: When activated, manually pushing the door open a short distance will trigger an actuation, causing door to open to the full open position and then hold. Hold open time will follow Hold Open setting. When set to FT, the behavior will be the same as ON, but the hold open time will be 1 second. Alternate Action: When activated, an actuation will work like a garage door opening. First actuate signal will open the door and hold until next actuate signal is received or times out. Timeout ranges from 10 minutes to 30 minutes. Auto Reverse on Closing: When activated, the door will re-open upon hitting an obstruction while closing. This applies for both manual and actuated openings. This feature only works for door angles greater than the Smart Power Boost Angle setting. Electric Lock Delay: When activated, the system will trigger the Electric Lock Relay and delay for a specified time before then opening the door. Delay time is 0.5 to 2.0 seconds. If you are experiencing pause or interference with your latch, consider turning on or increasing the latch delay time. Preload Release: When activated, the door will first drive closed prior to engaging the Electric Lock to relieve pressure on the latch. This feature only available when Electric Lock Delay is enabled.
Electrohydraulic Systems Auto equalizers 6400/4630/4640 Series	<ul style="list-style-type: none"> DMSS Safety Action: This action will occur while opening when DMSS (Door Mounted Safety Sensor) on the swing side of the door triggers. If set to Slow, the opening speed will slow. If set to Pause, the door will pause for 5 seconds and then open slowly. If set to close, the door will close immediately. DMSS Safety Side Ignore Angle: When activated, the system will ignore the DMSS (Door Mounted Safety Sensor) on the swing side when the door is greater than the angle selected. Eliminates nuisance detection when sensor detects a wall or guard rail.
Electromechanical Systems Senior Swing 2810Q/2850Q/2860Q/9530Q/9540Q/9550Q/Q/Q/Q/Q Series	<ul style="list-style-type: none"> Actuator 2 Enable: This allows the Actuator 2 input to be disabled, and applies to Door 2 only. Audible Beep: Used to enable or disable the audible beeper on the device. Beeps are used to provide audible feedback during setup or service. Bluetooth: When available, this enables a certified mobile app to connect to the device. Toggle from Off to On to initiate claiming device. If device is not connected after 30 minutes, the system will automatically disable.
Electromechanical Systems Benchmark 9130/9140/9150 Series	
Actuators and Accessories	

2810IQ Series



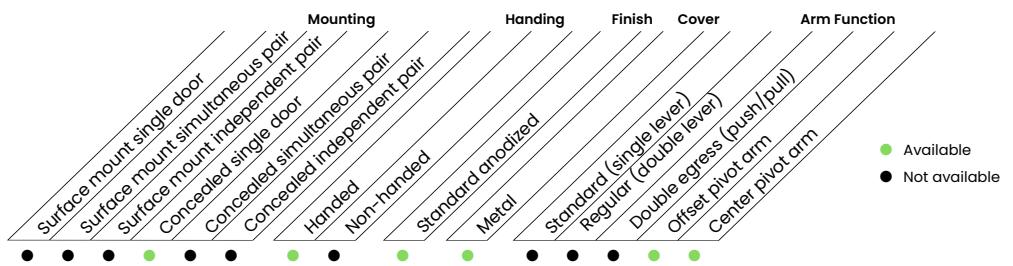
The LCN® 2810IQ Senior Swing is a heavy-duty electromechanical swing door operator. Designed for a concealed mount on single door applications, the 2810IQ can be configured with either a center or offset pivot arm, allowing flexibility for a variety of opening needs.

When activated, this operator provides a smooth and seamless opening experience to accommodate those with accessibility needs or a pedestrian with their hands full. The 2810IQ can also be operated manually for regular pedestrian traffic and includes both Power Assist and Push n' Go, which can be activated for an easy, smooth manual open.

Features

Certifications	Grade 1 - ANSI A156.19, UL325, UL228, UL10C, ADA, 100 Hour Salt Spray, CSFM, Meets BAA - Buy American Act	Fasteners	Wood and machine screws (WMS)
Handing	Handed	Mounting	Single door, overhead concealed, center pivot, offset pivot, butt hinge
Door width	Minimum door width 33"- 48"; 49" with finger guard Note: Single door width per leaf 33" minimum, 48" maximum.	Arms	Center pivot arm Offset pivot arm
Door weight	Up to 600 lbs	Finishes/colors/powder coat	<ul style="list-style-type: none"> 628 - Aluminum, anodized 710 - Dark bronze, anodized 711 - Matte black, anodized
Warranty	2 years	Power input	115VAC single phase @60Hz, 230VAC single phase @50Hz
		Power output	2A @ 24VDC

Product Configurations



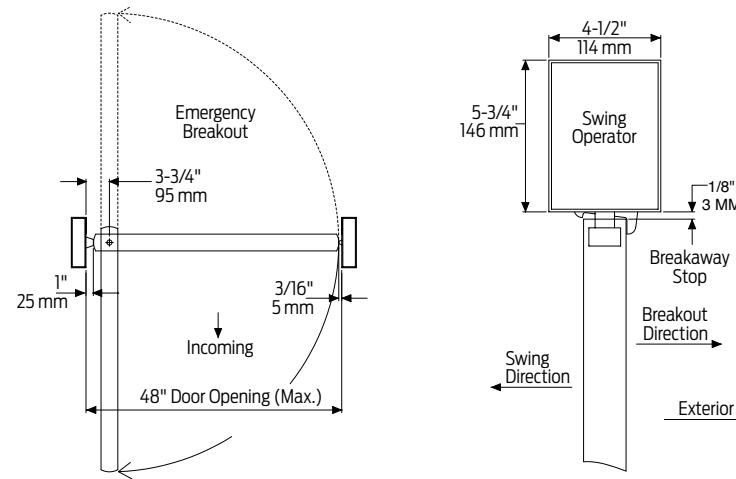
Note: Special Templates - Customized installation templates or products may be available to solve non-standard applications. Contact LCN Product Support for assistance.

Electromechanical Systems

Concealed Single Door Mounting Details

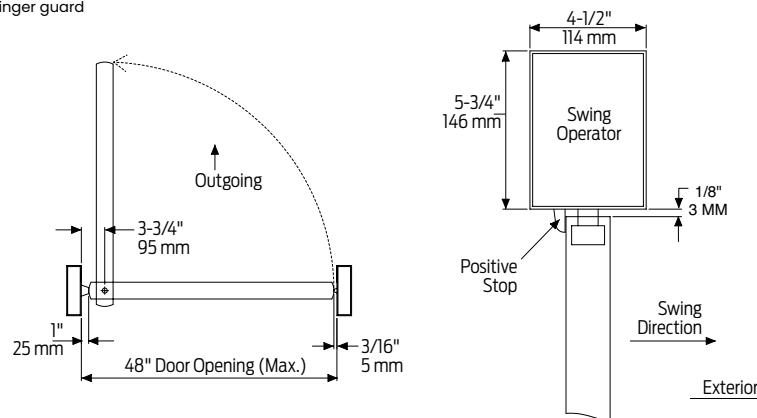
Center Pivot, Breakaway Stop, Pull

Shown with 3-3/4" pivot and finger guard



Center Pivot, Positive Stop, Push

Shown with 3-3/4" pivot and finger guard



Top rail	Minimum 2" (51 mm)
Head frame	Minimum 36" (L) x 5-3/4" (H) x 4-1/2" (W) (914 mm x 146 mm x 114 mm)
Opening and closing time	<ul style="list-style-type: none"> Variable by adjustments to the electronic control box Maximum hold open time adjustable up to approximately 60 seconds
System diagram	See page 52-53 for typical system wiring and electrical data
Maximum opening	Template allows 90 degree power opening and 90 degree manual opening
Minimum door width	33" with applied stop by others and 36" with LCN positive or breakaway stop

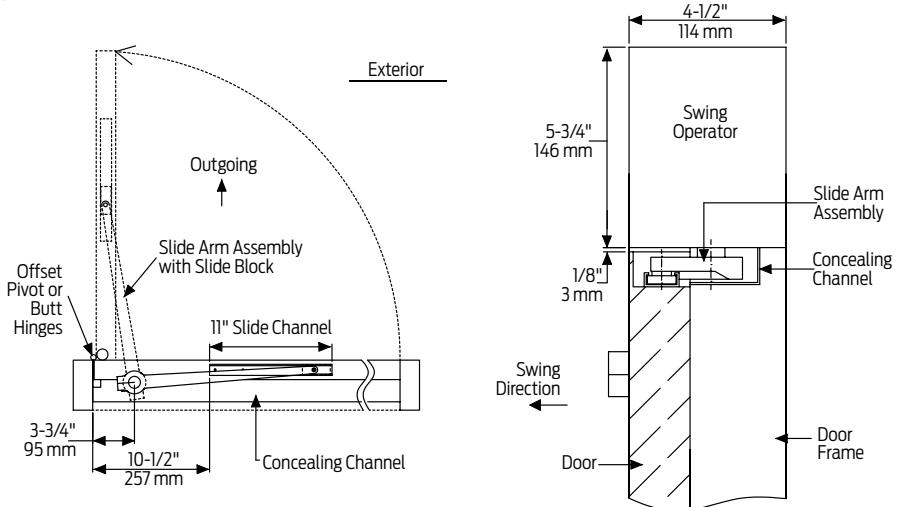
Notes:

- Power Assist and Push & Go permits non-switch activation
- Double Door Header available up to 98", specify length 49" to 98" maximum (consult factory regarding this option)
- Positive or breakaway stop available with center pivot arm

Concealed Single Door Mounting Details

Offset Pivot or Butt Hinge, Slide Arm, Push

Shown with 3-3/4" pivot



2610/4810/4820/4840/7900 Series

6400/4630/4640 Series

2810IQ/2850IQ/2860IQ/9530IQ/9540IQ/9550IQ/9560IQ Series

9130/9140/9150 Series

Top rail	Minimum 2" (51 mm)
Head frame	Minimum 33" (L) x 5-3/4" (H) x 4-1/2" (W) (838 mm x 146 mm x 114 mm)
Opening and closing time	<ul style="list-style-type: none"> Variable by adjustments to the electronic control box Maximum hold open time adjustable up to approximately 60 seconds
System diagram	See page 52-53 for typical system wiring and electrical data
Maximum opening	Template allows 90 degree power opening and 90 degree manual opening

- Minimum door width 33"
- Installations require bottom pivot and two intermediate pivots

Notes:

- Push 'N Go permits non-switch activation
- Double door header available up to 98", specify length 49" to 98" maximum (consult factory regarding this option)
- Positive or breakaway stop available with center pivot arm

Electromechanical Systems

Accessories

Motor Gearbox



2810IQ-3454
Standard Motor Gearbox (MGB)

- Senior Swing
- Handed
- Driving mechanism for operator
- Provides maximum 15 lbs opening force

Control Box



2810IQ-3462
Standard Controller (CTRL)

- Senior Swing
- Electronic controlling device for Senior Swing

Arm



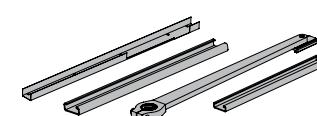
2810IQ-3077CP
2 3/4" Center Pivot Arm (ARMCP)

- Center pivot installations only
- Used with overhead concealed operators and center pivoted doors



2810IQ-3077OP
3 3/4" Offset Pivot Arm (ARMOP)

- Offset pivot or butt hung installations only
- Used with overhead concealed operators



2810IQ-3077OPCM
Offset Pivot Arm Assembly

- Offset arm with track and concealing channel (includes 3072 concealing channel, 168 slide channel and 3077OP offset pivot arm)

Brackets



2810IQ-375
Mounting Bracket

- Motor gearbox mounting bracket for 3-3/4" offset pivot, butt hinge or center pivot with finger guard installations
- Front bracket



2810IQ-275
Mounting Bracket

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



2810IQ-3018
Rear Mounting Bracket

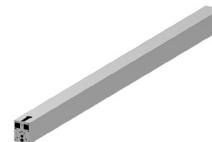
- Motor gearbox mounting bracket
- Rear bracket

Header



2810IQ-3572HL
Standard Mounting Header (HDR)

- Standard
- Single door, single operator
- Specify length 33" to 49" maximum



2810IQ-3572DD
Double Door Header (HDR2)

- Standard
- Double door, single operator
- Specify length 49" to 98" maximum



2810IQ-334
Header End Caps

- With openings for wiring

End Cap

Accessories

Channels



2810IQ-3072

Concealing Channel

- Offset arm with track and concealing channel (includes 3072 concealing channel, 168 slide channel and 3077OP offset pivot arm) used to conceal arm in overhead concealed applications
- For offset pivot installations only
- If ordering separately specify length and hand

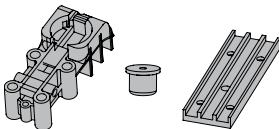


2810IQ-168

Slide Channel

- Offset pivot or butt hinge installations only
- Mounts in top rail of door
- Allows arm to slide

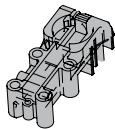
Pivots



2810IQ-3107

Bottom Pivot Assembly

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



2810IQ-107

Bottom Pivot Body

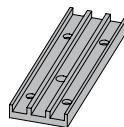
- For center pivoted installations



2810IQ-110

Pivot Post

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

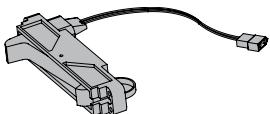


2810IQ-117

Bottom Pivot Plate

- Applied to floor for center pivoted installations

Installation Accessories



2810IQ-384B

Breakaway Stop (BKY)

- Allows in-swinging door to swing out in case of emergency
- Disables operator in breakaway mode
- For center pivoted installations only



2810IQ-384F

Positive Stop (POS)

- Prevents out-swinging door from swinging in
- For center pivoted installations only



2810IQ-12

Filler Plate Blank

- Completes length of header box



2810IQ-11A

Spindle Plate

- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 2-3/4" center pivot installations



2810IQ-11B

Spindle Plate

- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 3-3/4" offset pivot, butt hinge or center pivot with finger guard installations

Electromechanical Systems

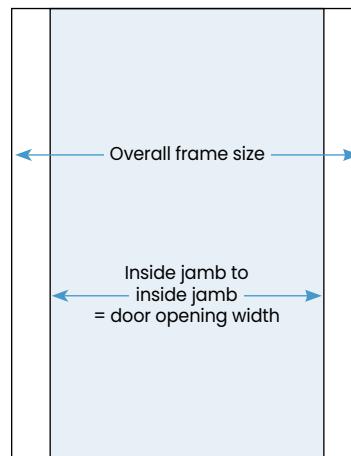
Ordering Information

How to Order a 2810IQ Series Operator		
1	Choose operator	281IQ
2	Motor gearbox	Standard
3	Controller	Standard
4	Concealed header	HDR - Single door header - 33" - 48" HDR2 - Double door header - 48.125" - 98" HDR2MP - Door header w/ manual prep - 48.125" - 98"
5	Specify door opening width (jamb to jamb)	33" - 48"
6	Select arm	ST/CP - Center pivot arm ST/OP - Offset pivot arm
7	Track (stops)	LESS - No stop (standard selection) BKY - Breakaway stop POS - Positive stop
8	Specify handing	RH - Right Hand LH - Left Hand
9	Voltage	115V (standard selection) 230V
10	Spindle center	2.75 (standard selection) 3.75 SPEC
11	Select finish	628 - Aluminum, clear anodized 710 - Dark bronze, anodized 711 - Matte black, anodized

Operator will be shipped with:

- Motor gearbox mounting hardware
- Controller box mounting hardware
- Wood and machine screws

Measuring Door Opening Width



2850IQ Series



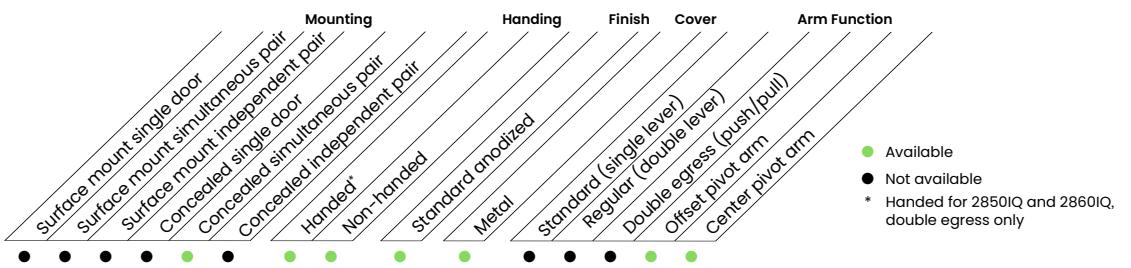
The LCN® 2850IQ Senior Swing is a heavy-duty electromechanical swing door operator. Designed for a concealed mount on double door applications, this configuration is ideal for simultaneous double door operation and features two motor gearboxes with one controller. The 2850IQ can be mounted with either center or offset pivot arms, allowing flexibility for a variety of opening needs.

When activated, this operator provides a smooth and seamless opening experience to accommodate those with accessibility needs or a pedestrian with their hands full. The 2850IQ can also be operated manually for regular pedestrian traffic and includes both Power Assist and Push n' Go, which can be activated for an easy, smooth manual open.

Features

Certifications	Grade 1 – ANSI A156.19, UL325, UL228, UL10C, ADA, 100 Hour Salt Spray, CSFM, Meets BAA – Buy American Act	Fasteners	Wood and machine screws (WMS)
Handing	Handed	Mounting	Double door, overhead concealed, center pivot, offset pivot, butt hinge
Door width	<ul style="list-style-type: none"> Combined width min 52" – 96" Simultaneous pair – width per leaf 26" minimum to 48" maximum 	Arms	Center pivot arm Offset pivot arm
Door weight	Up to 600lbs	Finishes/colors/ powder coat	<ul style="list-style-type: none"> 628 – Aluminum, anodized 710 – Dark bronze, anodized 711 – Matte black, anodized
Warranty	2 years	Power input	115VAC single phase @60Hz, 230VAC single phase @50Hz
		Power output	2A @ 24VDC

Product Configurations

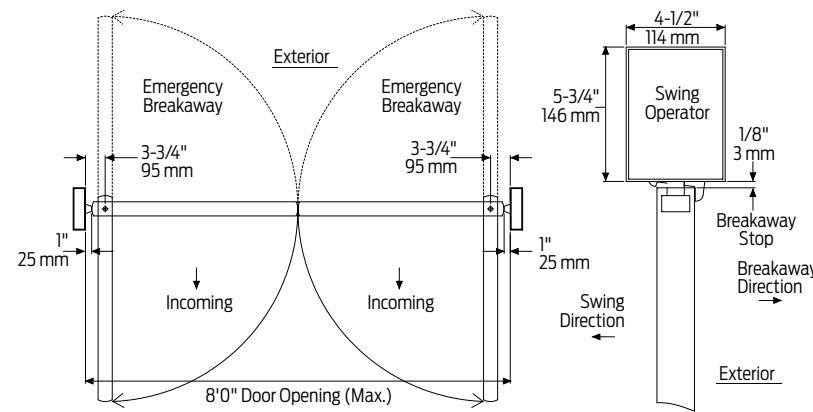


Note: Special Templates - Customized installation templates or products may be available to solve non-standard applications. Contact LCN Product Support for assistance.

Concealed Simultaneous Pair Mounting Details

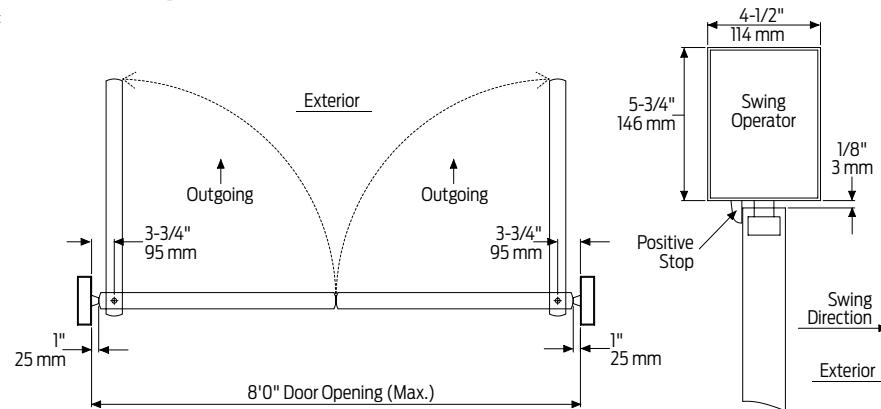
Center Pivot, Breakaway Stop, Pull

Shown with 3-3/4" pivot



Center Pivot, Positive Stop, Push

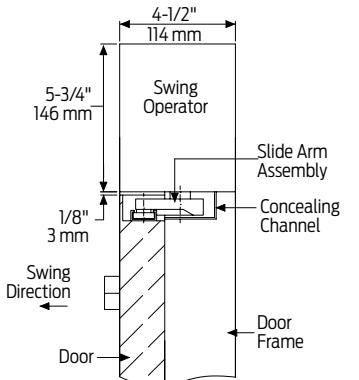
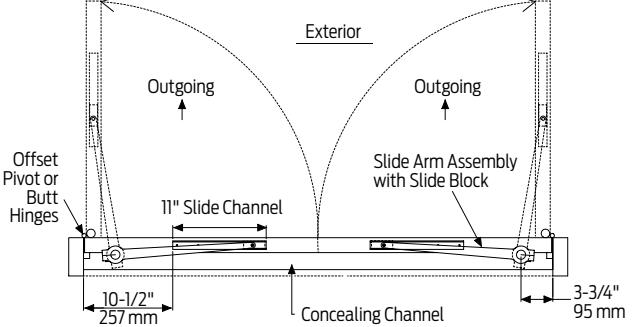
Shown with 3-3/4" pivot



Concealed Simultaneous Pair Mounting Details

Offset Pivot Or Butt Hinge, Slide Arm, Push

Shown with 3-3/4" pivot



Electromechanical Systems

Accessories

Motor Gearbox



2850IQ-3454 Standard Motor Gearbox (MGB)

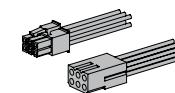
- Senior Swing
- Driving mechanism for operator
- Provides maximum 15 lbs opening force
- Handed

Control Box



2850IQ-3462 Standard Controller (CTRL)

- Senior Swing
- Electronic controlling device for Senior Swing



2850IQ-982 Companion Cable

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

Arm



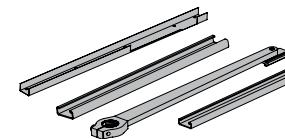
2850IQ-3077CP 2-3/4" Center Pivot Arm (ARMCP)

- Center pivot installations only
- Used with overhead concealed operators and center pivoted doors



2850IQ-3077OP 3-3/4" Offset Pivot Arm (ARMOP)

- Offset pivot or butt hung installations only
- Handed
- Used with overhead concealed operators



2850IQ-3077OPCM Offset Pivot Arm Assembly

- Offset Pivot Arm with track and concealing channel
- Includes 3072 Concealing Channel, 168 Slide Channel and 3077OP offset pivot arm

Brackets



2850IQ-375 Mounting Bracket

- Motor gearbox mounting bracket for 3-3/4" offset pivot, butt hinge or center pivot with finger guard installations
- Front bracket



2850IQ-275 Mounting Bracket

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



2850IQ-3018 Rear Mounting Bracket

- Motor gearbox mounting bracket
- Rear bracket

Header



2850IQ-3572HL Standard Mounting Header (HDR)

- Mounting header
- Pair door, two operators
- Specify length 52" to 98" maximum
- Standard

End Cap



2850IQ-334 Header End Caps

- End cap with openings for wiring

Accessories

Channels



2850IQ-3072

Concealing Channel

- Used to conceal arm in overhead concealed applications
- For offset pivot installations only
- If ordering separately specify length and hand

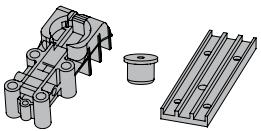


2850IQ-168

Slide Channel

- Offset pivot or butt hinge installations only
- Mounts in top rail of door
- Allows arm to slide

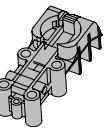
Pivots



2850IQ-3107

Bottom Pivot Assembly

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



2850IQ-107

Bottom Pivot Body

- Pivot body for center pivoted installations



2850IQ-110

Pivot Post

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

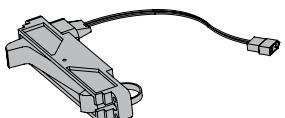


2850IQ-117

Bottom Pivot Plate

- Applied to floor for center pivoted installations

Installation Accessories



2850IQ-384B

Breakaway Stop (BKY)

- Allows in-swinging door to swing out in case of emergency
- For center pivoted installations only



2850IQ-384F

Positive Stop (POS)

- Prevents out-swinging door from swinging in
- For center pivoted installations only



2850IQ-12

Filler Plate Blank

- Completes length of header box



2850IQ-11A

Spindle Plate

- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 2-3/4" center pivot installations



2850IQ-11B

Spindle Plate

- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 3-3/4" offset pivot, butt hinge or center pivot with finger guard installations

Electromechanical Systems

Ordering Information

How to Order a 2850IQ Series Operator

1	Choose operator	2853IQ
2	Motor gearboxes	Two standard
3	Controller	Standard
4	Concealed header	HDR2 - Double door header
4	Specify door opening width (jamb to jamb)	52" - 96"
6	Select arm	STCP2 - Two center pivot arms STOP2 - Two offset pivot arms
7	Track (stops)	LESS - No stop (standard selection) BKY2 - Breakaway stop POS2 - Positive stop
8	Voltage	115V (standard selection) 230V
9	Spindle center	2.75 (standard selection) 3.75 SPEC
10	Select finish	628 - Aluminum, clear anodized 710 - Dark bronze, anodized 711 - Matte black, anodized

Operator will be shipped with:

- Motor gearbox mounting hardware
- Controller box mounting hardware
- Wood and machine screws

2860IQ Series



The LCN® 2860IQ Senior Swing is a heavy-duty electromechanical swing door operator. Designed for a concealed mount on double door applications, this configuration is ideal for independent double door operation and features two motor gearboxes with two separate controllers. The 2860IQ can be mounted with either center or offset pivot arms, allowing flexibility for a variety of opening needs.

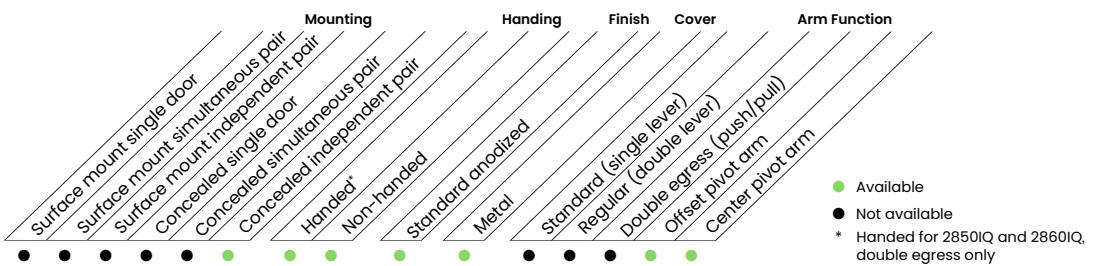
When activated, this operator provides a smooth and seamless opening experience to accommodate those with accessibility needs or a pedestrian with their hands full. Each of the double doors controlled by the 2860IQ can also be operated manually and independently for regular pedestrian traffic and include both Power Assist and Push n' Go, which can be activated for an easy, smooth manual open.

Features

Certifications	Grade 1 – ANSI A156.19, UL325, UL228, UL10C, ADA, 100 Hour Salt Spray, CSFM, Meets BAA – Buy American Act
Handing	Handed
Door width	<ul style="list-style-type: none"> Combined width min 52" – 96" Simultaneous pair – width per leaf 26" minimum to 48" maximum
Door weight	Up to 600 lbs
Warranty	2 years

Fasteners	Wood and machine screws (WMS)
Mounting	Independent pair, overhead concealed, center pivot, offset pivot, butt hinge
Arms	Center pivot arm Offset pivot arm
Finishes/colors/ powder coat	<ul style="list-style-type: none"> 628 – Aluminum, anodized 710 – Dark bronze, anodized 711 – Matte black, anodized
Power input	115VAC single phase @60Hz, 230VAC single phase @50Hz
Power output	2A @ 24VDC

Product Configurations



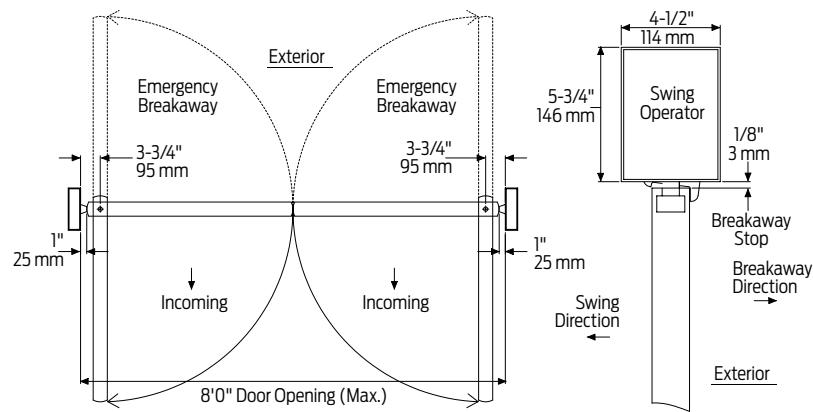
Note: Special Templates – Customized installation templates or products may be available to solve non-standard applications. Contact LCN Product Support for assistance.

Electromechanical Systems

Concealed Independent Pair Mounting Details

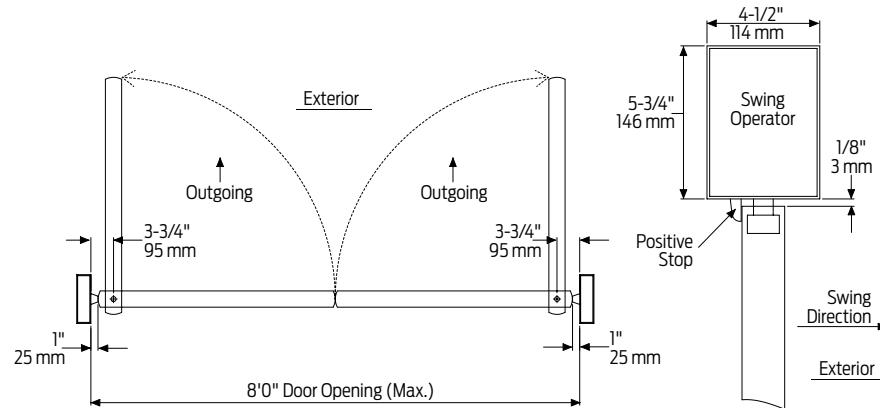
Center Pivot, Breakaway Stop, Pull

Shown with 3-3/4" pivot



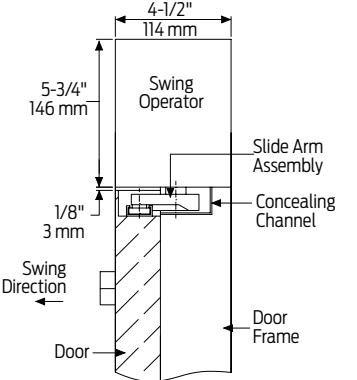
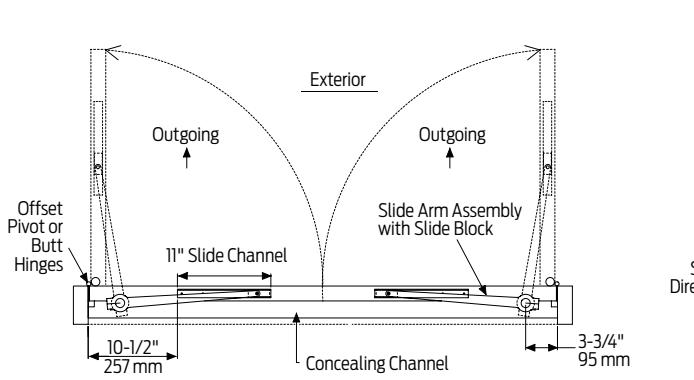
Center Pivot, Positive Stop, Push

Shown with 3-3/4" pivot



Concealed Independent Pair Mounting Details

Offset pivot or butt hinge, push



Electromechanical Systems

Accessories

Motor Gearbox



2860IQ-3454
Standard Motor Gearbox (MGB)

- Senior Swing
- Handed
- Driving mechanism for operator
- Provides maximum 15 lbs opening force

Control Box



2860IQ-3462
Standard Controller (CTRL)

- Electronic controlling device for Senior Swing

Arm



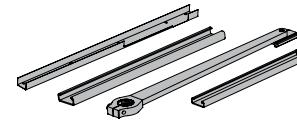
2860IQ-3077CP
2-3/4" Center Pivot Arm (ARMCP)

- Center pivot installations only
- Used with overhead concealed operators and center pivoted doors



2860IQ-3077OP
3-3/4" Offset Pivot Arm (ARMOP)

- Offset pivot or butt hung installations only
- Used with overhead concealed operators



2860IQ-3077OPCM
Offset Pivot Arm Assembly

- Offset arm with track and concealing channel
- Includes 3072 concealing channel, 168 slide channel and 3077OP offset pivot arm

Brackets



2860IQ-375
Mounting Bracket

- Motor gearbox mounting bracket for 3-3/4" offset pivot, butt hinge or center pivot with finger guard installations
- Front bracket



2860IQ-275
Mounting Bracket

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



2860IQ-3018
Rear Mounting Bracket

- Motor gearbox mounting bracket
- Rear bracket

Header



2860IQ-3572HL
Standard Mounting Header (HDR)

- Pair door, two operators
- Specify length 65" to 98" maximum
- Standard

End Cap



2860IQ-334
Header End Caps

- With openings for wiring

Accessories

Channels



2860IQ-3072

Concealing Channel

- Used to conceal arm in overhead concealed applications
- For offset pivot installations only
- If ordering separately specify length and hand

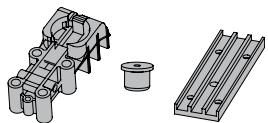


2860IQ-168

Slide Channel

- Offset pivot or butt hinge installations only
- Mounts in top rail of door
- Allows arm to slide

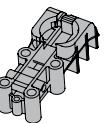
Pivots



2860IQ-3107

Bottom Pivot Assembly

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



2860IQ-107

Bottom Pivot Body

- Pivot body for center pivoted installations



2860IQ-110

Pivot Post

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

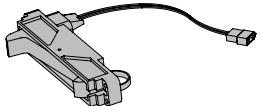


2860IQ-117

Bottom Pivot Plate

- Applied to floor for center pivoted installations

Installation Accessories



2860IQ-384B

Breakaway Stop (BKY)

- Allows in-swinging door to swing out in case of emergency
- For center pivoted installations only



2860IQ-384F

Positive Stop (POS)

- Prevents out-swinging door from swinging in
- For center pivoted installations only



2860IQ-12

Filler Plate Blank

- Completes length of header box



2860IQ-11A

Spindle Plate

- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 2-3/4" center pivot installations



2860IQ-11B

Spindle Plate

- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 3-3/4" offset pivot, butt hinge or center pivot with finger guard installations

Electromechanical Systems

Ordering Information

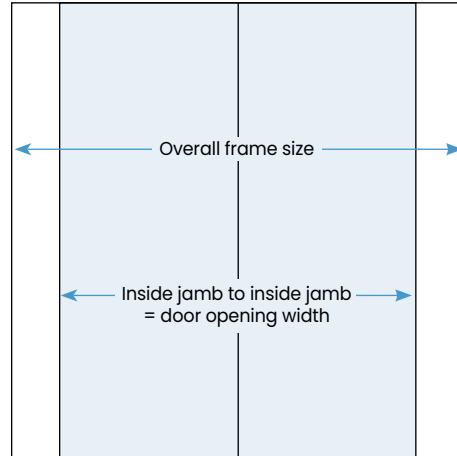
How to Order a 2860IQ Series Operator

1	Choose operator	2863IQ
2	Motor gearboxes	Two standard
3	Controllers	Two standard
4	Concealed header	HDR2 - Double door header
5	Specify door opening width (jamb to jamb)	52" - 96"
6	Select arm	STCP2 - Two center pivot arms STOP2 - Two offset pivot arms
7	Track (stops)	LESS - No stop (standard selection) BKY2 - Breakaway stop POS2 - Positive stop
8	Voltage	115V (standard selection) 230V
9	Spindle center	2.75 (standard selection) 3.75 SPEC
10	Select finish	628 - Aluminum, clear anodized 710 - Dark bronze, anodized 711 - Matte black, anodized

Operator will be shipped with:

- Motor gearbox mounting hardware
- Controller box mounting hardware
- Wood and machine screws

Measuring Door Opening Width



9530IQ Series



The LCN® 9530IQ Senior Swing is a heavy-duty electromechanical swing door operator. Designed for a surface mount on single door applications, the 9530IQ is paired with a standard arm for a pull-side configuration.

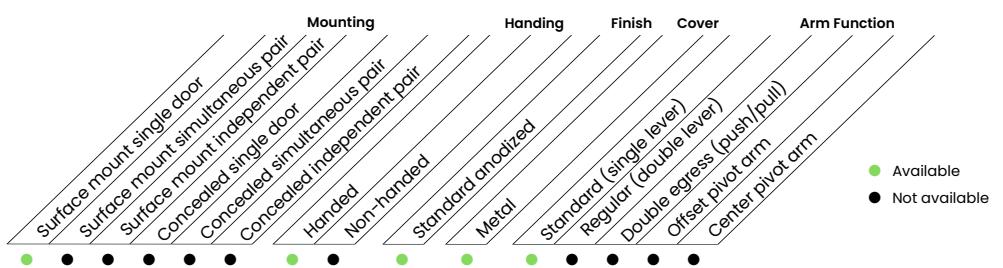
When activated, this operator provides a smooth and seamless opening experience to accommodate those with accessibility needs or a pedestrian with their hands full. The 9530IQ can also be operated manually for regular pedestrian traffic and includes both Power Assist and Push n' Go, which can be activated for an easy, smooth manual open.

Features

Certifications	Grade 1 – ANSI A156.19, UL325, UL228, UL10C, ADA, 100 Hour Salt Spray, CSFM, Meets BAA – Buy American Act
Handing	Handed
Door width	<ul style="list-style-type: none"> Minimum 33" – 48" Single door – width per leaf 33" minimum to 48" maximum
Door weight	Up to 600 lbs
Warranty	2 years

Fasteners	Machine screws (MS)
Mounting	Single door, surface mount, offset pivot, butt hinge, pull side
Arms	Standard arm
Finishes/colors/powder coat	<ul style="list-style-type: none"> 628 – Aluminum, anodized 710 – Dark bronze, anodized 711 – Matte black, anodized
Cover	Metal cover (MC)
Power input	115VAC single phase @60Hz, 230VAC single phase @50Hz
Power output	2A @ 24VDC

Product Configurations



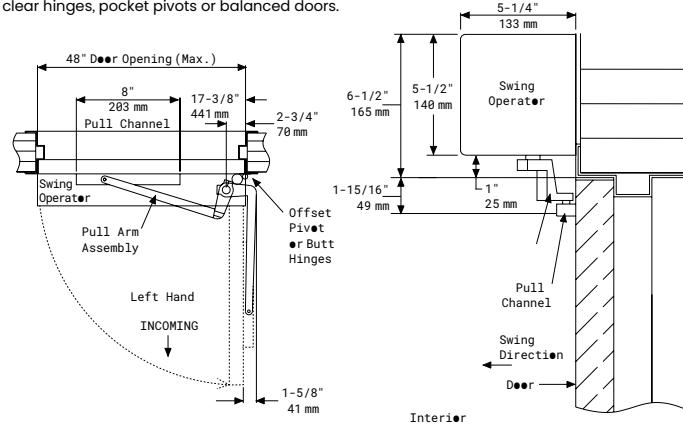
Note: Special Templates - Customized installation templates or products may be available to solve non-standard applications. Contact LCN Product Support for assistance.

Electromechanical Systems

Top Jamb Single Door Mounting Details

Offset Pivot/Butt Hinge, Center Pivot, Pull

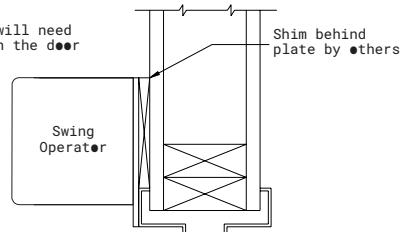
Note: Cannot be used with swing clear hinges, pocket pivots or balanced doors.



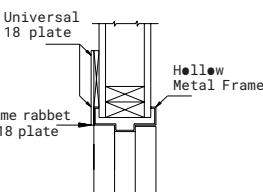
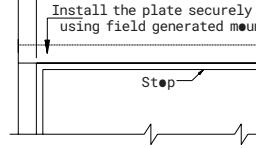
Hollow Metal Frame

The -18 plate is 1/4" thick and will need to be ordered 3-3/4" longer than the door opening width. See illustration below.

The 18 plate is 1/4" thick and will need to be ordered 3-3/4" longer than the door opening width.



The length of universal 18 plate will need to be ordered 3-3/4" longer than the supplied header.



Note: Suggested installation.

Butt Hinges	Should not exceed 5" (127 mm) in width
Reveal	Should not exceed 4" (102 mm)
Top Rail	Minimum 2-3/4" (70 mm)
Head Frame	Minimum 1-3/4" (44 mm); Face Frame 6-1/2" (165mm) Total Operator Clearance
Opening and Closing Time	<ul style="list-style-type: none"> Variable by adjustments to the Electronic Control Box Maximum Hold Open Time adjustable up to approximately 60 Seconds
System Diagram	See page 52-53 for typical system wiring and electrical data
Maximum Opening	Template allows 90 degree power opening and 90 degree manual opening

Notes:

- Power Assist and Push & Go permit non-switch activation with Smart Power Boost providing additional latching force
- 36" door width is standard. Specify 33" - 48" max
- Double door header available up to 98", specify other length 49"- 98" max
- Actuators available separately, see pages 110-129

Accessories

Motor Gearbox



9530IQ-3454
Standard Motor Gearbox (MGB)

- Senior Swing
- Handed
- Driving mechanism for operator
- Provides maximum 15 lbs opening force

Control Box



9530IQ-3462
Standard Controller (CTRL)

- Electronic controlling device for Senior Swing

Arm



9530IQ-3077PLCM
Standard Arm Assembly with Track Roller (STDTRKARM2)

- Handed
- Track roller included (includes 3038, 3077T, 3034 and 73)



9530IQ-3077T
Standard Arm (STDTRKARM)

- Handed
- Track roller not included

Track



9530IQ-3038
Track

- Non-handed
- Includes 3034 and 73



9530IQ-73
Track End Cap

- Black plastic end caps



9530IQ-3034
Roller

- Quiet low friction roller assembly



9530IQ-475
MGB Mounting Bracket

- Mounting bracket for the motor gearbox
- Connects to baseplate
- Includes fasteners



9530IQ-575
Controller Mounting Brackets

- Two mounting brackets for the controller box
- Connects to backplate
- Includes fasteners

Operator Housing



9530IQ-72MC
Standard Cover

- Single door operator cover
- Specify for door widths 33" - 48"



9530IQ-72MC-DD
Double Door Cover

- Double door cover for single or multiple operators
- Specify for door widths 49" - 98"



9530IQ-10
Standard Baseplate

- Single door operator baseplate
- Specify for door widths 33" - 48"



9530IQ-10-DD
Double Door Baseplate

- Double door baseplate for single or multiple operators
- Specify for door widths 49" - 98"



9530IQ-163
RF Window

- Cover for rectangular opening on top of the cover

Installation Accessories



9530IQ-18
Mounting Plate

- Optional mounting plate for standard hollow metal door frames
- Specify desired length between 33" - 101-1/2"

Note: The length of a universal 18 plate will need to be ordered 3-3/4" longer than the door width.

Accessories

End Cap



9530IQ-334L
Left Side End Cap

- One end cap for the left side of a metal cover



9530IQ-334R
Right Side End Cap

- One end cap for the right side of a metal cover



9530IQ-3179
Rocker Switch Assembly

- This is an exterior Off/On/Auto three-way rocker switch on the end cap of the metal cover. The switch is concealed from view, and is accessed by pulling the switch open from the end cap



9530IQ-163-1
End Cap Cover Insert

- This cover insert is used to fill the end cap(s) that do not contain the Rocker Switch Assembly Insert.

Ordering Information

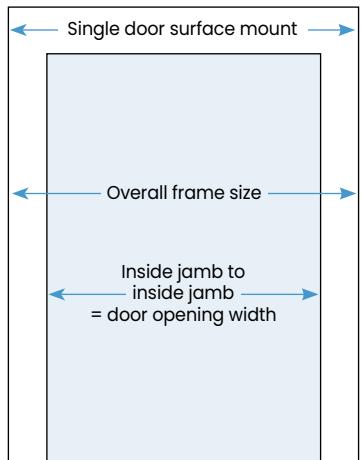
How to Order a 9530IQ Series Operator

1	Choose operator	953IQ
2	Motor gearbox	Standard
3	Controller	Standard
4	Metal cover	COV - Single door header - 33" - 48" COV2 - Double door header - 48.125" - 98"
5	Specify door opening width (jamb to jamb)	33" - 98"
6	Select arm	STD - Standard arm
7	Track	STD - Standard track
8	Specify handing	RH - Right hand LH - Left hand
9	Voltage	115V (standard selection) 230V
10	Spindle center	2.75 (standard selection) SPEC
11	Select finish	628 - Aluminum, clear anodized 710 - Dark bronze, anodized 711 - Matte black, anodized
12	Rocker switch assembly	SW - Yes NS - No

Operator will be shipped with:

- Motor gearbox mounting bracket
- Controller box mounting hooks (2)
- Machine screws
- Baseplate (manufactured at specified door width)
- Cover end cap kit (one left, one right, cover insert(s), fasteners)

Measuring Door Opening Width



Electromechanical Systems

9540IQ Series



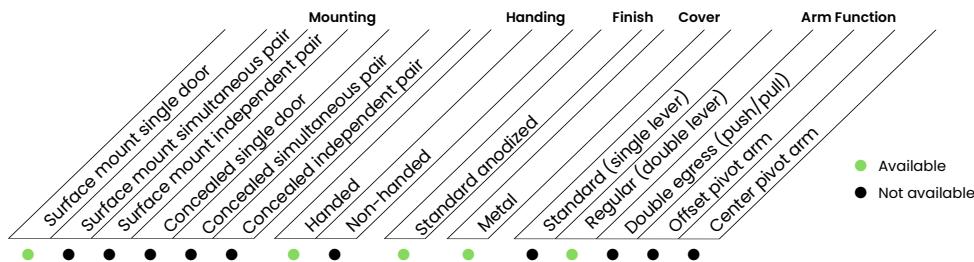
The LCN® 9540IQ Senior Swing is a heavy-duty electromechanical swing door operator. Designed for a surface mount on single door applications, the 9540IQ is paired with a regular arm for a push-side configuration.

When activated, this operator provides a smooth and seamless opening experience to accommodate those with accessibility needs or a pedestrian with their hands full. The 9540IQ can also be operated manually for regular pedestrian traffic and includes both Power Assist and Push n' Go, which can be activated for an easy, smooth manual open.

Features

Certifications	Grade 1 – ANSI A156.19, UL325, UL228, UL10C, UL1998, ADA, 100 Hour Salt Spray, CSFM, Meets BAA – Buy American Act	Fasteners	Machine screws (MS)
Handing	Handed	Mounting	Single door, surface mount, offset pivot, butt hinge, push side
Door width	<ul style="list-style-type: none"> Combined width min 33" – 48" Single door – width per leaf 33" minimum to 48" maximum 	Arms	<ul style="list-style-type: none"> Regular arm Long arm Telescoping arm Telescoping long arm
Door weight	Up to 600 lbs	Finishes/colors/ powder coat	<ul style="list-style-type: none"> 628 – Aluminum, anodized 710 – Dark bronze, anodized 711 – Matte black, anodized
Warranty	2 years	Cover	Metal cover (MC)
		Power input	115VAC single phase @60Hz, 230VAC single phase @50Hz
		Power output	2A @ 24VDC

Product Configurations

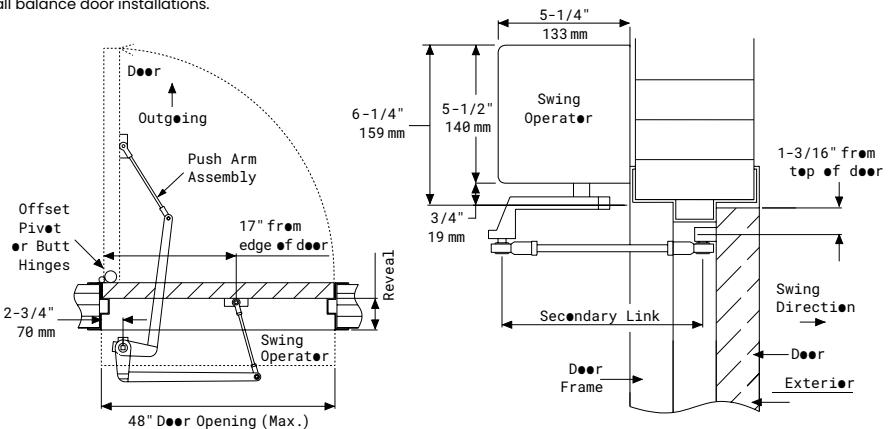


Note: Special Templates – Customized installation templates or products may be available to solve non-standard applications. Contact LCN Product Support for assistance.

Top Jamb Single Door Mounting Details

Offset Pivot/Butt Hinge, Center Pivot, Push

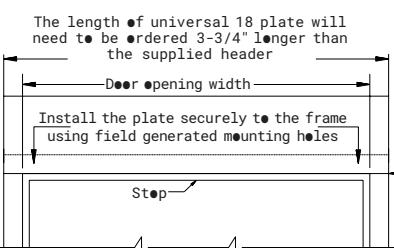
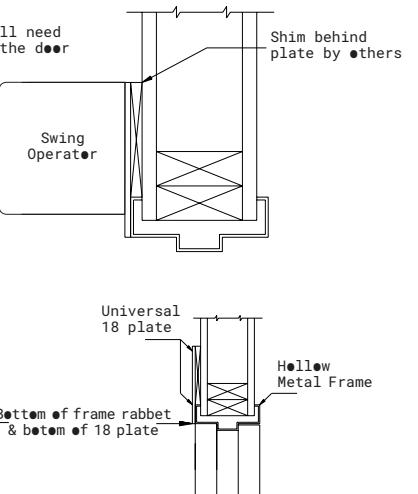
Note: Consult factory for all balance door installations.



Hollow Metal Frame

The -18 plate is $1/4"$ thick and will need to be ordered $3-3/4"$ longer than the door opening width. See illustration below.

The 18 plate is $1/4"$ thick and will need to be ordered $3-3/4"$ longer than the door opening width.



Note: Suggested installation.

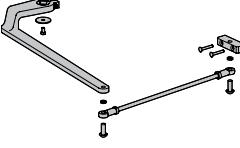
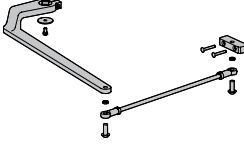
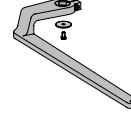
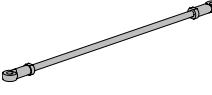
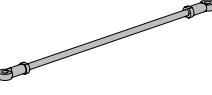
Butt hinges	Should not exceed 5" (127 mm) in width
Reveal	Push installations should not exceed 10" (254 mm) for regular arm and 20" (508 mm) for long arm
Top rail	Minimum 2-3/4" (70 mm)
Head frame	Minimum 1-3/4" (44 mm); face frame 6-1/2" (165mm) total operator clearance
Opening and closing time	<ul style="list-style-type: none"> Variable by adjustments to the electronic control box Maximum hold open time adjustable up to approximately 60 seconds
System diagram	See page 52-53 for typical system wiring and electrical data
Maximum opening	Template allows 90 degree power opening and 90 degree manual opening

Notes:

- Power Assist and Push & Go permit non-switch activation with Smart Power Boost providing additional latching force
- Electromechanical unit with microprocessor control
- 36" door width is standard. Specify 33" - 48" max
- Double door header available up to 98", specify other length 49"- 98" max
- Consult factory regarding this option
- Actuators available separately, see pages 110-129

Electromechanical Systems

Accessories

Product Selection Guide	Motor Gearbox	Control Box	Brackets	Installation Accessories	
Pneumatic Systems Auto equalizers 2610/4810/4840/7900 Series	 <p>9540IQ-3454 Standard Motor Gearbox (MGB)</p> <ul style="list-style-type: none"> Senior Swing Handed Driving mechanism for operator Provides maximum 15 lbs opening force 	 <p>9540IQ-3462 Standard Controller (CTRL)</p> <ul style="list-style-type: none"> Electronic controlling device for Senior Swing 	 <p>9540IQ-475 MGB Mounting Bracket</p> <ul style="list-style-type: none"> Mounting bracket for the motor gearbox Connects to baseplate Includes fasteners Front bracket 	 <p>9540IQ-575 Controller Mounting Brackets</p> <ul style="list-style-type: none"> Two mounting brackets for the controller box Connects to backplate Includes fasteners 	
Electrohydraulic Systems Auto equalizers 6400/4630/4640 Series	Arm			 <p>9540IQ-18 Mounting Plate</p> <ul style="list-style-type: none"> Optional mounting plate for standard hollow metal door frames Specify desired length between 33" - 101 1/2" <p>Note: The length of a universal 18 plate will need to be ordered 3-3/4" longer than the door width.</p>	
Electromechanical Systems Senior Swing 2810IQ/2850IQ/2860IQ/9530IQ/9540IQ/9550IQ/Q/9560IQ Series	 <p>9540IQ-3077 Regular Arm (REGARM)</p> <ul style="list-style-type: none"> Handed Includes 77 main arm assembly and 79 linkage assembly For reveals up to 10" 	 <p>9540IQ-3077L Long Arm (LONG)</p> <ul style="list-style-type: none"> Handed Includes 77 main arm assembly and 79LR linkage assembly For reveals up to 20" 	 <p>9540IQ-77 Main Arm</p> <ul style="list-style-type: none"> Handed Attaches to motor gearbox 	 <p>9540IQ-79 Linkage Assembly - 15"</p> <ul style="list-style-type: none"> Threaded rod attaches to door Extends from main arm 	 <p>9540IQ-79LR Linkage Assembly - 32"</p> <ul style="list-style-type: none"> Threaded long rod attaches to door Extends from main arm Used for reveal 10" to 20"
Electromechanical Systems Benchmark 9130/9140/9150 Series	Arm		Operator Housing		
Actuators and Accessories	 <p>9540IQ-3077TLS Telescoping Arm (TLS)</p> <ul style="list-style-type: none"> A regular length, double lever, non-hold open arm for push-side applications with a fully adjustable linkage assembly (no hacksaw required) For reveals up to 5" 	 <p>9540IQ-3077LNGTLS Telescoping Long Arm (LNGTLS)</p> <ul style="list-style-type: none"> An extended arm for deep reveals or other special configurations on push-side applications with a fully adjustable linkage assembly (no hacksaw required) For reveals up to 13" For extra long reveals of up to 18", use the telescoping extension part 	 <p>9540IQ-72MC Standard Cover</p> <ul style="list-style-type: none"> Single door operator cover Specify for door widths 33" - 48" 	 <p>9540IQ-72MC-DD Double Door Cover</p> <ul style="list-style-type: none"> Double door cover for single or multiple operators Specify for door widths 49" - 98" 	
Electromechanical Systems Benchmark 9130/9140/9150 Series	Operator Housing				
Actuators and Accessories	 <p>9540IQ-10 Standard Baseplate</p> <ul style="list-style-type: none"> Single door operator baseplate Specify for door widths 33" - 48" 	 <p>9540IQ-10-DD Double Door Baseplate</p> <ul style="list-style-type: none"> Double door baseplate for single or multiple operators Specify for door widths 49" - 98" 	 <p>9540IQ-163 RF Window</p> <ul style="list-style-type: none"> Cover for rectangular opening on top of the cover 		

End Cap



9540IQ-334L
Left Side End Cap
• One end cap for the left side of a metal cover



9540IQ-334R
Right Side End Cap
• One end cap for the right side of a metal cover



9540IQ-3179
Rocker Switch Assembly
• This is an exterior Off/Auto three-way rocker switch on the end cap of the metal cover. The switch is concealed from view, and is accessed by pulling the switch open from the end cap



9540IQ-163-1
End Cap Cover Insert
• This cover insert is used to fill the end cap(s) that do not contain the Rocker Switch Assembly Insert

Electromechanical Systems

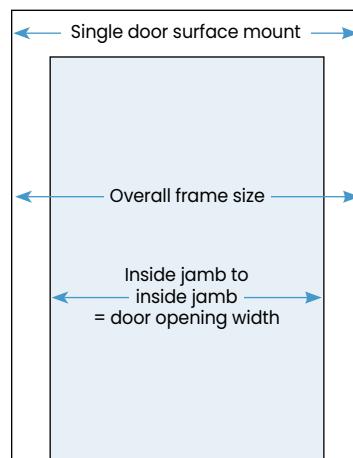
Ordering Information

How to Order a 9540IQ Series Operator		
1	Choose operator	9542IQ
2	Motor gearbox	Standard
3	Controller	Standard
4	Metal cover	COV - Single door - 33" - 48" COV2 - Double door - 48.125" - 98"
5	Specify door opening width (jamb to jamb)	33" - 98"
6	Select arm	REG - Regular arm (standard selection) LONG - Long arm TLS - Telescoping arm LNGTLS - Telescoping long arm
7	Track	LESS - No track
8	Specify handing	RH - Right hand LH - Left hand
9	Voltage	115V (standard selection) 230V
10	Spindle center	2.75 (standard selection) 12.25 SPEC
11	Select finish	628 - Aluminum, clear anodized 710 - Dark bronze, anodized 711 - Matte black, anodized
12	Rocker switch assembly	SW - Yes NS - No

Operator will be shipped with:

- Motor gearbox mounting bracket
- Controller box mounting hooks (2)
- Machine screws
- Baseplate (manufactured at specified door width)
- Cover end cap kit (one left, one right, cover insert(s), fasteners)

Measuring Door Opening Width



9550IQ Series



The LCN® 9550IQ Senior Swing is a heavy-duty electromechanical swing door operator. Designed for a surface mount on double door applications, this configuration is ideal for simultaneous double door operation and features two motor gearboxes with one controller. The 9550IQ can be mounted with either two regular arms (push), two standard arms (pull), or one of each (double egress), allowing flexibility for a variety of opening needs.

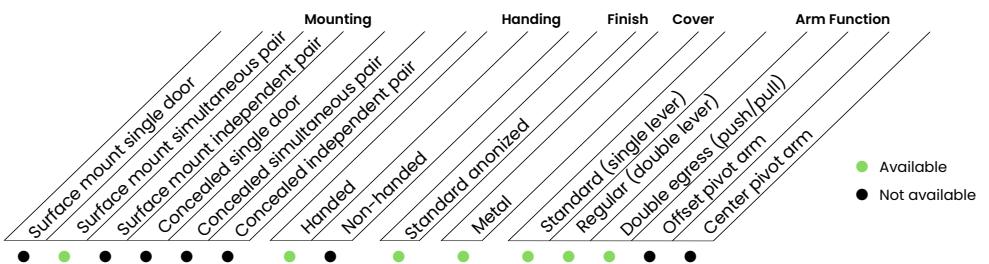
When activated, this operator provides a smooth and seamless opening experience to accommodate those with accessibility needs or a pedestrian with their hands full. The 9550IQ can also be operated manually for regular pedestrian traffic and includes both Power Assist and Push n' Go, which can be activated for an easy, smooth manual open.

Features

Certifications	Grade 1 – ANSI A156.19, UL325, UL228, UL10C, ADA, 100 Hour Salt Spray, CSFM, Meets BAA – Buy American Act
Handing	Handed
Door width	<ul style="list-style-type: none"> Minimum combined door width 52"– 98" (push) Minimum combined door width 60"– 98" (pull; double egress) Simultaneous pair – width per leaf 30" minimum – 48" maximum
Warranty	2 years
Door weight	Up to 600lbs

Fasteners	Machine screws (MS)
Mounting	Simultaneous pair, surface mount, pull side, push side, double egress
Arms	<ul style="list-style-type: none"> Standard arms (pull) Regular arms (push) Long arms (push) Telescoping arms (push) Telescoping long arms (push) Regular + standard arm (double egress) Telescoping + standard arm (double egress)
Cover	Metal cover
Finishes/colors/powder coat	<ul style="list-style-type: none"> 628 – Aluminum, anodized 710 – Dark brown, anodized 711 – Matte black, anodized
Power input	115VAC single phase @60Hz, 230VAC single phase @50Hz
Power output	2A @ 24VDC

Product Configurations



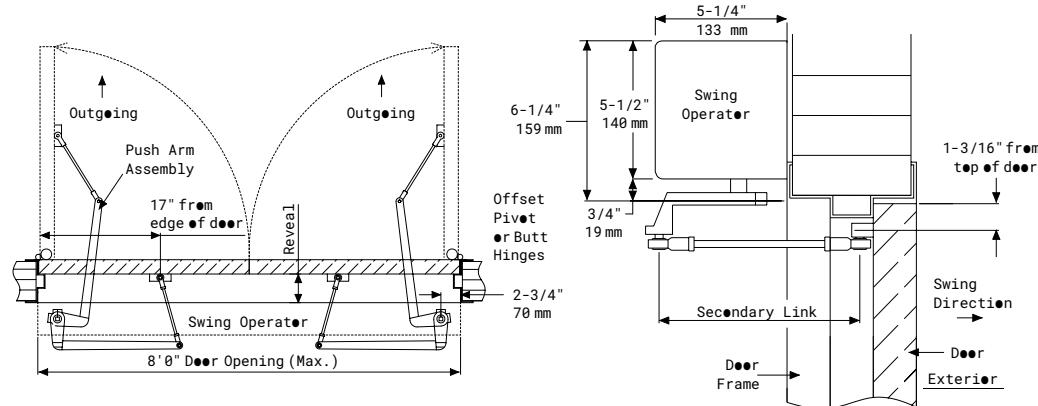
Note: Special Templates – Customized installation templates or products may be available to solve non-standard applications. Contact LCN Product Support for assistance.

Electromechanical Systems

Top Jamb Simultaneous Pair Mounting Details

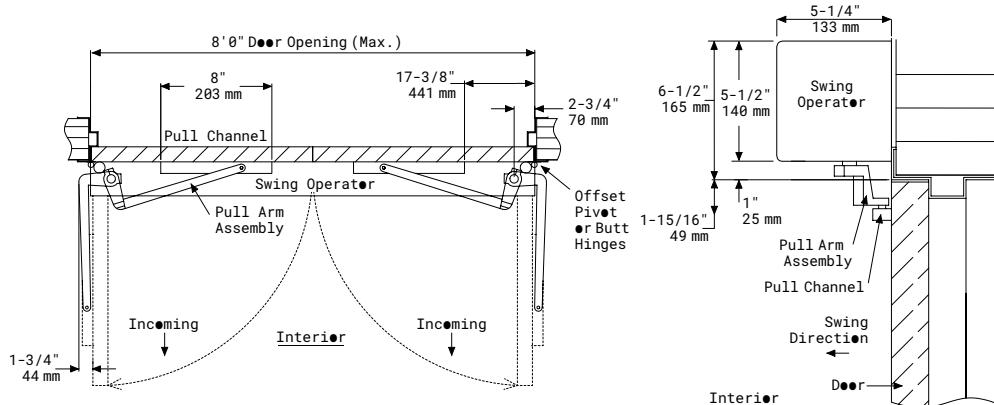
Offset Pivot/Butt Hinge, Center Pivot, Push

Note: Consult factory for all balanced door installations



Offset Pivot/Butt Hinge, Center Pivot, Pull

Note: Cannot be used with swing clear hinges, pocket pivots or balanced doors



Butt hinges	Should not exceed 5" (127 mm) in width
Reveal for push	Should not exceed 10" (254 mm) for Regular Arm and 20" (508 mm) for Long Arm
Reveal for pull	Should not exceed 4" (102 mm)
Reveal	Double egress installations should not exceed 4" (102 mm)
Top rail	Minimum 2-3/4" (70 mm)
Head frame	<ul style="list-style-type: none">• Minimum 1-3/4" (44 mm)• Face frame 6-1/2" (165mm) total operator clearance
Opening and closing time	<ul style="list-style-type: none">• Variable by adjustments to the electronic control box• Maximum hold open time adjustable up to approximately 60 seconds
System diagram	See page 52-53 for typical system wiring and electrical data
Maximum opening	Template allows 90 degree power opening and 90 degree manual opening

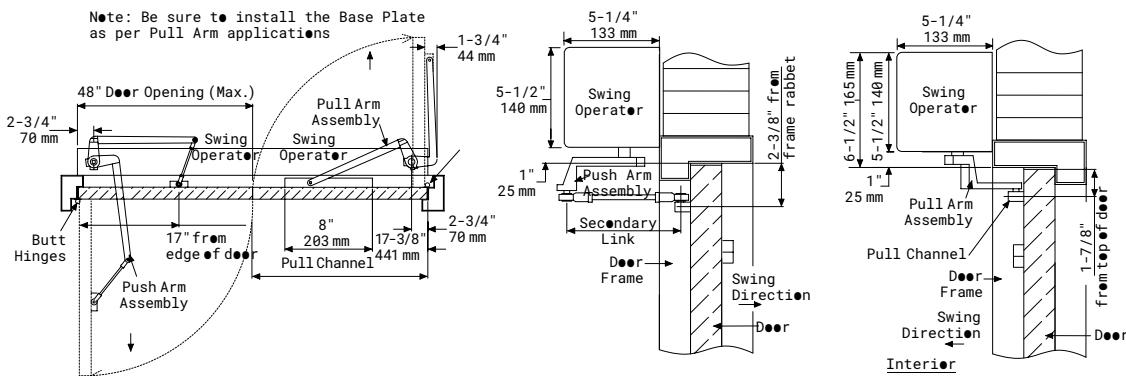
Notes

- Power Assist and Push & Go permit non-switch activation with Smart Power Boost providing additional latching force
- Electromechanical unit with microprocessor control
- 72" door width is standard. Specify other length 52" - 98" (push), specify other length 60" - 98" (pull; double egress) (consult factory regarding this option)
- Actuators available separately, see pages 110-129

Top Jamb Simultaneous Pair Mounting Details

RH Double Egress

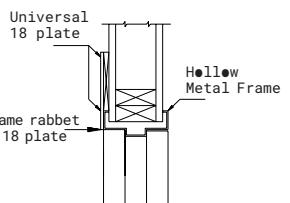
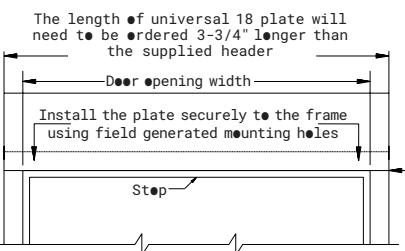
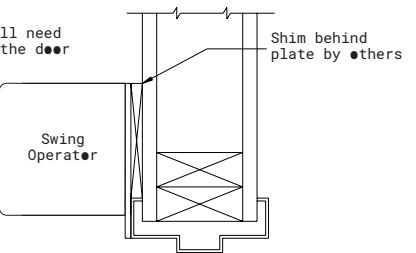
Double egress applications with safety sensors require LCN 9560IQ Series.
Note: Cannot be used with swing clear hinges, pocket pivots or balanced door.



Hollow Metal Frame

The -18 plate is 1/4" thick and will need to be ordered 3-3/4" longer than the door opening width. See illustration below.

The 18 plate is 1/4" thick and will need to be ordered 3-3/4" longer than the door opening width.



Note: Suggested installation.

Butt hinges	Should not exceed 5" (127 mm) in width
Reveal for push	Should not exceed 10" (254 mm) for regular arm and 20" (508 mm) for long arm
Reveal for pull	Should not exceed 4" (102 mm)
Reveal	Double egress installations should not exceed 4" (102 mm)
Top rail	Minimum 2-3/4" (70 mm)
Head frame	Minimum 1-3/4" (44 mm) Face frame 6-1/2" (165 mm) total operator clearance
Opening and closing time	<ul style="list-style-type: none"> Variable by adjustments to the electronic control box Maximum hold open time adjustable up to approximately 60 seconds
System diagram	See page 52-53 for typical system wiring and electrical data
Maximum opening	Template allows 90 degree power opening and 90 degree manual opening

Notes:

- Power Assist and Push & Go permit non-switch activation with Smart Power Boost providing additional latching force
- Electromechanical unit with microprocessor control
- 72" door width is standard. Specify other length 52" - 98" (push), specify other length 60" - 98" (pull; double egress) (consult factory regarding this option)
- Actuators available separately, see pages 110-129

Electromechanical Systems

Accessories

Product Selection Guide	Accessories			
Pneumatic Systems	Motor Gearbox	Control Box	Arm	
Auto equalizers 2610/4810/4840/7900 Series	<p>9550IQ-3454 Standard Motor Gearbox (MGB)</p> <ul style="list-style-type: none"> Senior Swing Handed Driving mechanism for operator Provides maximum 15 lbs opening force 	<p>9550IQ-3462 Standard Controller (CTRL)</p> <ul style="list-style-type: none"> Electronic controlling device for Senior Swing 	<p>9550IQ-982 Companion Cable</p> <ul style="list-style-type: none"> Cable that allows one control box to run two motor gear boxes For use with Senior Swing 	<p>9550IQ-3077PLCM Standard Arm Assembly with Track Roller (STDTRKARM2)</p> <ul style="list-style-type: none"> Handed Includes 3077 regular arm assembly, 3038 track, and 3034 track roller
Auto hydraulic systems 6400/4630/4640 Series	<h3>Arm</h3>			
Auto equalizers 9550IQ/9560IQ Series	<p>9550IQ-3077L Long Arm (LONG)</p> <ul style="list-style-type: none"> Handed Includes 77 main arm assembly and 79LR linkage assembly 	<p>9550IQ-3077 Regular Arm (REGARM)</p> <ul style="list-style-type: none"> Handed Includes 77 main arm assembly and 79 linkage assembly 	<p>9550IQ-3077T Standard Arm (STDTRKARM)</p> <ul style="list-style-type: none"> Handed Track roller not included 	<p>9550IQ-77 Main Arm</p> <ul style="list-style-type: none"> Handed Attaches to motor gearbox
Senior Swing 9550IQ/9560IQ Series	<p>9550IQ-79 Linkage Assembly</p> <ul style="list-style-type: none"> 15" Threaded rod attaches to door Extends from main arm 	<p>9550IQ-79LR Linkage Assembly</p> <ul style="list-style-type: none"> 32" Threaded long rod attaches to door Extends from main arm Used for reveal 10" to 20" 	<p>9550IQ-3077TLS Telescoping Arm (TLS)</p> <ul style="list-style-type: none"> A regular length, double lever, non-hold open arm for push-side applications with a fully adjustable linkage assembly (no hacksaw required) For reveals up to 5" 	<p>9550IQ-3077LNGTLS Telescoping Long Arm (LNGTLS)</p> <ul style="list-style-type: none"> An extended arm for deep reveals or other special configurations on push-side applications with a fully adjustable linkage assembly (no hacksaw required) For reveals up to 13" For extra long reveals of up to 18", use the telescoping extension part
Benchmark 9130/9140/9150 Series	<h3>Track</h3>			
Benchmark 9130/9140/9150 Series	<p>9550IQ-3038 Track</p> <ul style="list-style-type: none"> Non-handed Standard 	<p>9550IQ-73 Track End Cap</p> <ul style="list-style-type: none"> Black plastic end caps 	<p>9550IQ-3034 Roller</p> <ul style="list-style-type: none"> Quiet low friction roller assembly 	
Actuators and Accessories	<p>88</p> <p>LCNClosers.com Automatic Operators</p>			
	<p>LCN ALLEGION</p>			

Accessories

Brackets



9550IQ-475
MGB Mounting Bracket

- Mounting bracket for the motor gearbox
- Connects to baseplate
- Includes fasteners



9550IQ-575
Controller Mounting Brackets

- Two mounting brackets for the controller box
- Connects to backplate
- Includes fasteners

Installation Accessories



9550IQ-18
Mounting Plate

- Optional mounting plate for standard hollow metal door frames
- Specify desired length between 33" - 101-1/2"

Note: The length of a universal I8 plate will need to be ordered 3-3/4" longer than the door width.

Operator Housing



9550IQ-72MC-DD
Double Door Cover

- Double door cover for single or multiple operators
- Specify for door widths 52" - 98" (push)
- Specify for door widths 60" - 98" (pull, double egress)



9550IQ-10-DD
Double Door Baseplate

- Double door baseplate for single or multiple operators
- Specify for door widths 52" - 98" (push)
- Specify for door widths 60" - 98" (pull, double egress)



9550IQ-163
RF Window

- Cover for rectangular opening on top of the cover

End Cap



9550IQ-334L
Left Side End Cap

- One end cap for the left side of a metal cover



9550IQ-334R
Right Side End Cap

- One end cap for the right side of a metal cover



9550IQ-3179
Rocker Switch Assembly

- This is an exterior Off/On/Auto three-way rocker switch on the end cap of the metal cover. The switch is concealed from view, and is accessed by pulling the switch open from the end cap



9550IQ-163-1
End Cap Cover Insert

- This cover insert is used to fill the end cap(s) that do not contain the Rocker Switch Assembly Insert

Electromechanical Systems

Ordering Information

How to Order a 9550IQ Series Operator		
1	Choose operator	9553IQ
2	Motor gearboxes	Two standard
3	Controller	Standard
4	Metal cover	COV2 - Double door
5	Specify door opening width (jamb to jamb)	52" - 98" (push) 60" - 98" (pull, double egress)
6	Select arms	STDTRACKARM2 - Two standard arms - double pull REGARM2 - Two regular arms - double push LONG2 - Two long arms - double push TLS2 - Two telescoping arms - double push LNGTLS2 - Two telescoping long arms - double push REG/STD - Regular + standard arm - double egress TLS/STD - Telescoping + standard arm - double egress
7	Track	LESS - No track STD - Single standard track STD2 - Two standard tracks
8	Specify handing	RH - Right Hand LH - Left Hand Non-handed - Double push/double pull
9	Voltage	115V (standard selection) 230V
10	Spindle center	2.75 (standard selection) SPEC
11	Select finish	628 - Aluminum, clear anodized 710 - Dark bronze, anodized 711 - Matte black, anodized
12	Rocker switch assembly	SW - Yes NS - No

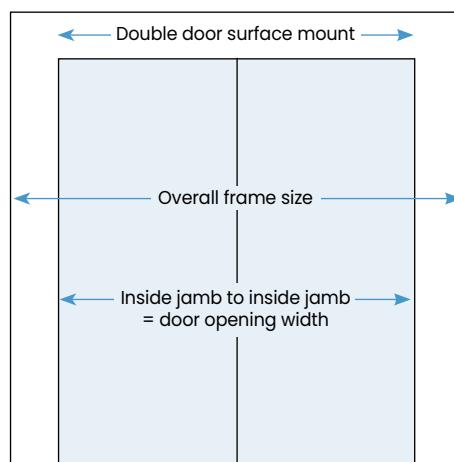
Operator will be shipped with:

- Motor gearbox mounting bracket (2)
- Controller box mounting hooks (2)
- Machine screws
- Baseplate (manufactured at specified door width)
- Cover end cap kit (one left, one right, cover insert(s), fasteners)

Electromechanical Systems	
Senior Swing 2810Q/2850Q/2860Q/9530Q/9550IQ/Q/9560IQ Series	

Actuators and Accessories	
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Measuring Door Opening Width



9560IQ Series



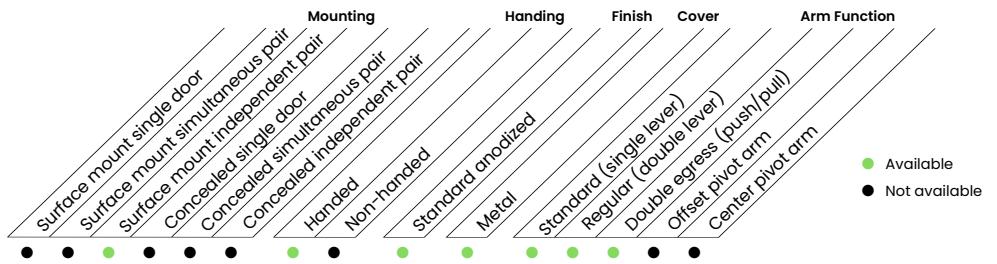
The LCN® 9560IQ Senior Swing is a heavy-duty electromechanical swing door operator. Designed for a surface mount on double door applications, this configuration is ideal for independent double door operation and features two motor gearboxes and two separate controllers. The 9560IQ can be mounted with either two regular arms (push), two standard arms (pull), or one of each (double egress), allowing flexibility for a variety of opening needs.

When activated, this operator provides a smooth and seamless opening experience to accommodate those with accessibility needs or a pedestrian with their hands full. Each of the double doors controlled by the 9560IQ can also be operated manually and independently for regular pedestrian traffic and include both Power Assist and Push n' Go, which can be activated for an easy, smooth manual open.

Features

Certifications	Grade 1 – ANSI A156.19, UL325, UL228, UL10C, ADA, 100 Hour Salt Spray, CSFM, Meets BAA – Buy American Act	Fasteners	Machine screws (MS)
Handing	Handed	Mounting	Independent pair, surface, pull, push, double egress
Warranty	2 years	Arms	Standard arms (pull) Regular arms (push) Long arms (push) Telescoping arms (push) Telescoping long arms (push) Regular + standard arm (double egress) Telescoping + standard arm (double egress)
Cover	Metal cover (MC)	Finishes/colors/ powder coat	<ul style="list-style-type: none"> 628 – Aluminum, anodized 710 – Dark bronze, anodized 711 – Matte black, anodized
Door width	Minimum combined door width: 65" – 98" Simultaneous pair – width per leaf 30" – 48"	Power input	115VAC single phase @60Hz, 230VAC single phase @50Hz
Door weight	Up to 600lbs	Power output	2A @ 24VDC

Product Configurations



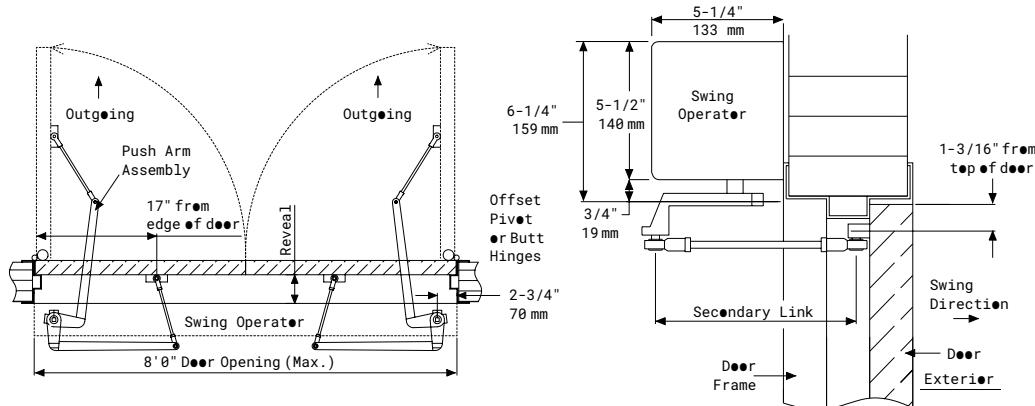
Note: Special Templates – Customized installation templates or products may be available to solve non-standard applications. Contact LCN Product Support for assistance.

Electromechanical Systems

Top Jamb Independent Pair Mounting Details

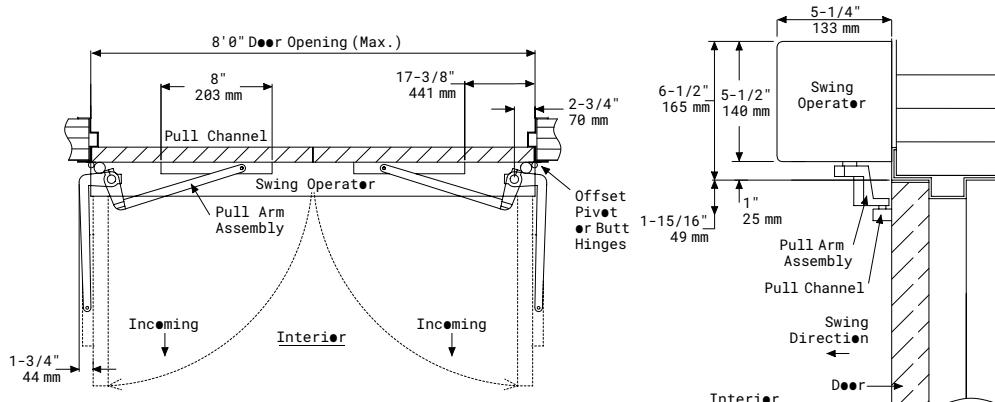
Offset Pivot/Butt Hinge, Center Pivot, Push

Note: Consult factory for all balanced door installations.



Offset Pivot/Butt Hinge, Center Pivot, Pull

Note: Cannot be used with swing clear hinges, pocket pivots or balanced doors.



Electromechanical Systems Senior Swing 2810Q/2850Q/2860Q/9530Q/9540Q/9550Q/Q/9560Q Series	<ul style="list-style-type: none"> Butt hinges: Should not exceed 5" (127 mm) in width Reveal for push: Should not exceed 10" (254 mm) for regular arm and 20" (508 mm) for long arm Reveal for pull: Should not exceed 4" (102 mm) Reveal: Double egress installations should not exceed 4" (102 mm) Top rail: Minimum 2-3/4" (70 mm) Head frame: <ul style="list-style-type: none"> Minimum 1-3/4" (44 mm) Face frame 6-1/2" (165 mm) total operator clearance Opening and closing time: <ul style="list-style-type: none"> Variable by adjustments to the electronic control box Maximum hold open time adjustable up to approximately 60 seconds System diagram: See page 52-53 for typical system wiring and electrical data Maximum opening: Template allows 90 degree power opening and 90 degree manual opening
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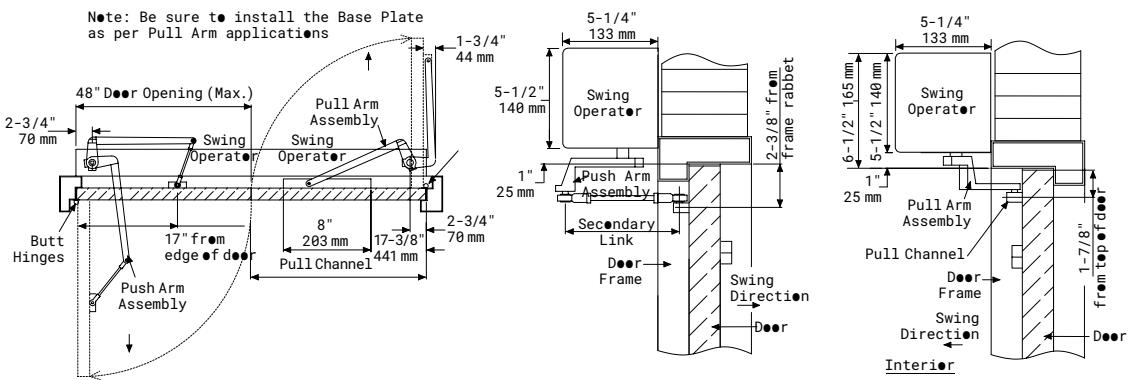
Notes:

- Push 'N Go permits non-switch activation with Smart Power Boost providing additional latching force
- Electromechanical unit with microprocessor control
- 72" door width is standard. Specify 65" - 98" max
- Pull, push, or double egress applications available
- Actuators available separately, see pages 110-129

Top Jamb Independent Pair Mounting Details

RH Double Egress

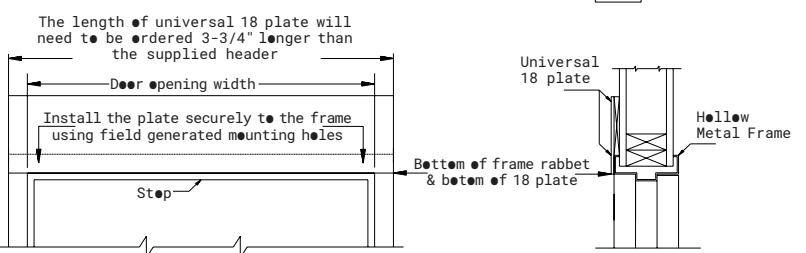
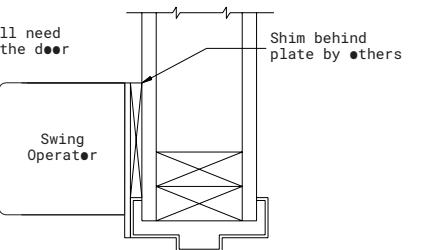
Note: Cannot be used with swing clear hinges, pocket pivots or balanced door.



Hollow Metal Frame

The -18 plate is 1/4" thick and will need to be ordered 3-3/4" longer than the door opening width. See illustration below.

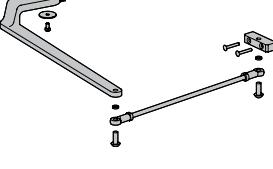
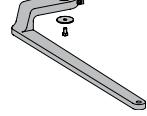
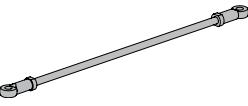
The 18 plate is 1/4" thick and will need to be ordered 3-3/4" longer than the door opening width.



Note: Suggested installation.

Electromechanical Systems

Accessories

Product Selection Guide	Motor Gearbox	Control Box	Arm
Pneumatic Systems Auto equalizers 2610/4810/4820/4840/7900 Series	 <p>9560IQ-3454 Standard Motor Gearbox (MGB)</p> <ul style="list-style-type: none"> • Senior Swing • Handed • Driving mechanism for operator • Provides maximum 15 lbs opening force 	 <p>9560IQ-3462 Standard Controller (CTRL)</p> <ul style="list-style-type: none"> • Electronic controlling device for Senior Swing 	 <p>9560IQ-3077T Standard Arm (STDTRKARM)</p> <ul style="list-style-type: none"> • Handed • Track roller not included
Electrohydraulic Systems Auto equalizers 6400/4630/4640 Series	 <p>9560IQ-3077TL Long Arm (LONG)</p> <ul style="list-style-type: none"> • Handed • Includes 77 main arm assembly and 79LR linkage assembly 	 <p>9560IQ-3077/PLCM Standard Arm Assembly with Track Roller (STDTRKARM2)</p> <ul style="list-style-type: none"> • Handed • Includes 3077 regular arm assembly, 3038 track, and 3034 track roller 	 <p>9560IQ-77 Main Arm</p> <ul style="list-style-type: none"> • Handed • Attaches to motor gearbox
Electromechanical Systems Senior Swing 95550IQ/Q/9560IQ/9560IQ Series	 <p>9560IQ-79LR Linkage Assembly</p> <ul style="list-style-type: none"> • 32" • Threaded long rod attaches to door • Extends from main arm • Used for reveal 10" to 20" 	 <p>9560IQ-3077TLS Telescoping Arm (TLS)</p> <ul style="list-style-type: none"> • A regular length, double lever, non-hold open arm for push-side applications with a fully adjustable linkage assembly (no hacksaw required) • For reveals up to 5" 	 <p>9560IQ-3077LNGTLS Telescoping Long Arm (LNGTLS)</p> <ul style="list-style-type: none"> • An extended arm for deep reveals or other special configurations on push-side applications with a fully adjustable linkage assembly (no hacksaw required) • For reveals up to 13" • For extra long reveals of up to 18", use the telescoping extension part
<h3>Track</h3>			
Electromechanical Systems Benchmark 9130/9140/9150 Series	 <p>9560IQ-3038 Track</p> <ul style="list-style-type: none"> • Non-handed • Standard 	 <p>9560IQ-73 Track End Cap</p> <ul style="list-style-type: none"> • Black plastic end caps 	 <p>9560IQ-3034 Roller</p> <ul style="list-style-type: none"> • Quiet low friction roller assembly
Actuators and Accessories	<p>94</p> <p>LCNClosers.com Automatic Operators</p>		
<p>LCN ALLEGION</p>			

Electromechanical Systems

Accessories

Brackets



9560IQ-475
MGB Mounting Bracket

- Mounting bracket for the motor gearbox
- Connects to baseplate
- Includes fasteners



9560IQ-575
Controller Mounting Brackets

- Two mounting brackets for the controller box
- Connects to backplate
- Includes fasteners

Installation Accessories



9560IQ-18
Mounting Plate

- Optional mounting plate for standard hollow metal door frames
- Specify desired length between 33" - 101-1/2"

The length of a universal 18 plate will need to be ordered 3-3/4" longer than the door width.

Operator Housing



9560IQ-72MC-DD
Double Door Cover

- Double door cover for single or multiple operators
- Specify for door widths 52" - 98" (push)
- Specify for door widths 60" - 98" (pull, double egress)



9560IQ-10-DD
Double Door Baseplate

- Double door baseplate for single or multiple operators
- Specify for door widths 52" - 98" (push)
- Specify for door widths 60" - 98" (pull, double egress)



9560IQ-163
RF Window

- Cover for rectangular opening on top of the cover

End Cap



9560IQ-334L
Left Side End Cap

- One end cap for the left side of a metal cover



9560IQ-334R
Right Side End Cap

- One end cap for the right side of a metal cover

End Cap



9560IQ-3179
Rocker Switch Assembly

- This is an exterior Off/ HO/Auto three-way rocker switch on the end cap of the metal cover. The switch is concealed from view, and is accessed by pulling the switch open from the end cap



9560IQ-163-1
End Cap Cover Insert

- This cover insert is used to fill the end cap(s) that do not contain the Rocker Switch Assembly Insert

Electromechanical Systems

Ordering Information

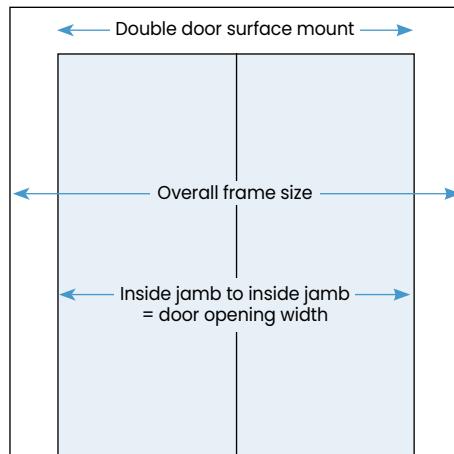
How to Order a 9560IQ Series Operator

1	Choose operator	9563IQ
2	Motor gearboxes	Two standard
3	Controllers	Two standard
4	Metal cover	COV2 - Double door
5	Specify door opening width (jamb to jamb)	65" - 98"
6	Select arm	STDTRACKARM2 - Two standard arms - double pull REG2 - Two regular arms - double push LONG2 - Two long arms - double push TLS2 - Two telescoping arms - double push LNGLTLS2 - Two telescoping long arms - double push REG/STD - Regular + standard arm - double egress TLS/STD - Telescoping + standard arm - double egress
7	Track	LESS - No track STD - Single standard track STD2 - Two standard tracks
8	Specify handing	RH - Right hand LH - Left hand Non-handed (double push/double pull)
9	Voltage	115V (standard selection) 230V
10	Spindle center	2.75 (standard selection) SPEC
11	Select finish	628 - Aluminum, clear anodized 710 - Dark bronze, anodized 711 - Matte black, anodized
12	Rocker switch assembly	SW - Yes NS - No

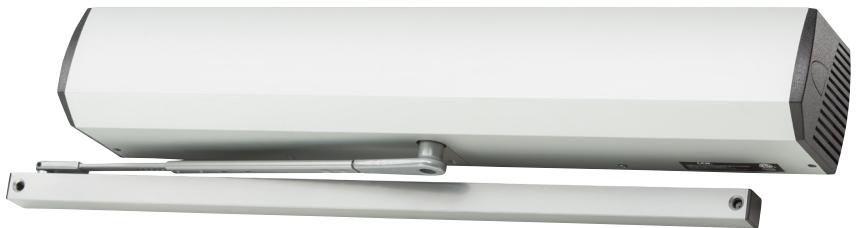
Operator will be shipped with:

- Motor gearbox mounting brackets (2)
- Controller box mounting hooks (4)
- Machine screws
- Baseplate (manufactured at specified door width)
- Cover end cap kit (one left, one right, cover insert(s), fasteners)

Measuring Door Opening Width



9130 Series

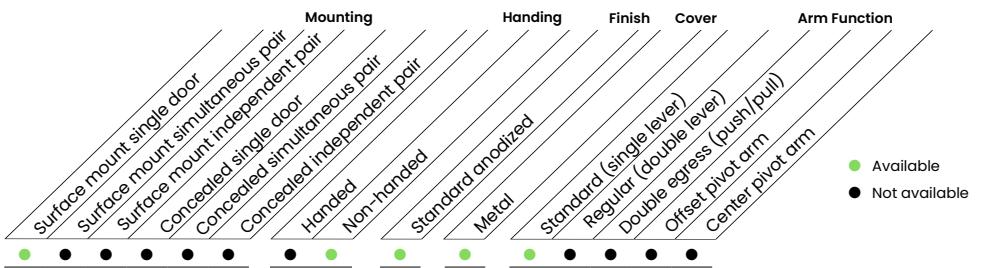


The 9130 Benchmark by LCN is an electrically powered low-energy operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for automatic opening applications that occasionally require manual opening. The Benchmark is a cost-effective solution for retrofitting an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

Features

Certifications	Grade 1 - A156.19, UL325/228, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	<ul style="list-style-type: none"> • Metal 27", standard • Metal 36", optional
Handing	Non-handed	Fasteners	Wood and Machine Screws (WMS)
Door width	<ul style="list-style-type: none"> • 30" - 48" • 30" minimum door width for 27" • 36" door width only for full length pull operator 	Mounting	Single interior door, surface mount, offset pivot/butt hinge (pull side)
Warranty	2 years	Arms	Standard arm and track
		Finishes/colors/powder coat	<ul style="list-style-type: none"> • 628 - Aluminum, Anodized • 710 - Dark brown, Anodized

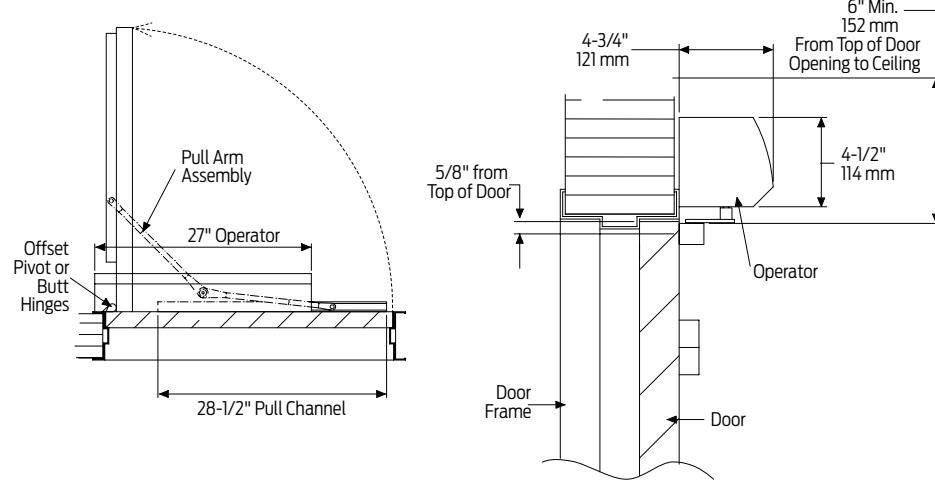
Product Configurations



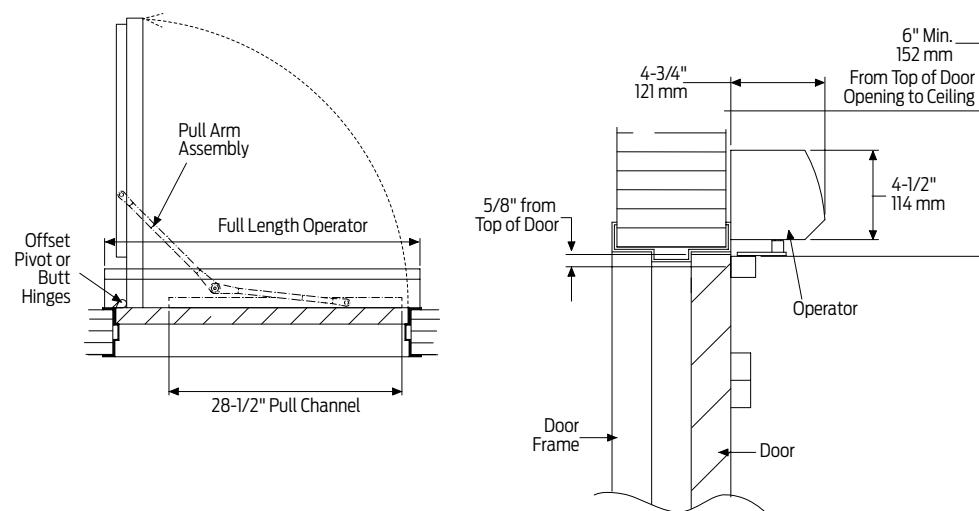
Note: Special Templates - Customized installation templates or products may be available to solve non-standard applications. Contact LCN Product Support for assistance.

Top Jamb (Single Door) Mounting Details

Offset/Butt Hinge, Center Pivot, Pull, Standard Cover



Offset/Butt Hinge, Center Pivot, Pull, Full Cover



Butt hinges	Should not exceed 5" (127 mm) in width
Reveal	Should not exceed 1/8" (3 mm)
Top rail	Minimum 2" (51 mm)
Head frame	Minimum 2" (51 mm)
Opening and closing time	<ul style="list-style-type: none">• 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 page 52-53 for typical system wiring and electrical data
Maximum opening	Template allows 90 degree power opening and 90 degree manual opening

Notes:

- Notes:
 - Push 'N Go permits non-switch activation with a microprocessor control box that ensures reliability and maintains customer settings
 - Power boost allows for increased closing force near latch
 - On/off switch is included as standard
 - All potentiometers are clearly labeled with their functions
 - LED lights indicate power to control box and motor gearbox

Electromechanical Systems

Accessories

Motor Gearbox



9130-3454S
Standard Motor Gearbox
(MGB)

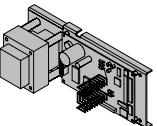
- Driving mechanism for operator (switch included)
- For 27" unit



9130-3454
Standard Motor Gearbox
(MGB) (W/O Switch)

- Driving mechanism for operator (switch not included)
- For full length 36" unit

Control Box



9130-3462
Standard Controller (120 volts)
(CTRL)

- Electronic controlling device with power supply output and power boost feature

Arm



9130-3077T
Standard Arm
(STDTRKARM)

- Non-handed
- Track roller not included



9130-3077PLCM
Standard Arm (STDTRKARM)

- Non-handed
- Standard non-handed track

Track



9130-3038
Standard Track (STDTRK)

- Non-handed
- Standard



9130-73
Track End Cap

- Black plastic

Installation Accessories

Brackets



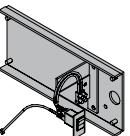
9130-3034
Roller Assembly

- Quiet low friction



9130-3018
Mounting Bracket

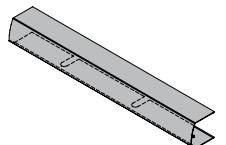
- Standard



9130-3351-2
Switch Bracket

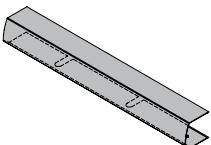
- 41" cable
- Bracket used to locate switch at end of cover on full length unit

Covers



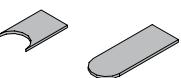
9130-72MC
Standard 27" Metal Cover (MC27)

- Non-handed
- 27"
- Extruded aluminum
- Standard



9130-72FC
Full Metal Cover 36" (FMC)

- Non-handed
- 36"
- Extruded aluminum



9130-163
Cover Insert

- Used to cover operator shaft opening (includes 2 pieces)



9130-163-1
Cover End Cap Insert

- Used to cover switch hole opening



9130-334
Cover End Cap

- Black plastic
- Includes 9130-163-1 cover and cap insert

Ordering Information

How to Order 9130 Series Operators

1	Select finish (standard anodized finish)	628 - Aluminum, clear anodized 710 - Dark brown, anodized
2	Cover	Full metal cover 36" (FMC) Optional

Operator will be shipped with:

- Standard motor gearbox
- Standard control box
- Mounting bracket
- 27" metal cover
- Standard arm (3077t)
- Standard track w/track roller
- Wood and machine screws

Table of Sizes

Door Width



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

9140 Series



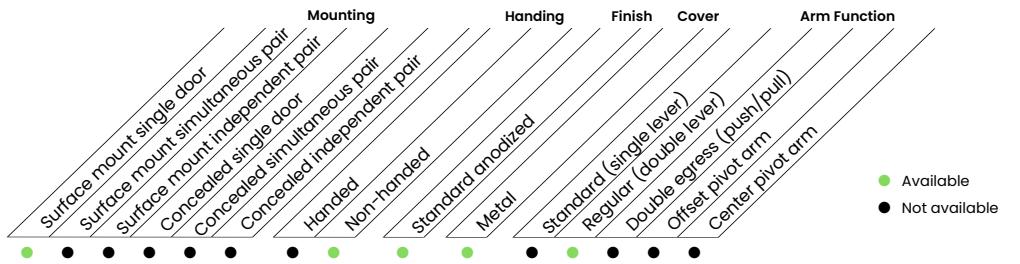
The 9140 Benchmark by LCN is an electrically powered low-energy operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for automatic opening applications that occasionally require manual opening. The Benchmark is a cost-effective solution for retrofitting an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

Features

Certifications	Grade 1 - A156.19, UL325/228, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act
Handing	Non-handed
Door width	<ul style="list-style-type: none"> • 26" - 48" • 26" minimum door width for 27" • 36" door width only for full length pull operator
Warranty	2 years

Fasteners	Wood and machine screws (WMS)
Mounting	Single interior door, surface mount, offset pivot/butt hinge (push side)
Arms	Regular arm (REGARM)
Finishes/colors/powder coat	<ul style="list-style-type: none"> • 628 - Aluminum, anodized • 710 - Dark brown, anodized

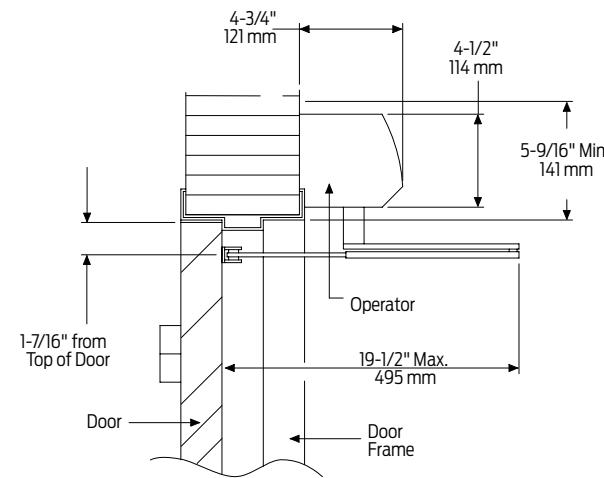
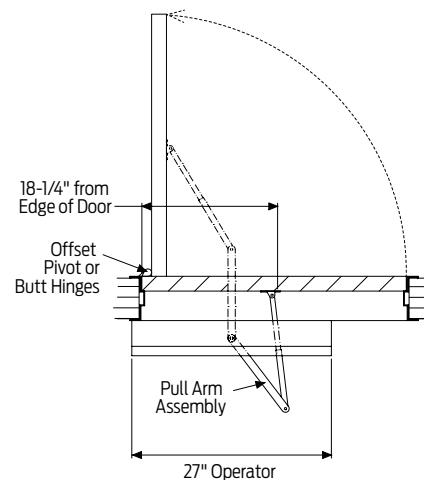
Product Configurations



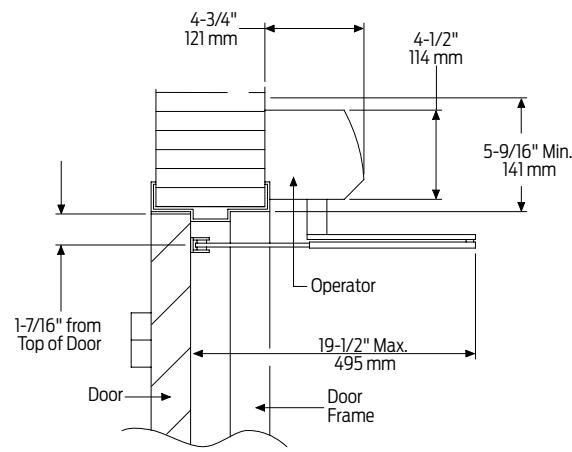
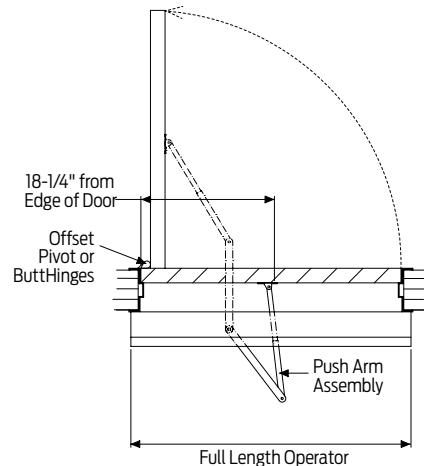
Note: Special Templates - Customized installation templates or products may be available to solve non-standard applications. Contact LCN Product Support for assistance.

Top Jamb (Single Door) Mounting Details

Offset/Butt Hinge, Center Pivot, Push, Standard Cover



Offset/Butt Hinge, Center Pivot, Push, Full Cover



Butt hinges	Should not exceed 5" (127 mm) in width
Reveal	Push installations should not exceed 6" (152 mm) for regular arm and 9-3/4" (248 mm) for long arm
Top rail	<ul style="list-style-type: none"> Minimum 2" (51 mm) Flush ceiling installation requires 5-1/4" (133 mm) minimum
Head frame	Minimum 2" (51 mm)
Opening and closing time	<ul style="list-style-type: none"> 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 page 52-53 for typical system wiring and electrical data
Maximum opening	Template allows 90 degree power opening and 90 degree manual opening

Notes:

- Push 'N Go permits non-switch activation with a microprocessor control box that ensures reliability and maintains customer settings
- Power boost allows for increased closing force near latch
- On/off switch is included as standard
- All potentiometers are clearly labeled with their functions
- LED lights indicate power to control box and motor gearbox

Electromechanical Systems

Accessories

Motor Gearbox



9140-3454S
Standard Motor Gearbox (MGB)

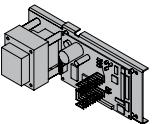
- Driving mechanism for operator (switch included)
- For 27" unit



9140-3454
Standard Motor Gearbox (MGB) (W/O Switch)

- Driving mechanism for operator (switch not included)
- For full length unit (36")

Control Box



9140-3462
Standard Controller (120 volts) (CTRL)

- Electronic controlling device with power supply output and power boost feature

Arm



9140-3077
Regular Arm (REGARM)

- Non-handed



9140-3077L
Long Arm (LONG)

- Non-handed



9140-79
Rod and Shoe

- For use with regular arm



9140-79LR
Long Rod and Shoe

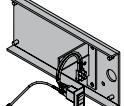
- Used with long arm, for deep reveals

Brackets



9140-3018
Mounting Bracket

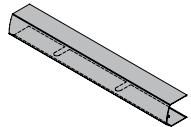
- Standard



9140-3351-1
Switch Bracket

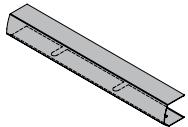
- 29" cable
- Used with a 36" door
- Used to locate switch at end of cover on full length unit

Covers



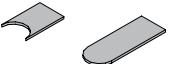
9140-72MC
Standard 27" Metal Cover (MC27)

- Non-handed
- 27"
- Extruded aluminum cover
- Standard



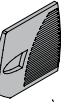
9140-72FC
Full 36" Cover (FC36)

- Non-handed
- 36"
- Extruded aluminum cover



9140-163
Cover Insert

- Used to cover operator shaft opening (includes 2 pieces)



9140-163-1
Cover End Cap Insert

- Used to cover switch hole opening



9140-334
Cover End Cap

- Black plastic
- Includes 9130-163-1 cover and cap insert

Electromechanical Systems

Ordering Information

How to Order 9140 Series Operators

1	Select finish (standard anodized finish)	628 - Aluminum, clear anodized 710 - Dark brown, anodized
2	Cover	Full metal cover 36" (FMC)
3	Arm	Long arm (LONG) (reveals 6" to 9 3/4")

Optional

Operator will be shipped with:

- Standard motor gearbox
- Standard control box
- Mounting bracket
- 27" metal cover
- Standard arm (3077t)
- Standard track w/track roller
- Wood and machine screws

Table of Sizes

Door Width



→ Indicates recommended range of door width for operator.

Note: For all Benchmark series, 30" minimum door width for 27" pull operator.
36" door width only for full length pull operator.

9150 Series



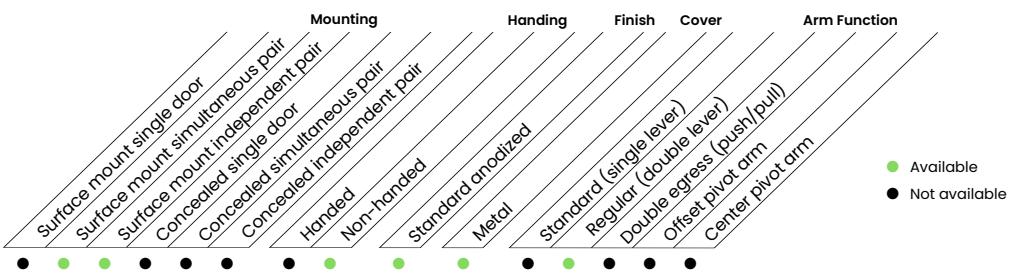
The 9150 Benchmark by LCN is an electrically powered low-energy operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for automatic opening applications that occasionally require manual opening. The Benchmark is a cost-effective solution for retrofitting an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

Features

Certifications	Grade 1 - ANSI A156.19, UL325/228, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act
Handing	Non-handed
Templating	Peel-n-stick templates - 2-3/8" x 6-3/4" mounting hole pattern
Door width	<ul style="list-style-type: none"> Minimum door width 52" - 96" 72" door width only for full length double operator
Warranty	2 years

Cover	Metal cover (MC)
Fasteners	Wood and machine screws (WMS)
Mounting	Pair of doors, surface mount, offset pivot/butt hinges (push side)
Arms	Regular arm (REGARM)
Finishes/colors/powder coat	<ul style="list-style-type: none"> 628 - Aluminum, anodized 710 - Dark brown, anodized

Product Configurations

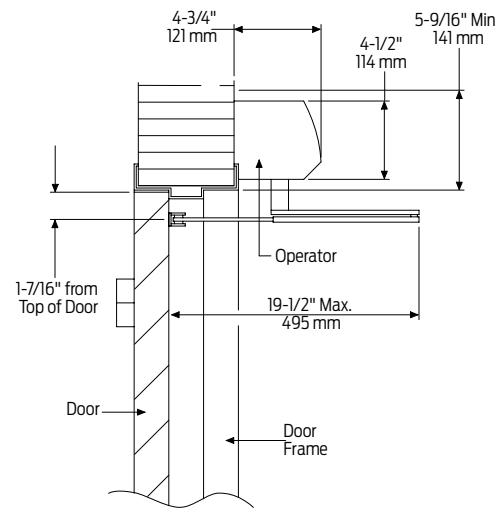
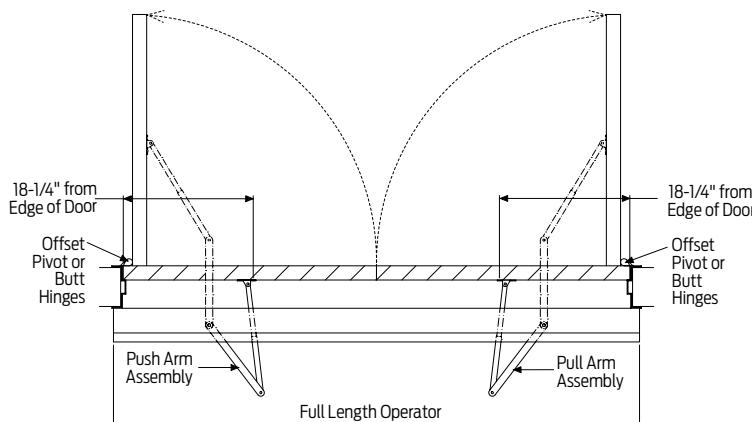


Note: Special Templates - Customized installation templates or products may be available to solve non-standard applications. Contact LCN Product Support for assistance.

Electromechanical Systems

Top Jamb, Independent/Simultaneous Pair Mounting Details

Offset Pivot/Butt Hinge, Center Pivot, Push



Butt hinges	Should not exceed 5" (127 mm) in width
Reveal	Push installations should not exceed 6" (152 mm) for regular arm and 9-3/4" (248 mm) for long arm
Top rail	<ul style="list-style-type: none"> Minimum 2" (51 mm) Flush ceiling installation requires 5-1/4" (133 mm) minimum
Head frame	Minimum 2" (51 mm)
Opening and closing time	<ul style="list-style-type: none"> Variable by adjustments to the electronic control module located on the operator assembly Maximum hold open time adjustable up to approximately 32 seconds
System diagram	See page 52-53 for typical system wiring and electrical data
Maximum opening	Template allows 90 degree power opening and 90 degree manual opening

Notes:

- Determined by wiring
- Push 'N Go permits non-switch activation with a microprocessor control box that ensures reliability and maintains customer settings
- Power boost allows for increased closing force near latch
- All potentiometers clearly labeled with their functions
- LED lights indicate power to control box and motor gearbox

Electromechanical Systems

Accessories

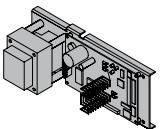
Motor Gearbox



9150-3454S
Standard Motor Gearbox (MGB)

- Driving mechanism for operator (switch included)

Control Box



9150-3462
Standard Controller (120 volts) (CTRL)

- Electronic controlling device with power supply output and power boost feature

Arm



9150-3077
Regular Arm (REGARM)
• Non-handed



9150-3077L
Long Arm (LONG)
• Non-handed



9150-79
Rod and Shoe
• For use with regular arm



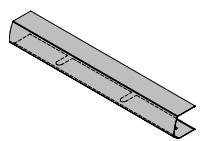
9150-79LR
Long Rod and Shoe
• Used with long arm, for deep reveals

Brackets

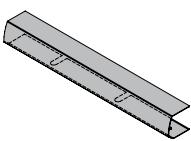


9150-3018
Mounting Bracket
• Standard

Covers



9150-72MC
Standard 72" Metal Cover (MC72)
• Non-handed
• 72"
• Extruded aluminum cover
• Standard



9150-163
Cover Insert
• Used to cover operator shaft opening (includes 2 pieces)



9150-163-1
Cover End Cap Insert
• Used to cover switch hole opening



9150-334
Cover End Cap
• Black plastic
• Includes 9130-163-1 cover and cap insert

Electromechanical Systems

Ordering Information

How to Order 9150 Series Operators

1	Select finish (standard anodized finish)	628 - Aluminum, clear anodized 710 - Dark brown, anodized
2	Arm	Long arm (LONG) (reveals 6" to 9-3/4") Optional

Operator will be shipped with:

- Standard motor gearbox (2 ea)
- Standard control box (2 ea)
- Mounting bracket (2 ea)
- 27" metal cover
- Standard arm (2 ea)
- Wood and machine screws

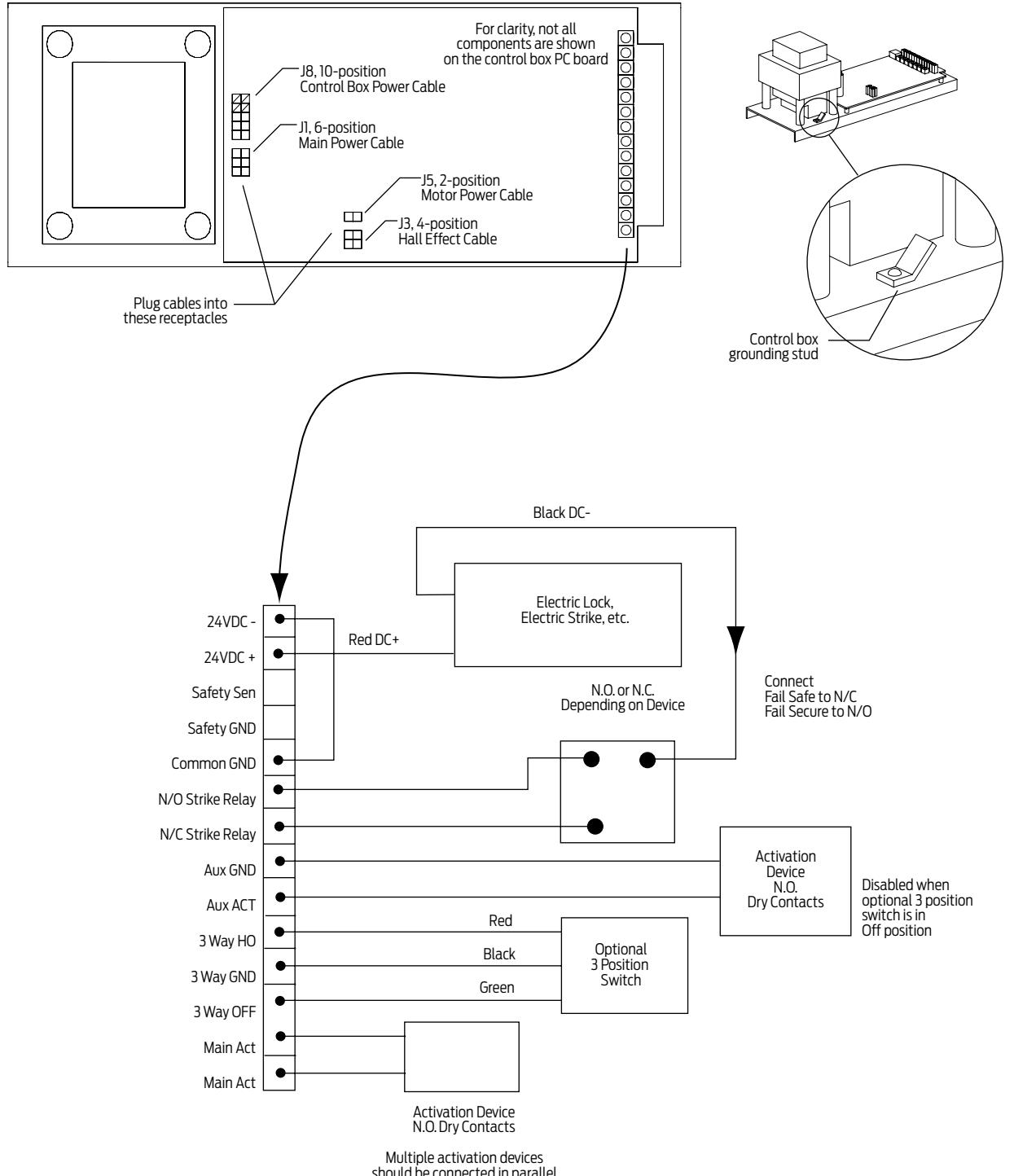
Table of Sizes

Door Width



→ Indicates recommended range of door width for operator.
Note: For 9150 Benchmark series, 72" door width only for full length push double door operator.

Benchmark Control Box Diagram



ACTUATORS AND ACCESSORIES

Actuators and Accessories

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.

4-1/2" Surface and Flush Mounts



8310-856

Hard Wired Wall Mount, Logo

- 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



8310-856P

Hard Wired Wall Mount, Blank

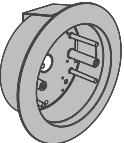
- Hard wired low voltage actuator with round, stainless steel touch plate in 4-1/2" (114mm) diameter
- Designed to mount in a flush or surface mount box (sold separately) in/on a vertical surface near the controlled door
- Optional mounting in single gang electrical box (by others)
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard



8310-856T

Hard Wired Wall Mount, Logo and Text

- Same as the 8310-856, with the added engraving of "Push to Open"



8310-868F

Flush Mount Box

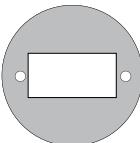
- Rugged Plastic Box, 4-1/2" Round
- Optional accessory - can be used w/ any 4-1/2" round actuator



8310-868S

Surface Mount Box

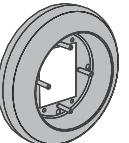
- Rugged plastic box, 4-1/2" round
- Optional accessory - can be used w/any 4-1/2" round actuator



8310-800

Weather/Trim Ring

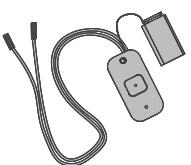
- Weather/trim ring, 4-1/2" round
- Optional accessory - must be used w/any 4-1/2" round plastic mounting box



8310-874

Escutcheon

- 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
- Not to be used with wireless function



8310-844

Transmitter, Wireless, 1 Channel, Wall Mount, 9V

- Transmitter, wireless, 1 channel, 9V battery included
- Use to convert standard wall mount actuator to wireless
- Requires 8310-865 Receiver

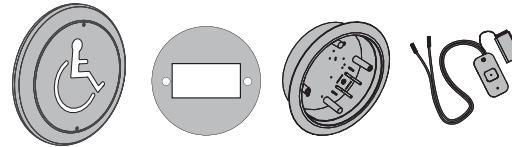


8310-865

Wireless Receiver

- Receiver, wireless, 1 channel, w/ sequencing feature
- Used in conjunction w/ wireless actuators and transmitter(s) for push plate applications

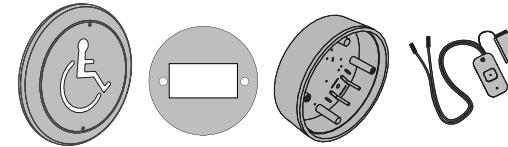
Actuators and Accessories



8310-3856WF

Wireless Actuator, Wall Mount and Flush, Logo, 4-1/2 Inch Round

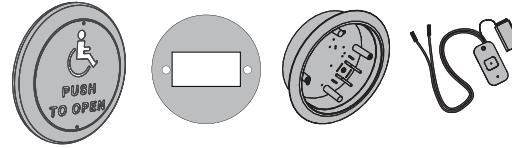
- Actuator, 4-1/2" round, logo, wireless
- Includes 8310-856 actuator, 8310-844 transmitter, 8310-868F flush box, 8310-800 weather/trim ring
- Requires 8310-865 receiver (not part of kit)



8310-3856WS

Wireless Actuator, Wall Mount and Surface, Logo, 4-1/2 Inch Round

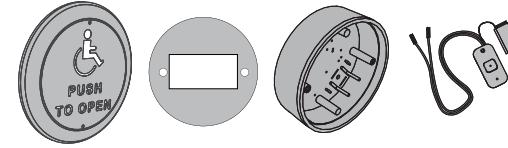
- Actuator, 4-1/2" round, logo, wireless
- Includes 8310-856 actuator, 8310-844 transmitter, 8310-868S surface box, 8310-800 weather/trim ring
- Requires 8310-865 receiver (not part of kit)



8310-3856TWF

Wireless Actuator, Wall Mount and Flush, Logo and Text, 4-1/2 Inch Round

- Actuator, 4-1/2" round, logo, text, wireless
- Includes 8310-856T actuator, 8310-844 transmitter, 8310-868F flush box, 8310-800 weather/trim ring
- Requires 8310-865 receiver (not part of kit)



8310-3856TWS

Wireless Actuator, Wall Mount and Surface, Logo and Text, 4-1/2 Inch Round

- Actuator, 4-1/2" round, logo, text, wireless
- Includes 8310-856T actuator, 8310-844 transmitter, 8310-868S surface box, 8310-800 weather/trim ring
- Requires 8310-865 receiver (not part of kit)

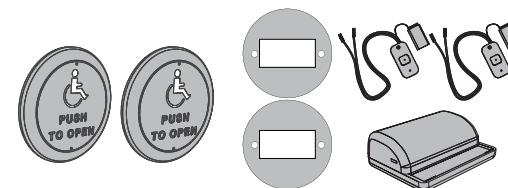


8310-3860T

Hard Wired Actuator Package, Logo and Text, 4-1/2 Inch Round

- Actuator package, 4-1/2" round
- Includes 8310-856T (2) wall mount actuator, 8310-868S surface mount box

Note: Weather/Trim Rings are sold separately.



8310-3860TW

Wireless Actuator Package, Logo and Text, 4-1/2 Inch Round

- Includes 8310-856T (2) wall mount actuator, 8310-868S (2) surface mount box, 8310-800 (2) weather/trim ring, 8310-844 (2) transmitter, 8310-865 receiver

6" Surface and Flush Mounts



8310-852

Hard Wired Wall Mount Actuator, Logo, 6 Inch Round

- 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.



8310-852WP

Wireless Wall Mount Actuator Package, Logo, 6 Inch Round

- 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
- Requires 8310-865 Receiver



8310-852T

Hard Wired Wall Mount Actuator, Logo and Text, 6 Inch Round

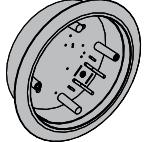
- Same as the 8310-852, with the added engraving of "Push to Open"



8310-852TWP

Wireless Wall Mount Actuator Package, Logo and Text, 6 Inch Round

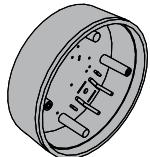
- Same as the 8310-852WP, with the added engraving of "Push to Open"



8310-869F

Flush Mount Box

- Rugged plastic box, 6" round
- Optional accessory - can be used w/any 6" round actuator



8310-869S

Surface Mount Box

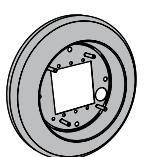
- Rugged plastic box, 6" round
- Optional accessory - can be used w/any 6" round actuator



8310-802

Weather/Trim Ring

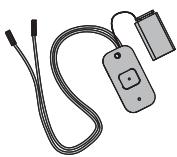
- Plastic weather/trim ring, 6" round
- Optional accessory - can be used w/any 6" round plastic mounting box



8310-876

Escutcheon

- 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
- Not to be used with wireless function



8310-844

Transmitter, wireless, 1 channel, Wall Mount, 9V

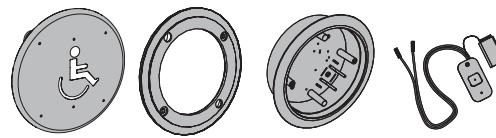
- Transmitter, Wireless, 1 Channel, 9V battery included
- Use to convert standard wall mount actuator to wireless
- Requires 8310-865 receiver



8310-865

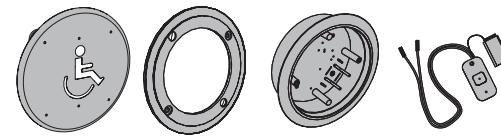
Wireless Receiver

- Receiver, wireless, 1 channel, w/ sequencing feature
- Used in conjunction w/ wireless actuators and transmitter(s) for push plate applications

Actuators and Accessories**8310-3852WF**

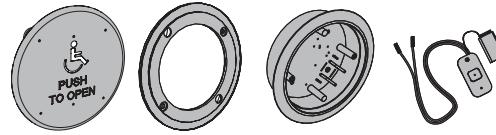
Wireless Actuator, Wall Mount and Flush, Logo, 6 Inch Round

- 6" round, logo, wireless
- Includes 8310-852 actuator, 8310-844 transmitter, 8310-869F flush box, 8310-802 weather/trim ring
- Requires 8310-865 receiver (not part of kit)

**8310-3852WS**

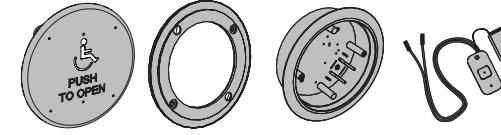
Wireless Actuator, Wall Mount and Surface, Logo, 6 Inch Round

- 6" round, logo, wireless,
- Includes 8310-852 actuator, 8310-844 transmitter, 8310-869S surface box, 8310-802 weather/trim ring
- Requires 8310-865 receiver (not part of kit)

**8310-3852TWF**

Wireless Actuator, Wall Mount and Flush, Logo and Text, 6 Inch Round

- 6" round, logo, text, wireless,
- Includes 8310-852T actuator, 8310-844 transmitter, 8310-869F flush box, 8310-802 weather/trim ring
- Requires 8310-865 receiver (not part of kit)

**8310-3852TWS**

Wireless Actuator, Wall Mount and Surface, Logo and Text, 6 Inch Round

- 6" round, logo, text, wireless
- Includes 8310-852T actuator, 8310-844 transmitter, 8310-869S surface box, 8310-802 weather/trim ring
- Requires 8310-865 receiver (not part of kit)

6" Surface and Flush Mounts

Actuators and Accessories

1-1/2" x 4-3/4" Surface and Flush Mounts



8310-818

Hard Wired Jamb Mount Actuator, Logo, 1-1/2" x 4-3/4"

- 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



8310-818T

Hard Wired Jamb Mount Actuator, Logo and Text, 1-1/2" x 4-3/4"

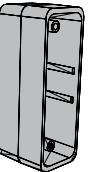
- Same as the 8310-818, with the added engraving of "Push to Open"



8310-819F

Box Only, Jamb Mount and Flush Mount, 1-1/2" x 4-3/4"

- 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



8310-819S

Box Only, Jamb Mount and Surface Mount, 1-1/2" x 4-3/4"

- 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 plastic mounting box



8310-844J

Transmitter, Wireless, 1 Channel, Jamb Mount, 3V

- 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)



8310-865

Wireless Receiver

- Receiver, wireless, 1 channel, w/sequencing feature
- Used in conjunction w/ Wireless Actuators and Transmitter(s) for push plate applications

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

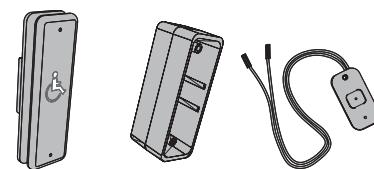
Actuators and Accessories

1-1/2" x 4-3/4" Surface and Flush Mounts

**8310-3818WF**

Wireless Actuator, Jamb Mount and Flush, Logo, 1-1/2" x 4-3/4"

- 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)

**8310-3818WS**

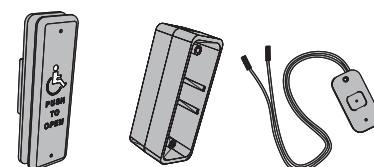
Wireless Actuator, Jamb Mount and Surface, Logo, 1-1/2" x 4-3/4"

- 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)

**8310-3818TWF**

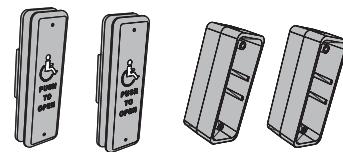
Wireless Actuator, Jamb Mount and Flush, Logo and Text, 1-1/2" x 4-3/4"

- 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)

**8310-3818WS**

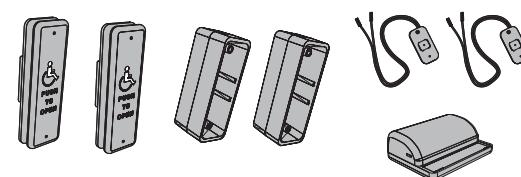
Wireless Actuator, Jamb Mount and Surface, Logo, 1-1/2" x 4-3/4"

- 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)

**8310-3822T**

Hard Wired Actuator Package, Logo and Text, 1-1/2" x 4-3/4"

- Actuator package, 1-1/2" x 4-3/4", jamb mount
- Includes 8310-818T (2) jamb mount actuator, 8310-819S (2)
- Surface mount box

**8310-3822TW**

Wireless Actuator Package, Logo and Text, 1-1/2" x 4-3/4"

- 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

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

4-3/4" Square Surface and Flush Mounts



8310-853

Hard Wired Wall Mount, Logo, 4-3/4" x 4-3/4"

- 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



8310-853WP

Wireless Wall Mount Actuator Package, Logo, 4-3/4" x 4-3/4"

- Wireless, low profile, low voltage actuator with square, 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
- Requires 8310-865 Receiver



8310-853T

Hard Wired Wall Mount, Logo and Text, 4-3/4" x 4-3/4"

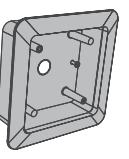
- Same as the 8310-853, with the added engraving of "Push to Open"



8310-853TWP

Wireless Wall Mount Actuator Package, Logo and Text, 4-3/4" x 4-3/4"

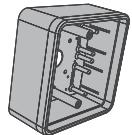
- Same as the 8310-853WP, with the added engraving of "Push to Open"



8310-867F

Flush Mounted Actuator

- Rugged plastic box, 4-3/4" square
- Optional accessory - can be used w/any 4-3/4" square actuator



8310-867S

Surface Mount Box

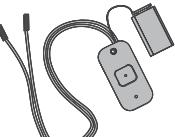
- Rugged plastic box, 4-3/4" square
- Optional accessory - can be used w/any 4-3/4" square actuator



8310-801

Weather/Trim Ring

- Plastic weather ring, 4-3/4" square
- Optional accessory - can be used w/any 4-3/4" square plastic mounting box



8310-844

Transmitter, Wireless, 1 Channel, Wall Mount, 9V

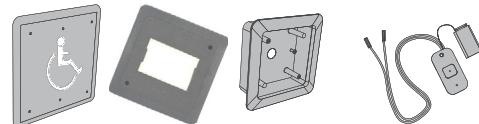
- Transmitter, wireless, 1 channel, 9V battery included
- Use to convert standard wall mount actuator to wireless
- Requires 8310-865 receiver



8310-865

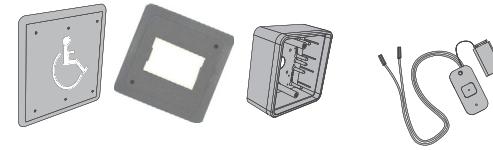
Wireless Receiver

- Receiver, wireless, 1 channel, w/ sequencing feature
- Used in conjunction w/ wireless actuators and transmitter(s) for push plate applications

Actuators and Accessories**8310-3853WF**

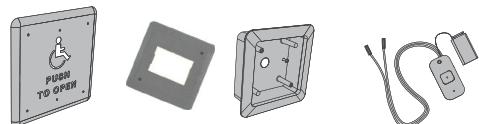
Wireless Actuator, Wall Mount and Flush, Logo, 4-3/4" x 4-3/4"

- Actuator, 4-3/4" square, logo, wireless
- Includes 8310-853, 8310-844 transmitter, 8310-867F Flush Box, 8310-801 weather/trim ring
- Requires 8310-865 receiver (not part of kit)

**8310-3853WS**

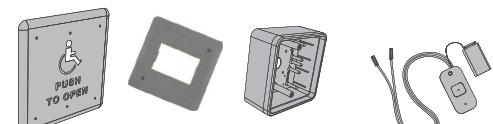
Wireless Actuator, Wall Mount and Surface, Logo, 4-3/4" x 4-3/4"

- Actuator, 4-3/4" square, logo, wireless
- Includes 8310-853, 8310-844 transmitter, 8310-867S surface box, 8310-801 weather/trim ring
- Requires 8310-865 receiver (not part of kit)

**8310-3853TWF**

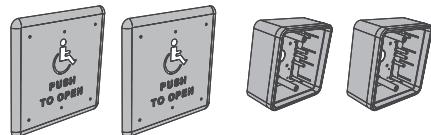
Hard Wired Actuator, Wall Mount and Flush, Logo and Text, 4-3/4" x 4-3/4"

- Actuator, 4-3/4" square, logo, text, wireless
- Includes 8310-853T, 8310-844 transmitter, 8310-867F flush box, 8310-801 weather/trim ring
- Requires 8310-865 receiver (not part of kit)

**8310-3853TWS**

Hard Wired Actuator, Wall Mount and Surface, Logo and Text, 4-3/4" x 4-3/4"

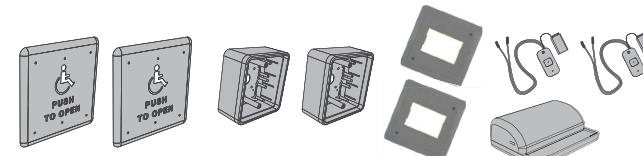
- Actuator, 4-3/4" square, logo, text, wireless
- Includes 8310-853T, 8310-844 transmitter, 8310-867S surface box, 8310-801 weather/trim ring
- Requires 8310-865 receiver (not part of kit)

**8310-3857T**

Hard Wired Actuator Package, Logo and Text, 4-3/4" x 4-3/4"

- Actuator package, 4-3/4" square
- Includes 8310-853T (2) wall mount actuator, 8310-867S (2)
- Surface mount box

Note: Weather/trim rings are sold separately

**8310-3857TW**

Wireless Actuator Package, Logo and Text, 4-3/4" x 4-3/4"

- Actuator package, 4-3/4" square
- Includes 8310-853T (2) wall mount actuator, 8310-867S (2) surface mount box, 8310-801 (2) weather/trim ring, 8310-844 (2) transmitter, 8310-865 receiver

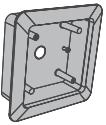
4-3/4" Dual Square Surface and Flush Mounts



8310-855

Hard Wired Wall Mount Actuator, Logo, Double Vestibule

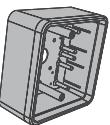
- Hardwired low voltage actuator with dual rectangle, stainless steel touch plate in 4-3/4" (121mm) square
- Engraved blue filled handicap symbol w/text, conforms to most accessibility codes
- Designed to mount in a flush or surface mount box (sold separately) in/on a vertical surface near the controlled 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



8310-867F

Flush Mounted Actuator

- Rugged plastic box, 4-3/4" square
- Optional accessory - can be used w/ any 4-3/4" square actuator



8310-867S

Surface Mount Box

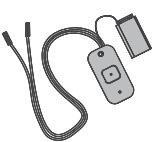
- Rugged plastic box, 4-3/4" square
- Optional accessory - can be used w/ any 4-3/4" square actuator



8310-801

Weather/Trim Ring

- Plastic weather ring, 4-3/4" square
- Optional accessory - can be used w/ any 4-3/4" square plastic mounting box



8310-844

Transmitter, Wireless, 1 Channel, Wall Mount, 9V

- Transmitter, wireless, 1 channel, 9V battery included
- Use to convert standard wall mount actuator to wireless
- Requires 8310-865 Receiver

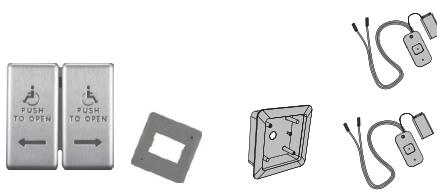


8310-865

Wireless Receiver

- Receiver, wireless, 1 channel, w/ sequencing feature
- Used in conjunction w/ wireless actuators and transmitter(s) for push plate applications

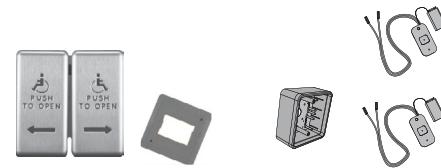
4-3/4" Dual Square Surface and Flush Mounts



8310-3855WF

**Wireless Actuator, Wall Mount and Flush, Dual Vestibule
Logo, 4-3/4" x 4-3/4"**

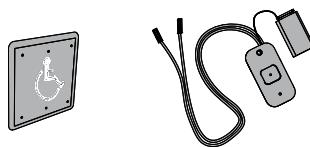
- Actuator, 4-3/4" square, logo, text, dual vestibule, wireless
- Includes 8310-855 actuator, 8310-844 transmitter (2), 8310-867F flush box, 8310-801 weather/trim ring
- Requires 8310-865 receiver (2) (not part of kit)



8310-3855WS

Wireless Actuator, Wall Mount and Surface, Dual Vestibule, Logo, 4-3/4" x 4-3/4"

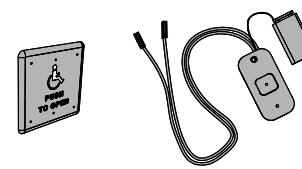
- Actuator, 4-3/4" square, logo, text, dual vestibule, wireless
- Includes 8310-855 actuator, 8310-844 transmitter (2), 8310-867S surface box, 8310-801 weather/trim ring
- Requires 8310-865 receiver (2) (not part of kit)



8310-3853WB

Wireless Bollard Actuator, Logo, 4-3/4" Square

- 4-3/4" square w/ logo, wireless actuator
- Use w/ 8310-866 Bollard (not included) - includes 8310- 853 actuator, 8310-844 transmitter
- Requires 8310-865 receiver (not part of kit)



8310-3853TWE

Wireless Bollard Actuator, Logo and Text, 4-3/4" Square

- 4-3/4" square w/ logo, wireless actuator
- Use w/ 8310-866 bollard (not included) - includes 8310-853T actuator, 8310-844 transmitter
- Requires 8310-865 receiver (not part of kit)

36" x 6" Full Length Actuators



8310-836T

Hard Wired Full Length Actuator, Logo and Text, 36" x 6"

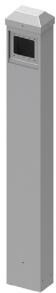
- Hardwired low voltage actuator with stainless steel touch plate with 36" x 6" activation surface
- Blue handicap symbol conforms with most accessibility codes
- Added "PUSH TO OPEN" lettering for enhanced identification
- Designed to meet California building codes and increase accessibility for wheelchair bound entrants
- Can easily be mounted to any flat surface or a bollard post



8310-836TW

Wireless Full Length Actuator, Logo and Text, 36" x 6"

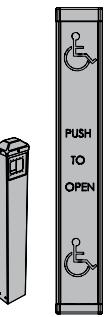
- Same as the 8310-836T with a built in wireless transmitter and 3v battery
- Use in conjunction with 8310-865 receiver (not included)



8310-866FLA

FLA Bollard Post

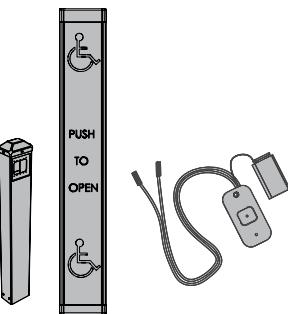
- A powder coated steel 42" x 4" x 6": bollard post, mounting base prepped for the 8310-836T
- Includes 8310-866CAP, 2 mounting screws and spacer for installation



8310-3836T

Full Length Actuator/Bollard Package

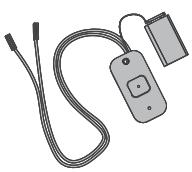
- 36" x 6" actuator with 8310-866FLA bollard for wired applications



8310-3836TW

Wireless Full Length Actuator/Bollard Package

- 36" x 6" actuator with 8310-866FLA bollard and 8310-844 wireless transmitter
- Transmitter requires 8310-865 receiver (not included)



8310-844

Transmitter, Wireless, 1 Channel, Wall Mount, 9V

- Transmitter, wireless, 1 channel, 9V battery included
- Use to convert standard wall mount actuator to wireless
- Requires 8310-865 receiver



8310-865

Wireless Receiver

- Receiver, wireless, 1 channel, w/sequencing feature
- Used in conjunction w/ wireless actuators and transmitter(s) for push plate applications

Actuators and Accessories

Touchless Actuators



8310-2210 Touchless Actuator, Battery Kit

- 1 - 12" range
- Battery powered
- Kit includes transmitters and receiver
- Kit includes transmitters and receiver and is not compatible with other wireless hardware



8310-2310 Touchless Actuator, Single Gang Battery

- 1 - 12" range
- Battery powered
- Mounts with a standard single gang box by others that must be at least 2-3/4" deep



8310-2320 Touchless Actuator, Double Gang Battery

- 1 - 12" range
- Battery powered
- Mounts with a standard single or double gang box by others that must be at least 2-3/4" deep



8310-2330 Touchless Actuator, Jamb Battery

- 1 - 12" range
- Battery powered
- Mounts without a mounting box



8310-2340 Touchless Actuator, Round Battery

- 1 - 12" range
- Battery powered
- Mounts with a standard single gang box by others that must be at least 2-3/4" deep

Touchless Wireless Transmitters and Receivers



8310-880 Wireless Receiver, 900 mHz

- Receiver, wireless
- Program instant or delayed actuation
- Used in conjunction with touchless actuators for wireless signal transmission



8310-881 900 mHz Transmitter, 1 Button

- Handheld transmitter
- 3V battery powered
- Line of sight ~500 ft



8310-882 900 mHz Transmitter, 2 Buttons

- Handheld transmitter
- 3V battery powered
- Line of sight ~500 ft



8310-883 900 mHz Transmitter, 3 Buttons

- Handheld transmitter
- 3V battery powered
- Line of sight ~500 ft



8310-884 900 mHz Transmitter, 4 Buttons

- Handheld transmitter
- 3V battery powered
- Line of sight ~500 ft



8310-885 Retrofit 900 mHz Transmitter

- Push plate conversion to touchless application
- Line of sight ~500 ft



8310-886 900 mHz Hardwired Transmitter

- 900 mHz transmitter for hardwired applications

Actuators and Accessories

Restroom Actuator Kits

The restroom actuator kits are intended for single occupancy and family restrooms. Dual color illuminated LEDs provide notification of whether the restroom is occupied or vacant. Opening/closing and locking of the door is accomplished with a push button or touchless actuator system. A logic module controls the electric strike, door operator, switches, and illumination.



8310-2410

Touchless Restroom Kit

- Advanced logic relay, 2 amp power supply, control box and transformer
- Wired touchless switch, "Wave to Lock", light ring, stainless faceplate
- Wired touchless switch, "Wave to Open", light ring, double gang stainless faceplate
- Wired touchless switch, "Wave to Open", double gang stainless faceplate
- Electric strike, Grade 2 ANSI, 3 faceplates
- Door position switch, surface



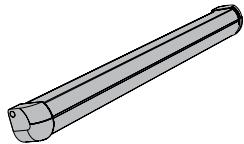
8310-2420

Push Plate Restroom Kit

- Advanced logic relay, 2 amp power supply, control box and transformer
- Combo push actuator, 2x4", "Push to Open", and "Push to Lock", illuminated, flush mount
- Push plate actuator, 4-1/2", "Push to Open", illuminated
- Electric strike, Grade 2 ANSI, 3 faceplates
- Door position switch, surface

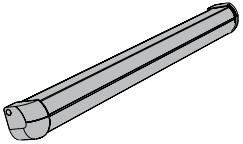
Sensors

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.



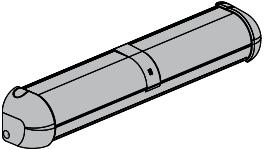
8310-804-1
(1) Door Mount Safety Sensor for Leading Edge

- Contains one active sensor module to detect obstruction(s) on leading edge of door
- Use with Senior Swing will require 8310-847 Door Mount Harness



8310-804-2
(1) Door Mount Safety Sensor for Full Face

- Contains two active sensor modules to detect obstruction(s) on full face of door
- Use with Senior Swing will require 8310-847 Door Mount Harness



8310-877
(1) Header Mount Safety Sensor

- Safety sensor, 'diffused infrared' technology
- Used to detect obstructions during door open and door closed position
- Nine selectable patterns
- 8310-859 handheld remote control required to program 8310-877 sensor from a distance
- Includes 8310-846 Harness



8310-877S
Header Mount Safety Sensor Spacer

- Required when 8310-804-1 or 8310-804-2 door mount safety sensor is mounted on the pull side with a Senior Swing
- Spacers are used w/8310-877 header mount safety sensor



8310-859
Handheld Remote Control

- Used to program 8310-877 header mount safety sensor or 8310-854 header mount motion sensor



8310-846
Header Mount Harness

- Comes with 8310-877 header mount safety sensor



8310-847
Door Mount Harness

- Used with 8310-804-1 or 8310-804-2 Door Mount Safety Sensor, must order separately.
- Used with Senior Swing only, must order separately



8310-878
Single Door Safety Package - (2) Door Mounted Safety Sensors with ANSI .10 Monitoring

- Contains two door-mounted sensors and a control hub that perform the swing door safety functions and provides the sensor monitoring required by A156.10
- All wire harnesses and mounting hardware included



8310-879
Double Door Safety Package - (4) Door Mounted Safety Sensors with ANSI .10 Monitoring

- Contains four door-mounted sensors and a control hub that perform the swing door safety functions and provides the sensor monitoring required by A156.10
- All wire harnesses and mounting hardware included

Actuators and Accessories

**8310-3881****Single Door Package - (1) Activation and (2) Safety Sensors with ANSI .10 Monitoring**

- Activation/safety sensor package, single door
- Includes 8310-854 (2) header mount activation sensor, 8310-878 monitored safety sensor kit (Used with Senior Swing only)

Alert: After November 2017, this package must be purchased for knowing-act activation requirements in A156.10 for single door.

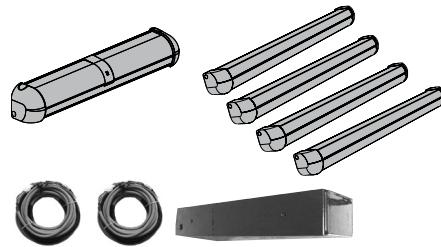
**8310-3883****Senior Swing Single Door Package - (1) Safety Sensor and (1) Concealed Door Position Switch and (1) Relay Module**

- 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 (used with Senior Swing only)

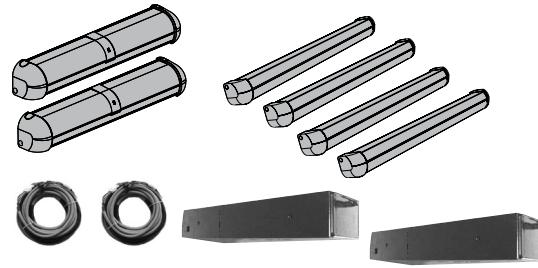
**8310-3882****Double Door Package - (2) Activation and (4) Safety Sensors with ANSI .10 Monitoring**

- Activation/safety sensor package, double door
- Includes 8310-854 (2) header mount sensor, 8310-879 monitored safety sensor kit (Used with Senior Swing only)

Alert: After November 2017, this package must be purchased for knowing-act activation requirements in A156.10 for single door.

**8310-3891****Senior Swing Simultaneous Pair Package - (1) Header Safety Sensor and (1) Spacer and (4) Door Mount Safety Sensors and (2) Harnesses**

- 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 (Used with Senior Swing only)

**8310-3892****Senior Swing Independent Pair Package - (2) Header Sensors and (2) Spacers and (4) Door Safety Sensors and (2) Harnesses**

- 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 (Used with Senior Swing only)

NOTE: Not for use with Double Egress These two sensor packages must be used on installations with knowing-act activation only

Actuators and Accessories

Sensor Accessories



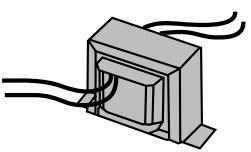
8310-805 Door Position Switch (DPS)

- Surface mount
- Used when 8310-804-1 or 8310-804-2 Door Mounted Safety Sensor and 8310-845 Relay Module is installed in conjunction w/either a electrohydraulic, pneumatic or Benchmark Automatic Operator
- Disables approach side sensor when door is closed



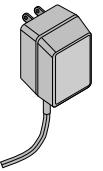
8310-805C Door Position Switch (DPS)

- Concealed
- Used when 8310-804-1 or 8310-804-2 Door Mounted Safety Sensor and 8310-845 Relay Module is installed in conjunction w/either a electrohydraulic, pneumatic or Benchmark Automatic Operator
- Disables approach side sensor when door is closed



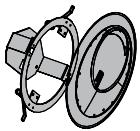
8310-824 24V Hardwired Transformer

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



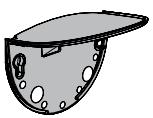
8310-824P 24V Plug In Transformer

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



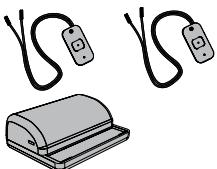
8310-854ECA Drop Ceiling Bracket

- Bracket used w/ 8310-854 header mount activation sensor
- Optional



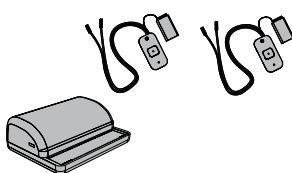
8310-854ERA Protective Cover

- Cover used w/8310-854 header mount activation sensor
- Optional



8310-3803 3v Wireless Conversion Kit Jamb Mount

- Jamb mount, 3v
- Converts standard jamb actuator to wireless version
- Includes 8310-865 receiver, 8310-844J (2) jamb mounted
- Transmitter - requires 8310-819S or 8310-819F jamb box



8310-3809 9v Wireless Conversion Kit Wall Mount

- Jamb mount, 9v
- Converts standard wall mount actuator to wireless version
- Includes 8310-865 receiver, 8310-844 (2) wall mount transmitter
- Requires surface or flush box and weather ring



8310-3889 Safety Module Kit for Pneumatic Control Box

- 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)

8310-3888 Safety Module Harness for Pneumatic Control Box

- Safety module, service part
- Safety module harness for pneumatic control box

Actuators and Accessories



8310-861
Transmitter, Wireless, 1 Channel, Handheld, 9v

- Wireless
- 1 Channel, handheld, 9v; requires 8310-865 receiver



8310-862
Transmitter, Wireless, 2 Channel, Handheld, 9v

- Wireless
- 2 Channel, handheld, 9v; requires 8310-865 receiver



8310-863
Transmitter, Wireless, 3 Channel, Handheld, 9v

- Wireless
- 3 Channel, handheld, 9v; requires 8310-865 receiver



8310-864
Transmitter, Wireless, 4 Channel, Handheld, 9v

- Wireless
- 4 Channel, handheld, 9v; requires 8310-865 receiver



8310-866
Bollard Post with Mounting Base and Actuator
Cut-Out, 42" x 4" x 6"

- A powder coated steel 42" x 4" x 6" bollard post, mounting base and 8310-866CAP
- Actuator cut out accepts 8310-3853WB or 8310-3853TWB wireless actuators 4-3/4" square hard wired actuator



8310-866CAP
Bollard Post Protective Cap

- Plastic cap, protective cover, service part for 8310-866 bollard post

Accessories



8310-806K

Key Switch

- Type, 3 position (On/Off/Hold Open)
- Optional switch used with Benchmark or 4630/4640 operators with (cs) option



8310-806R

Rocker Switch

- Type, 3 position (On/Off/Hold Open)
- Optional switch used with Benchmark or 4630/4640 operators with (cs) option



8310-807

Line Filter

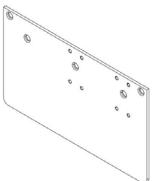
- AC, 120v, optional filter used w/ Senior Operators to reduce 'line noise'



8310-845

Programmable Relay Module

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

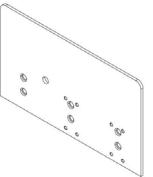


6440-18

COMPACT Drop Plate - Door Mount

Pull Side

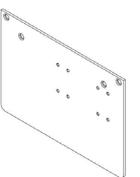
- Optional drop plate to meet aesthetic preference
- Available in ALUM 689 or DKBZ 695 finish
- 12-9/32" x 7-1/16" x 3/16"



6440-18TJ

COMPACT Drop Plate - Top Jamb

- Optional drop plate to meet aesthetic preference
- Available in ALUM 689 or DKBZ 695 finish
- 12-9/32" x 7-1/16" x 3/16"



6440-18PA

COMPACT Drop Plate - Door Mount

Parallel Arm

- Optional drop plate to meet aesthetic preference
- Available in ALUM 689 or DKBZ 695 finish
- 12-9/32" x 7-1/16" x 3/16"

Notes



Notes

About Allegion

At Allegion (NYSE: ALLE), we design and manufacture innovative security and access solutions that help keep people safe where they live, learn, work and connect. We're pioneering safety with our strong legacy of brands like CISA®, Interflex®, LCN®, Schlage®, SimonsVoss® and Von Duprin®. Our comprehensive portfolio of hardware, software and electronic solutions is sold around the world and spans residential and commercial locks, door closer and exit devices, steel doors and frames, access control and workforce productivity systems.

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