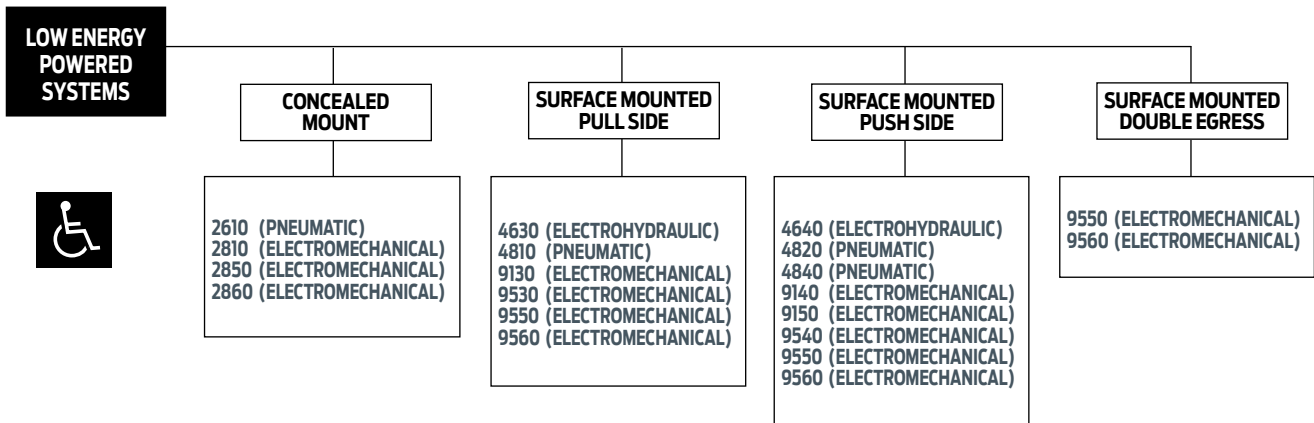


**Product selection guide**

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



## Product comparison

### Electrohydraulic/Pneumatic Product Comparison

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

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

● AVAILABLE  
○ NOT AVAILABLE

♿ Meets ADA requirements (power mode).

\* See individual series for maximum manual opening.

\*\* Switch provided for continuous Hold Open (4630 & 4640 only).

## Product comparison

### Electromechanical Product Comparison

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

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

● AVAILABLE  
○ NOT AVAILABLE

\*\*\* All electromechanical operators open to 90°.

\*\*\*\* Handed for 2850 and 2860, double egress only.

## WHAT IS THE ADA?

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

## WHAT IS THE INTENT OF ADA, TITLE III?

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

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

## HOW DOES ADA AFFECT DOORS?

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

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

### WHAT ARE THE OPENING FORCE LIMITS?

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

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

## HOW IS THE DOOR MEASURED?

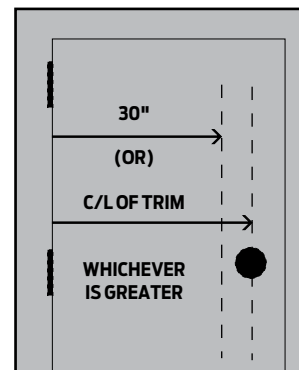
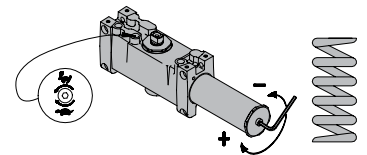
Two ADA criteria affect the door closer selection, adjustments, opening force, and time to close. Since the law does not clearly define the method of measurement, this is LCN's recommendation.

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

## FINISHES

- Available in six standard or a wide selection of optional custom powder coat finishes to blend with door and frame.
- 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 inhibiting (SRI) pre-treatment. Closers that combine the exclusive LCN powder coat finish and the SRI pre-treatment exceed the ANSI standard for corrosion resistance even further.
- Plated finishes are available as an option to accent door and frame.

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



**CAUTION!** Any manual door closer, including those certified by BHMA to conform to ANSI Standard 156.4, that is selected, installed, and adjusted based on ADA requirements may not provide sufficient power to reliably close and latch a door. Auto Equalizer systems offer an alternate solution.

## WHAT ARE THE CHOICES FOR ADA COMPLIANT DOOR CONTROLS?

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

### POWERED SYSTEMS

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

### POWERED SYSTEMS

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

#### 1. DOOR WIDTH:

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

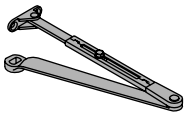
#### 2. SPRING POWER:

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

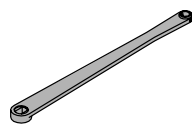
#### 3. ARM SELECTION:

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

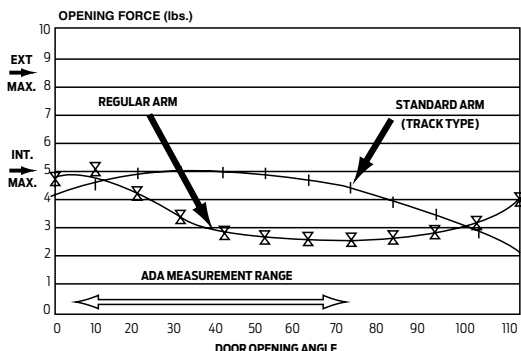
#### REGULAR ARM



#### STANDARD ARM



TYPICAL ARM POWER CURVE



• "RESERVED", TYPICALLY 8.6 POUNDS

#### 4. ADDITIONAL FORCES

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

## INFORMATION SOURCES

LCN CLOSERS PHONE 877-671-7011  
 121 W. RAILROAD AVE. FAX 800-248-1460  
 P.O. BOX 100 www.securitiestechnologies.ingersollrand.com  
 PRINCETON, IL, USA 61356-0100

## U.S. DEPARTMENT OF JUSTICE

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

## THE U.S. ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD

1111 18th Street N.W., Suite 501, Washington, D.C. 20036  
 (800) 872-2253

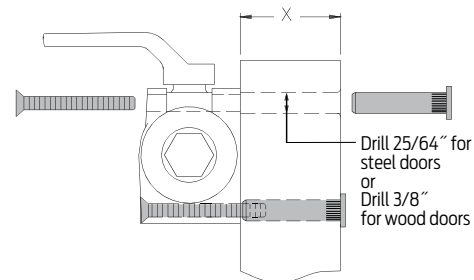
## AMERICAN NATIONAL STANDARDS INSTITUTE

11 West 42nd Street, New York, N.Y. 10036  
 (212) 642-4900

- ANSI A117.1 Providing Accessibility and Usability for Physically Handicapped People
- ANSI A156.4 for Door Controls - Closers
- ANSI A156.19 Power Assist and Low Energy Power Operated Doors

## ELECTROHYDRAULIC & PNEUMATIC FASTENERS

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



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

## ELECTROMECHANICAL FASTENERS

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

## Low Energy Operators

The basic design concept for all LCN power operator systems is door control of both the opening and closing motion of the door. Our designs allow the system to be easily retrofitted into existing doors and frames as well as new construction. A basic LCN electrohydraulic/pneumatic system consists of a power operator based on a heavy duty LCN 4040 Series door closer and peripheral actuators. Our electromechanical automatic operators utilize a motor gearbox and a control box to perform the opening and closing function. LCN offers a choice of either electrohydraulic, electromechanical or pneumatic low energy automatic operators.

### APPLICATIONS

- Electrohydraulic and pneumatic systems are used primarily for manual opening with available push button automatic opening.
- Electromechanical systems are used primarily for automatic openings.
- For dedicated handicap access.
- Stand alone or integrated into larger multi-door systems.
- Surface and concealed mountings.
- Installation accessories available for unusual conditions.
- **CAUTION!** For exterior doors exceeding 3'0" wide by 7'0" tall, interior doors exceeding 4'0" wide by 8'0" tall, or any door exceeding 225 pounds, consult factory before specifying or installing LCN electrohydraulic or pneumatic automatic operators.
- **CAUTION!** For exterior doors exceeding 4'0" wide by 7'0" tall, interior doors exceeding 4'0" wide by 8'0" tall, or any door exceeding 200 pounds, consult factory before specifying or installing LCN Electromechanical automatic operators.

### A156.19 SYSTEM DESIGN PARAMETERS

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

### COMMON SYSTEM FEATURES

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

### WARRANTY

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

### MAINTENANCE

- Operators mounted according to the LCN installation instructions require no periodic maintenance or adjustments.
- Periodic visual inspections are recommended.

## ELECTRIC AUTO EQUALIZER SYSTEMS

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

## STANDARDS, LISTINGS & APPROVALS

- UL listed for Fire Door Operator (GUJY) and Door Operator System (+DDR) 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

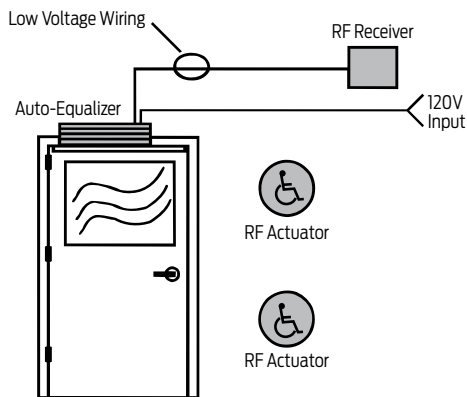
- 2 year limited warranty. See General Information Section for complete details.

## MAINTENANCE

- Operators mounted according to the LCN installation instructions require no periodic maintenance or adjustments.
- Periodic visual inspections are recommended.
- No service contracts.

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

## SINGLE DOOR SYSTEMS



### SINGLE DOOR SYSTEM (WIRELESS)

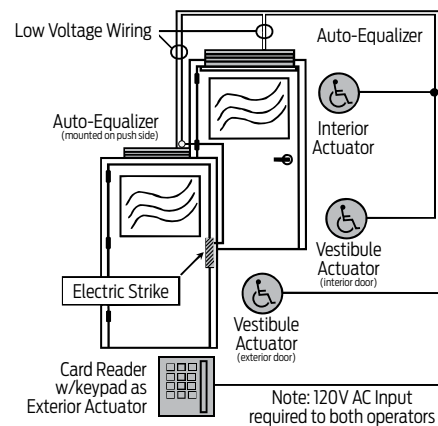
- An Interior Door
- No guide rails or safety devices
- Free Swinging (or Dogged) Door

#### 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 No.	Description
	1	4631	Auto Equalizer
	2	8310-3856WS	Wireless Actuators
	1	8310-865	Wireless Receiver

## VESTIBULE ENTRY OPERATION



### VESTIBULE ENTRY SYSTEM (WIRED)

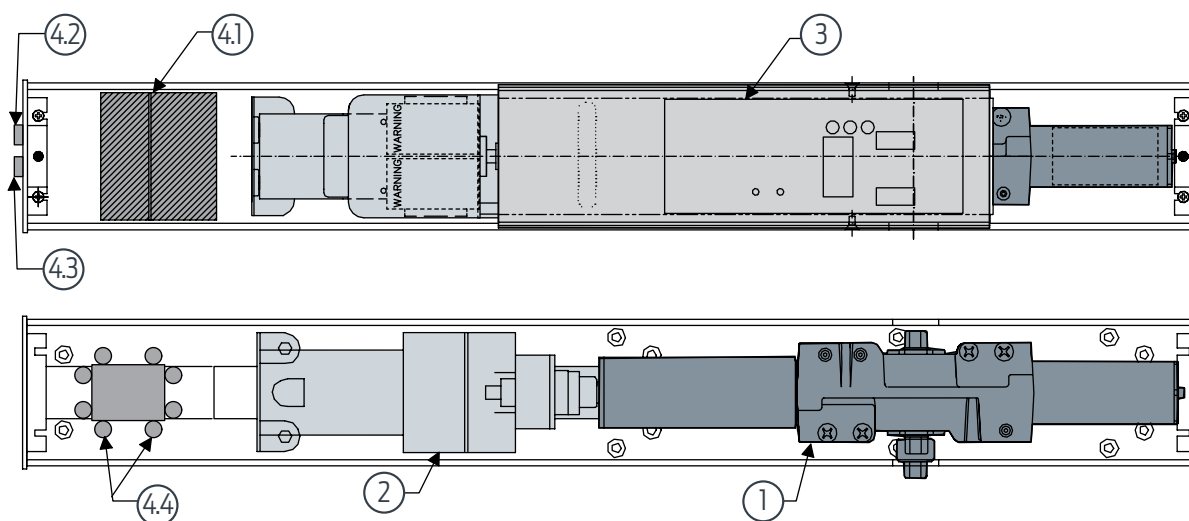
- Exterior & Vestibule doors
- Sequential Operation
- No guide rails or safety devices
- Controlled Access, Free Egress

#### How It Works:

- This installation provides both accessibility and security for building occupants
- The Auto Equalizer controller module provides both the power and coordination for card reader and electric strike applications
- A built-in delay allows the strike to release before the door begins to open
- Two interconnected Auto Equalizers provide sequential operation in both directions
- Vestibule actuators allow single door ingress/egress from the vestibule as needed

*NOTE: An EL device requires a separate power supply. If not actuated, the Auto Equalizer functions as a full featured door closer*

Bill of Materials:	Qty.	Part No.	Description
	1	4642	Auto Equalizer (exterior)
	1	4631	Auto Equalizer (interior)
	3	8310-856	Wall Plate Actuators
			Other products from Von Duprin and Locknetics



### 1 - DOOR CLOSER ASSEMBLY

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

### 2 - ELECTRIC MOTOR/CLUTCH ASSEMBLY

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

### 3 - DIGITAL CONTROLLER MODULE

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

### 4.X - FIELD WIRING

#### 4.1

- Input power; 120V AC @ 1.5 amperes
- On-board, low voltage power supply provides both 12V and 24V DC @ 1.0 ampere (maximum combined load) for LCN actuators, RF receivers, and electric strikes or magnetic locks
- 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

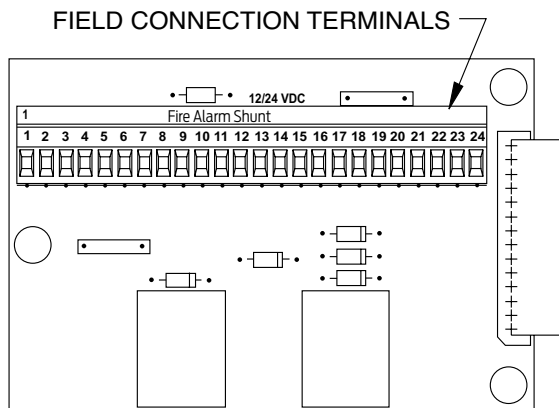
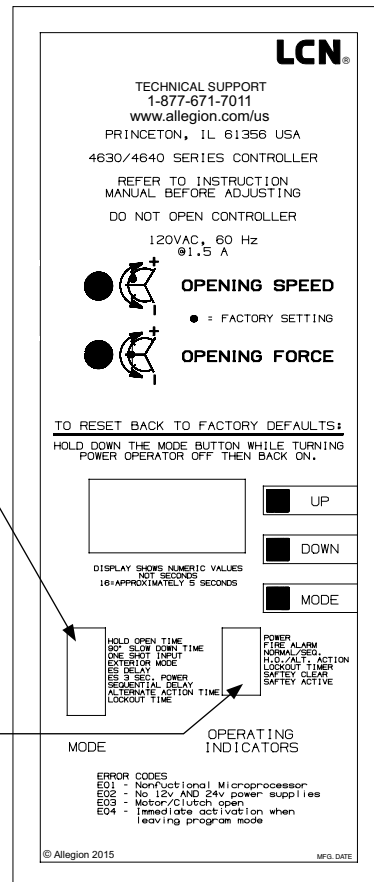
- Hold Open Switch

#### 4.4

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



LCN DIGITAL CONTROL BOX	
<b>Opening Speed Adjustment</b>	Limited to a minimum of 3 seconds to backcheck (approx. 70°)
<b>Opening Force Adjustment</b>	Maximum of 15 lb-f to stop door swing
<b>Time Display</b>	Displays numeric value relating to timing adjustments (16 = approx. 5 seconds)
<b>Mode Indicator</b>	Indicates programming mode currently being displayed
<b>Up Button</b>	Increases time or changes from OFF to ON when programming
<b>Down Button</b>	Decreases time or changes from OFF to ON when programming
<b>Mode Button</b>	Advances through programming setups on Mode Indicator
<b>Operating Indicators</b>	Displays operating information about internal functions and external hardware



**LCN LOW VOLTAGE (CLASS 2 NEC) ELECTRICAL CONNECTIONS**

Function	Terminal
Actuator - Normal Input (N.O.)	16 & 17 or 18 & 19
Actuator - Sequential Input (N.O.)	8 & 19
Actuator - Alternate Action (N.O.)	15 & 17
Actuator - Continuous (N.O.)	6 & 17
Sequential Output	9
Stop Side Safety (N.O.)	19 & 20
Swing Side Safety (N.O.)	19 & 21
Fire Alarm Contact (N.C.)	13 & 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 & 24V DC Negative*	2, 4, 13, 17, & 19
12V DC Positive*	5 & 7
24V DC Positive*	1 & 3

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

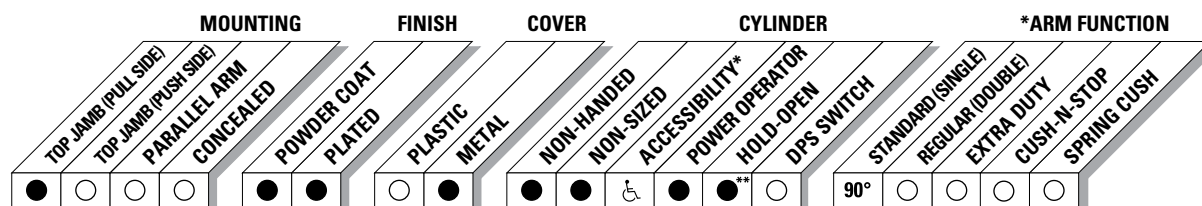


The 4630 AUTO EQUALIZER™ is LCN's SMART & RELIABLE electrically powered low-energy power operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally required automatic opening.

<b>Certifications</b>	Grade 1 - ANSI A117.1, A156.19, UL 10C, UL 325/228, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Cover</b>	Metal, standard
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-1/2" Diameter Piston</li> <li>■ 3/4" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Fasteners</b>	Wood and machine screws
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Top jamb (Pull Side)
<b>Handing</b>	Non-Handed	<b>Arms</b>	Standard single lever arm and track
<b>Size</b>	Adjustable Spring Size 1-4	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Aluminum (689)</li> <li>■ Statuary Bronze (690)</li> <li>■ Light Bronze (691)</li> <li>■ Black (693)</li> <li>■ Dark Bronze (695)</li> <li>■ Brass (696)</li> <li>■ Custom colors optional</li> </ul>
<b>Warranty</b>	2 years		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes*</li> </ul> <p><i>*End caps are black</i></p>

**Special  
Templates**

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



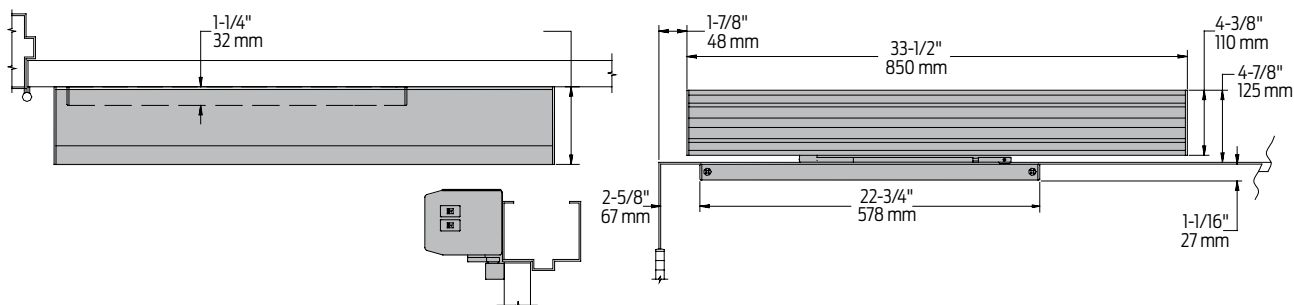
● AVAILABLE  
○ NOT AVAILABLE

♿ Meets ADA requirements (power mode).  
\* See individual series for maximum manual opening.  
\*\* Switch provided for continuous hold open (4630 only).

# 4630 Series Auto Equalizer

## Mounting details

### Top Jamb (Pull Side) Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended
<b>Reveal</b>	Should not exceed 1/8" (3 mm)
<b>Head Frame</b>	Minimum 2" (51 mm)
<b>Top Rail</b>	Minimum 1-1/8" (29 mm)
<b>Opening Time and Force</b>	<ul style="list-style-type: none"> <li>Variable by adjustments to the electronic control module located on the operator assembly</li> <li>Maximum hold open time adjustable up to approximately five minutes</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section pages 35 for typical system wiring and pages 37-38 for electrical data
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>Templating allows 90° power opening and 170° manual opening</li> <li>Please note that many track style door closers are capable of allowing 180° of door swing</li> <li>Track style closers are at their weakest closing force at 180°</li> <li>Consult factory for applications where exterior or large/heavy door must swing 180°</li> </ul>

#### Notes:

- Actuators are sold separately, see pages 115-131
- Comes with a digital control box utilizing a 4040 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

**Cylinders**



**4631-3971**  
Cast Iron Cylinder Assembly

- Non-handed
- Standard



**4631-3071**  
Cast Iron Cylinder Assembly

- 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

- 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)
- Standard

**Cover**



**4630-72MC**  
Metal Cover

- Non-handed
- Standard

**Track**



**4630-3038**  
Standard Track

- Non-handed
- Will not accept hold open clip or bumper assembly
- Standard

**Arm**



**4630-3077T**  
Standard Arm

- Non-handed
- Track roller not included with arm

**Installation Accessories**



**4630-3034**  
Track Roller

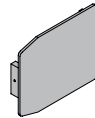
- Quiet low friction roller assembly
- Shoulder dimension "X" = 1/8" (3mm)

### Installation Accessories



**4630-334**  
Switch End Cap

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



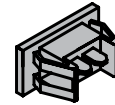
**4630-334-2**  
Blank End Cap

- Black powder coat only



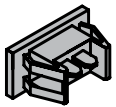
**4630-334CS**  
Switch End Cap

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



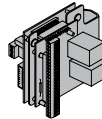
**4630-3179-1**  
On/Off Switch Assembly

- 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



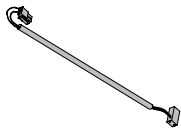
**4630-3454**  
Motor/Clutch Assembly

- A geared assembly in an LCN power 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



**4630-3498-2**  
AC Power Cable

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



**4630-3498-1**  
Ribbon Cable Connector

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

### How-to-order 4630 Series closers

#### Specify finish

- Standard Powder Coat \_\_\_\_\_  
Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass

### Closer options

#### Cylinder Assembly

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

#### Finishes

- Custom Powder Coat (RAL) \_\_\_\_\_
- Plated Finish, US \_\_\_\_\_

#### Screw pack

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

#### Special template

- ST- \_\_\_\_\_

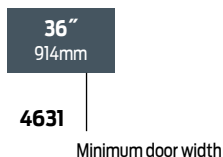
#### Closer will be shipped with:

- Standard cylinder
- Standard metal cover
- Standard arm
- Track roller
- Standard track
- Wood and machine screw pack  
unless options listed below are selected

### 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



→ Indicates recommended range of door width for closer size.

NOTE: Minimum door width 36" (914 mm).

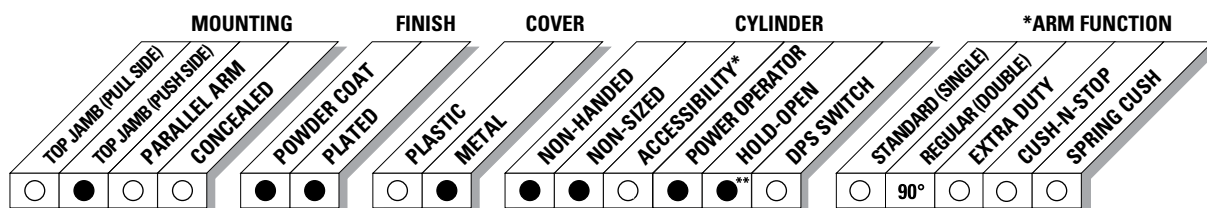


The 4640 AUTO EQUALIZER™ is LCN's SMART & RELIABLE electrically powered low-energy power operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

<b>Certifications</b>	Grade 1 - ANSI A117.1, A156.19, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Cover</b>	Metal, standard
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-1/2" Diameter Piston</li> <li>■ 3/4" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Fasteners</b>	Wood and machine screws
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Top jamb (Push Side)
<b>Handing</b>	Non-Handed	<b>Arms</b>	<ul style="list-style-type: none"> <li>■ Regular arm, standard</li> <li>■ Long arm, optional</li> </ul>
<b>Size</b>	Adjustable Spring Size 2-5	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Aluminum (689)</li> <li>■ Statuary Bronze (690)</li> <li>■ Light Bronze (691)</li> <li>■ Black (693)</li> <li>■ Dark Bronze (695)</li> <li>■ Brass (696)</li> <li>■ Custom colors optional</li> </ul>
<b>Warranty</b>	2 years		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes*</li> </ul> <p><i>*End caps are black</i></p>

**Special  
Templates**

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



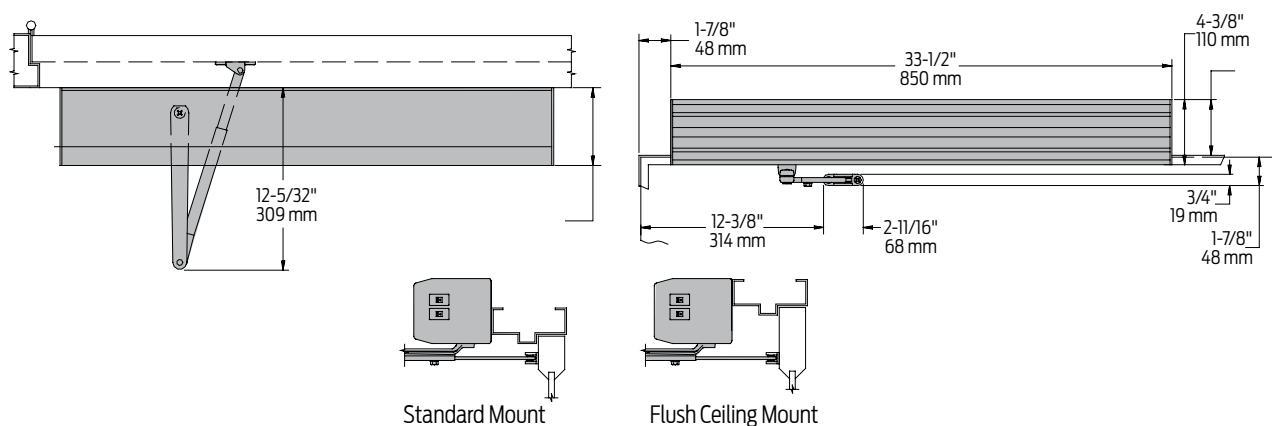
● AVAILABLE  
○ NOT AVAILABLE

♿ Meets ADA requirements (power mode).  
\* See individual series for maximum manual opening.  
\*\* Switch provided for continuous hold open (4640 only).

# 4640 Series Auto Equalizer

## Mounting details

### Top Jamb (Push Side) Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended
<b>Reveal</b>	<ul style="list-style-type: none"> <li>4-1/2" (114 mm) allows up to 90° power opening and 100° manual opening</li> <li>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</li> </ul>
<b>Head Frame</b>	Minimum 1-3/4" (44 mm). The standard mounting plate is also used to meet flush ceiling conditions
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Minimum 1-3/4" (44 mm)</li> <li>Flush ceiling installation requires 3-3/4" (95 mm) minimum</li> </ul>
<b>Opening Time and Force</b>	<ul style="list-style-type: none"> <li>Variable by adjustments to the electronic control module located on the operator assembly</li> <li>Maximum hold open time adjustable up to approximately five minutes</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 35 for typical system wiring and pages 37-38 for electrical data
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>Templating allows 90° power opening and 100° manual opening</li> <li>Consult factory for all pivot mounted installations</li> </ul>

#### Notes:

- Actuators are sold separately, see pages 115-131
- Comes with a digital control box utilizing a 4040 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
- 4030 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.



**Cylinders**



**4642-3971  
Cast Iron Cylinder Assembly**

- Non-handed
- Standard



**4642-3071  
Cast Iron Cylinder Assembly**

- 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**

- 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)
- Standard

**Cover**



**4640-72MC  
Metal Cover**

- Non-handed
- Standard

**Arms**



**4640-3077  
Regular Arm**

- Non-handed



**4640-3077L  
Long Arm**

- Includes LONG ROD AND SHOE, 4640-79LR for deep reveals



**4640-79  
Rod & Shoe**

- For use with regular arm



**4640-79LR  
Long Rod & Shoe**

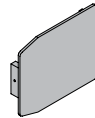
- Used for long arm with deep reveals

### 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



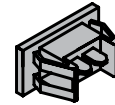
**4640-334-2**  
Blank End Cap

- Black powder coat only



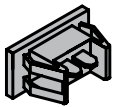
**4640-334CS**  
Switch End Cap

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



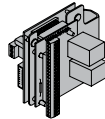
**4640-3179-1**  
On/Off Switch Assembly

- 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



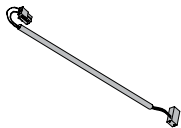
**4640-3454**  
Motor/Clutch Assembly

- A geared assembly in an LCN power 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



**4640-3498-2**  
AC Power Cable

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



**4640-3498-1**  
Ribbon Cable Connector

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

**How-to-order 4640 Series closers**

**Specify finish**

- Standard Powder Coat \_\_\_\_\_  
Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass

**Closer options**

**Cylinder Assembly**

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

**Finishes**

- Custom Powder Coat (RAL) \_\_\_\_\_
- Plated Finish, US \_\_\_\_\_

**Arm**

- Long (LONG)

**Screw pack**

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

**Special template**

- ST- \_\_\_\_\_

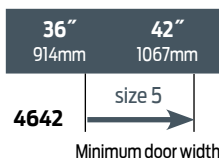
**Closer will be shipped with:**

- Standard cylinder
- Standard metal cover
- Regular arm
- Wood and machine screw pack  
unless options listed below are selected

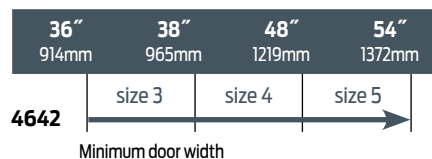
**Table of sizes**

- 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**



**Interior door width**



NOTE: Minimum door width 36" (914 mm).