

# UNDER CONSTRUCTION



**LCN**<sup>®</sup>

Door  
controls

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## **Concealed closers**

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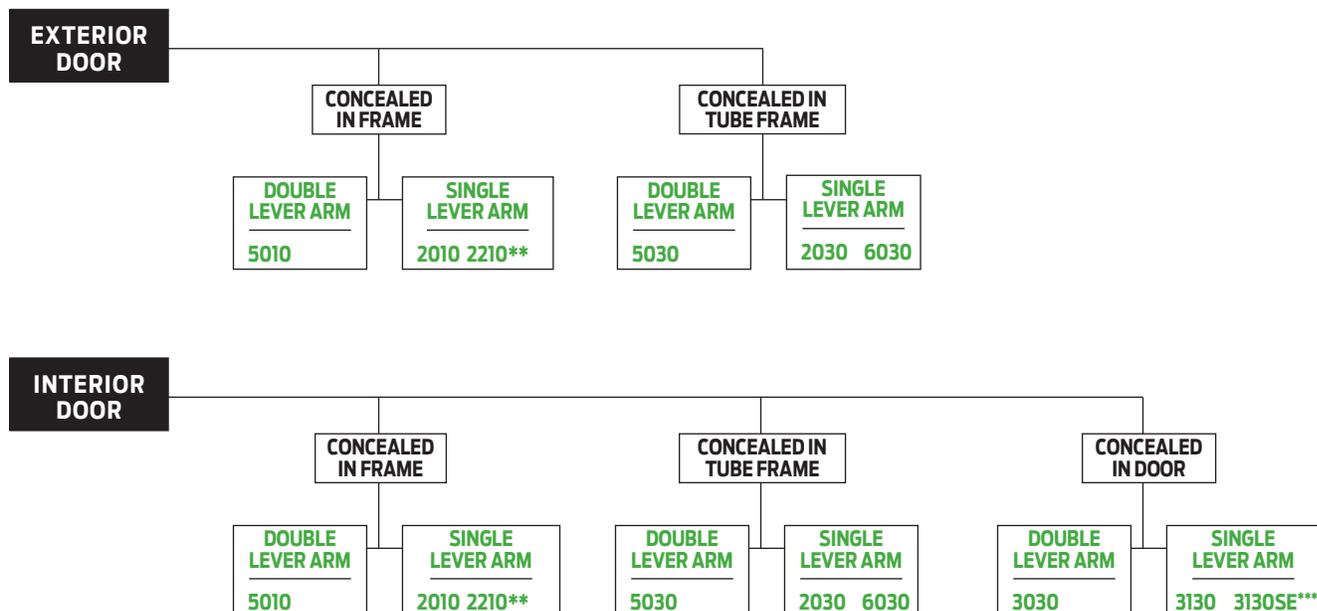
[4310 HSA Series](#)

[4410 HSA Series](#)

[SEH Series](#)

## Product selection guide

The concealed LCN closers feature a modern design for concealment in either the head frame or top rail of the door. This guide is based on the desired mounting of the closer.



\*\* INDICATES HIGH SECURITY CLOSER, DOOR POSITION SWITCH OPTIONAL. REFER TO HIGH SECURITY SECTION OF THE CATALOG.

\*\*\* INDICATES FIRE LIFE SAFETY CLOSER. REFER TO FIRE LIFE SAFETY SECTION.

## Product comparison

This chart shows a basic comparison of LCN concealed closers. Refer to the specific closer chapter for complete details.

CLOSER SERIES	CONCEALED MOUNTING			FINISH		CYLINDER				ARM		*ARM FUNCTION		
	IN FRAME	IN 1-3/4" TUBE	IN DOOR	POWDER COAT	PLATED	HANDED	SIZED	ACCESSIBILITY	DELAYED ACTION	CONCEALED	EXPOSED	STANDARD (SINGLE)	REGULAR (DOUBLE)	HOLD-OPEN
2010	●	○	○	●	●	●	●	♿	○	●	○	180°	○	110°
2030	○	●	○	●	●	●	●	♿	○	●	○	180°	○	110°
3030	○	○	●	●	●	●	●	♿	○	○	●	○	180°	140°
3130	○	○	●	●	●	●	●	♿	○	●	○	140°	○	100°
5010	●	○	○	●	●	●	●	♿	●	○	●	○	180°	100°
5030	○	●	○	●	●	●	●	♿	○	○	●	○	180°	100°
6030	○	○	○	●	●	○	●	♿	○	●	○	95°	○	95°

● AVAILABLE  
○ NOT AVAILABLE

♿ Closer available with less than 5.0 lbs. opening force on 36" door.

\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.

## Concealed closer series

### APPLICATIONS

- For aluminum, hollow metal, or wood doors and frames.
- Can be used with hinge or pivot mounted door.
- Closers for 4" or minimum 1-3/4" head frame or 4" top rail.
- Mounting clips for wood frames and other installation accessories available for unusual conditions.
- For concealed in door closers consult factory for installations with pivots.

### FEATURES COMMON TO CONCEALED CLOSERS

- Mountings for head frame or door top rail.
- Handed for right or left swinging doors. (except 6030)
- Closers to meet ADA reduced opening force requirements.
- Adjustable hydraulic backcheck cushions opening swing prior to 90°.
- Separate regulation of general closing speed and latching speed.
- Joints in arm and shoe adapt to uneven trim. (for double lever arms)

### DESIGN ASSISTANCE

LCN has been providing reliable solutions to unique door control problems since 1925. Design and specification assistance are only a phone call away. Contact LCN for assistance or technical information at **877-671-7011** or **FAX 800-248-1460 (Order Entry)**, Fax **815-879-1495** for Product Support.

### WARRANTY

15 year limited warranty. See General Information Section for complete warranty details.

### SPECIFICATIONS

Refer to "SPECIFICATIONS" section for suggested architectural specifications.

### MATERIALS

(Closers concealed in the door or frame)

- High strength **cast iron** cylinder.
- **Forged steel** main arms (except 6030).
- One piece **forged steel** piston.
- **All weather fluid** in overhead concealed models performs to temperature ranges from 120°F (49°C) to -30°F (-35°C) without any seasonal adjustment.
- **High efficiency, full complement**, low friction bearings.
- Tamper resistant regulating screws.
- Full rack and pinion hydraulic action.
- Quiet, low friction track and roller combination for all single lever (standard) arm closers.

### 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. (SRI not available with plated finishes)

### LISTINGS & APPROVALS

UL listed for self-closing doors without hold-open under "SWINGING DOOR CLOSERS" (GVEV) file R 1943.

Tested and certified under ANSI Standard A156.4. Consult factory for details.

Consult factory for other listings such as; cUL, California State Fire Marshal, Bureau of Standards and Appeals.

### POSITIVE PRESSURE

LCN closers have been certified for three hours by UL to be in compliance with UL 10 C. Contact LCN for specific details on door closer fire ratings.

### FASTENERS

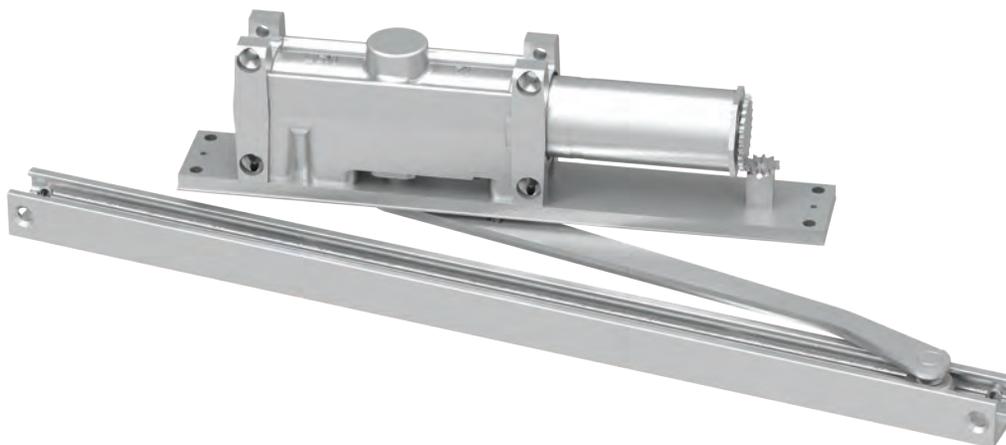
Standard WOOD and MACHINE SCREW (WMS) pack contains phillips head wood and machine screws to install the closer.

TORX machine screws are available for some closers.

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

### MAINTENANCE

Closers mounted according to LCN installation instructions require no periodic maintenance or adjustments.

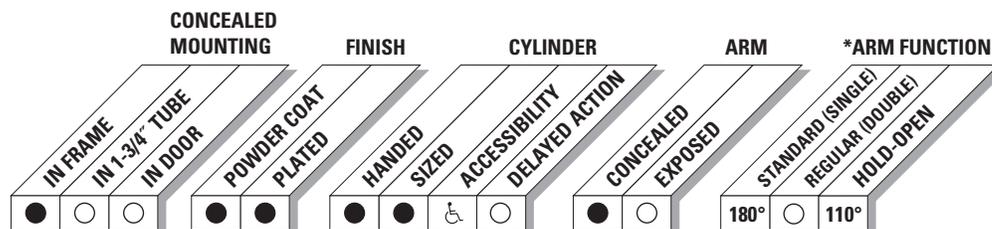


The concealed 2010 Series is a heavy duty closer designed to provide complete concealment. The single lever arm and roller assembly provide smooth, quiet door control and the choice of finishes and track functions meet virtually all architectural requirements.

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10 C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Wood and Machine Screw Pack
<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>■ 11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Mounting</b>	Concealed (in frame); aluminum frame requires minimum 4" x 4" (102 mm) tube
<b>Fluid</b>	All Weather Fluid	<b>Arms</b>	Standard arm and track
<b>Handing</b>	Handed	<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>Size</b>	Sized 1-6		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
<b>Warranty</b>	15 years		

**Special Templates**

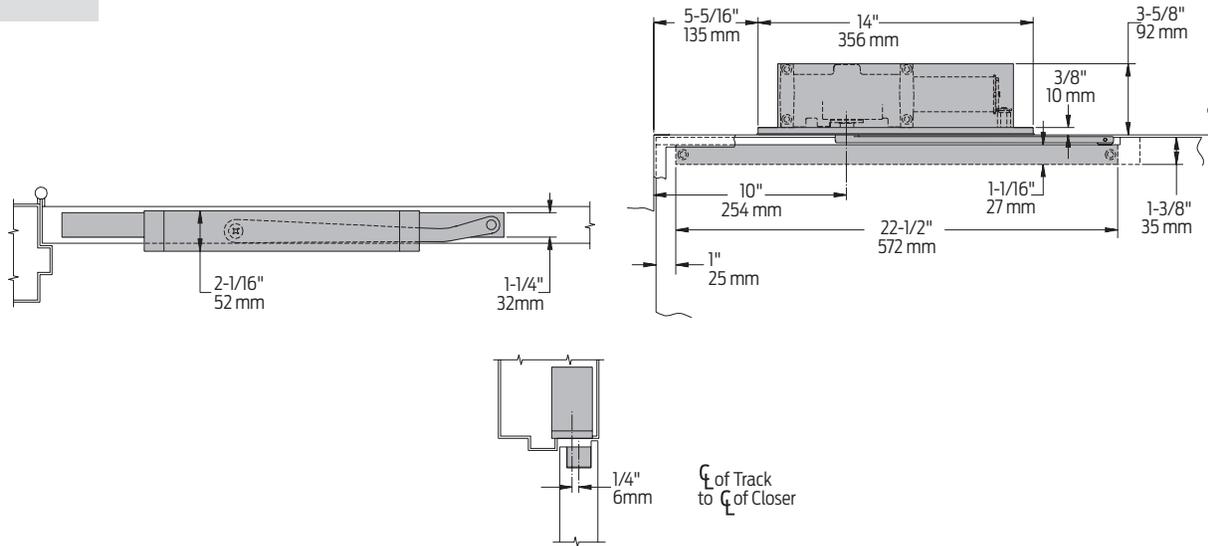
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



● AVAILABLE  
○ NOT AVAILABLE

♿ Closer available with less than 5.0 lbs. opening force on 36" door.

\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	<ul style="list-style-type: none"> <li>Recommended where a door cannot swing 180°</li> <li>Optional track bumper assembly assists backcheck in cushioning the opening swing of the door (not intended to replace an auxiliary stop).</li> </ul>
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>1-3/8" (35 mm) mortise required</li> <li>With Fire Shield, 1-13/32" (36 mm) mortise required</li> <li>5/16" (8 mm) cutout required at top of the door, stop face only</li> </ul>
<b>Door Thickness</b>	1-3/4" (44 mm) minimum
<b>Hollow Metal Frame</b>	Consult factory for installation instructions
<b>Maximum opening</b>	<ul style="list-style-type: none"> <li>Butt hinge template allows 180°, trim permitting</li> <li>Limited to 110° when optional bumper is installed</li> <li>Adjustable hold-open points from 85° to 110°, with hold-open track</li> <li>Offset pivot template allows 110°, trim permitting</li> <li>Limited to 95° when optional bumper is installed</li> <li>Adjustable hold-open points from 75° to 95°, with hold-open track</li> <li>Center pivot template allows 120°, trim permitting</li> <li>Limited to 95° when optional bumper is installed</li> <li>Adjustable hold-open points from 75° to 95°, with hold-open track</li> </ul>

Notes:

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

### Cylinder



#### 2011(3)(4)(5)(6)-3071 Cast Iron Cylinder Assembly

- Handed
- With mounting plate
- Standard

### Arm



#### 2010-3077T Standard Arm

- Handed
- Track roller not included with arm

### Installation Accessories



#### 2010-420 Fire Shield

- 22 gauge steel liner mounts in the track mortise of the door's top rail for 20 minute labeled wood doors



#### 2010-169 Track Bumper

- Mounts in track to assist backcheck
- Limits maximum opening
- Consists of bumper, bumper post, and mounting screw

*NOTE: Track bumper does not replace auxiliary stop.*

### Tracks



#### 2010-3038 Standard Track

- Non-handed
- Non hold-open
- Will accept hold-open clip and/or bumper assembly.
- Standard



#### 2010-3038B Standard Track with Bumper

- Non-handed
- Non hold-open
- Will accept hold-open clip
- Optional



#### 2010-3038H Hold-Open Track

- Non-handed
- Will accept bumper assembly
- Optional



#### 2010-3038HB Hold-Open Track with Bumper

- Non-handed
- Optional



#### 2010-3054 Hold-Open Clip

- Mounts in track to provide hold-open function
- Hold-open point controlled by clip location
- Requires 2010-3034H



#### 2010-3034 Track Roller

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



#### 2010-3034H Hold-Open Track Roller

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

### How-to-order 2010 Series closers

#### Table of sizes

- Select closer based on width of door.
- 2010 Series cylinders available in size 1, 3, 4, 5, or 6.
- Closing power of all 2010 Series closers may be increased 15%.
- Specify next higher size closer where strong drafts exist.

#### Select cylinder size

- 2011
- 2013
- 2014
- 2015
- 2016

#### Select hand

- RH
- LH

#### Specify finish

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

#### Closer will be shipped with:

- Standard cylinder with finish plate
- Standard arm
- Standard track
- Wood and machine screw pack  
unless options listed below are selected.

### Closer options

#### Tracks

- Standard with Bumper (BUMPER)
- Hold-open (H)
- Hold-open with Bumper (HBUMPER)

#### Finishes

- Custom Powder Coat (RAL) \_\_\_\_\_
- Plated Finish, US \_\_\_\_\_
- SRI primer (use with powder coat finishes only)

#### Installation accessories

- Fire Shield, 2010-420

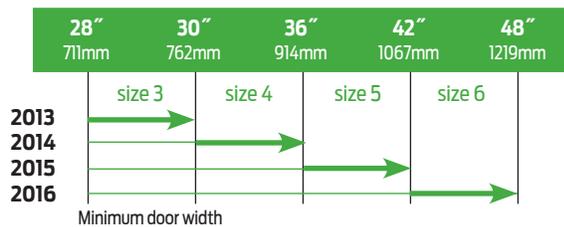
#### Screw pack

- TORX Machine Screw (TORX)

#### Special template

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

#### Exterior (and Vestibule) door width



#### Interior door width



→ Indicates recommended range of door width for closer size.

### Reduced opening force 2010 Series closers

**CAUTION!** Any manual door closer, including those certified by BHMA to conform to ANSI Standard A156.4, that is selected, installed and adjusted based on ADA or other reduced opening force requirements may not provide sufficient power to reliably close and latch a door.

Refer to POWER OPERATORS section for information on systems that meet reduced opening force requirements without affecting closing power.

\* Maximum opening force.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	2014	2014	2015
	5.0* lbs.	2011	2011	2013

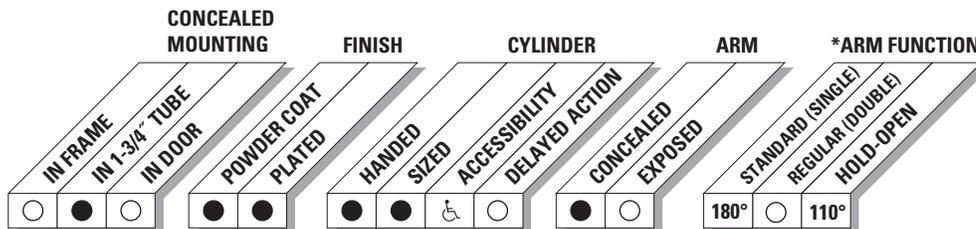


The concealed 2030 Series PACER® is a heavy duty closer designed to fit in a narrow, minimum 1-3/4" aluminum transom. The single lever arm and roller assembly provide smooth, quiet door control and the choice of finishes and track functions meet virtually all architectural requirements.

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10 C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Wood and Machine Screw Pack
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1 1/8" Diameter Piston</li> <li>■ 1 1/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Mounting</b>	Concealed (in tube); aluminum frame requires minimum 1-3/4" (44 mm) x 4" (102 mm) tube
<b>Fluid</b>	All Weather Fluid	<b>Arms</b>	Standard arm and track
<b>Handing</b>	Handed	<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>Size</b>	Sized 1-5		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
<b>Warranty</b>	15 years		

**Special Templates**

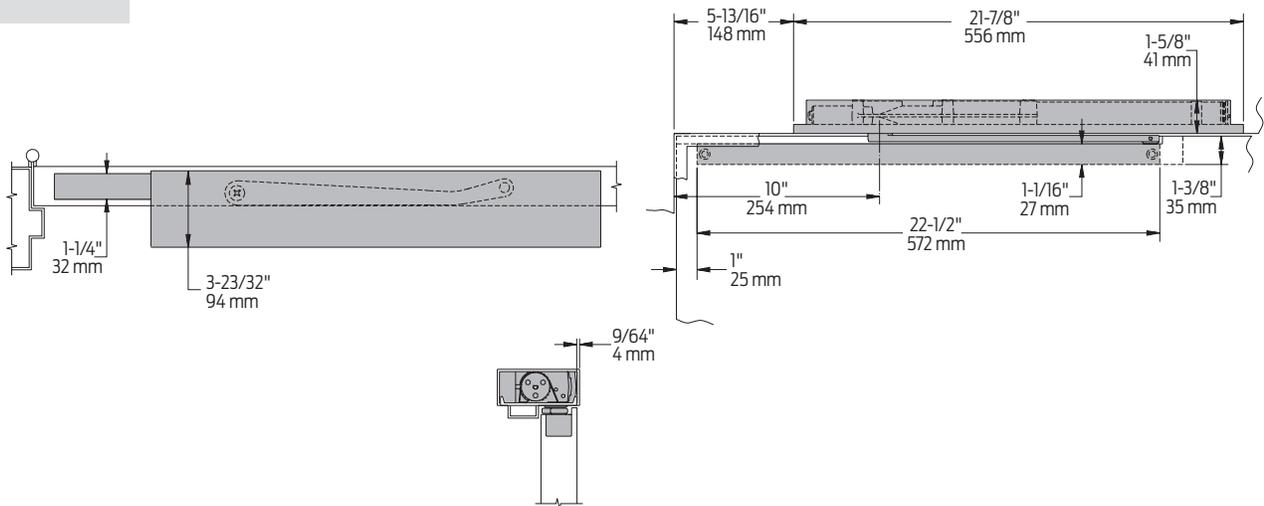
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



● AVAILABLE  
 ○ NOT AVAILABLE

♿ Closer available with less than 5.0 lbs. opening force on 36" door.

\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	<ul style="list-style-type: none"> <li>■ Recommended where a door cannot swing 180°</li> <li>■ Optional track bumper assembly assists backcheck in cushioning the opening swing of the door (not intended to replace an auxiliary stop).</li> </ul>
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>■ 1-3/8" (35 mm) mortise required</li> <li>■ With Fire Shield, 1-13/32" (36 mm) mortise required</li> <li>■ 5/16" (8 mm) cutout required at top of the door, stop face only</li> </ul>
<b>Door Thickness</b>	1-3/4" (44 mm) minimum
<b>Hollow Metal Frame</b>	Consult factory for installation instructions
<b>Wood Frame</b>	Installation simplified by WOOD MOUNTING CLIP SET 2030-416 for center pivoted or 2030-417 for offset pivoted and butt hung installations. Consult factory for preparation details.
<b>Maximum opening</b>	<ul style="list-style-type: none"> <li>■ Butt hinge template allows 180°, trim permitting</li> <li>■ Limited to 110° when optional bumper is installed</li> <li>■ Adjustable hold-open points from 85° to 110°, with hold-open track</li> <li>■ Consult factory if door will be held open at 180°</li> <li>■ Offset pivot template allows 115°, trim permitting. Limited to 95° when optional bumper is installed</li> <li>■ Hold-open point from 85°, with hold-open track</li> <li>■ Center pivot template allows 120°, trim permitting</li> <li>■ Limited to 100° when optional bumper is installed</li> <li>■ Adjustable hold-open points from 85° to 100°, with hold-open track</li> </ul>

**Notes:**

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

**Cylinder**



**2031(2)(3)(4)(5)-3071**  
Cast Iron Cylinder Assembly

- Handed
- With mounting plate
- Standard

**Arm**



**2030-3077T**  
Standard Arm

- Handed
- Track roller not included with arm

**Tracks**



**2030-3038**  
Standard Track

- Non-handed
- Non hold-open
- Will accept hold-open clip and/or bumper assembly
- Standard



**2030-3038B**  
Standard Track with Bumper

- Non-handed
- Non hold-open
- Will accept hold-open clip
- Optional



**2030-3038H**  
Hold-Open Track

- Non-handed
- Will accept bumper assembly
- Optional



**2030-3038HB**  
Hold-Open Track with Bumper

- Non-handed
- Optional

### Installation Accessories



**2030-420**  
Fire Shield

- 22 gauge steel liner mounts in the track mortise of the door's top rail for 20 minute labeled wood doors



**2030-416**  
Wood Mounting Clip Set

- Simplifies mounting center pivoted 2030 closer in wood frame
- Includes latch stile clip, hinge stile clip, and cover
- For use with Ives Series center pivots
- Consult factory for special template



**2030-417**  
Wood Mounting Clip Set

- Simplifies mounting offset pivoted or butt hung 2030 closer in wood frame
- Includes two clips
- For use with offset pivots
- Consult factory for special template



**2030-169**  
Track Bumper

- Mounts in track to assist backcheck. Limits maximum opening.
- Consists of bumper, bumper post, and mounting screw

*NOTE: Track bumper does not replace auxiliary stop*



**2030-3054**  
Hold-Open Clip

- Mounts in track to provide hold-open function
- Hold-open point controlled by clip location
- Requires 2030-3034H Hold-Open Track Roller



**2030-3034**  
Track Roller

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



**2030-3034H**  
Hold-Open Track Roller

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

**How-to-order 2030 Series closers**

**Select cylinder size**

- 2031
- 2032
- 2033
- 2034
- 2035

**Specify finish**

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

**Closer will be shipped with:**

- Standard cylinder with mounting plate
- Standard arm
- Standard track
- Wood and machine screw pack unless options listed below are selected.

**Select hand**

- RH
- LH

**Closer options**

**Tracks**

- Standard with Bumper (BUMPER)
- Hold-open (H)
- Hold-open with Bumper (HBUMPER)

**Finishes**

- Custom Powder Coat (RAL) \_\_\_\_\_
- Plated Finish, US \_\_\_\_\_
- SRI primer (use with powder coat finishes only)

**Installation accessories**

- Fire Shield, 2030-420
- Wood Clip Set, 2030-416
- Wood Clip Set, 2030-417

**Screw pack**

- TORX Machine Screw (TORX)

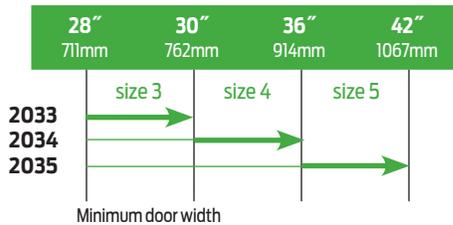
**Special template**

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

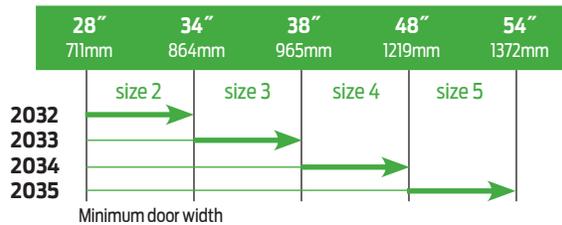
**Table of sizes**

- Select closer based on width of door.
- 2030 Series cylinders available in size 1, 2, 3, 4, or 5.
- Closing power of all 2030 Series closers may be increased 35%.
- Specify next higher size closer where strong drafts exist

**Exterior (and Vestibule) door width**



**Interior door width**



→ Indicates recommended range of door width for closer size.

**Reduced opening force 2030 Series closers**

**CAUTION!** Any manual door closer, including those certified by BHMA to conform to ANSI Standard A156.4, that is selected, installed and adjusted based on ADA or other reduced opening force requirements may not provide sufficient power to reliably close and latch a door.

Refer to POWER OPERATORS section for information on systems that meet reduced opening force requirements without affecting closing power.

\* Maximum opening force.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	2033	2033	2034
5.0* lbs.	2031	2032	2032	

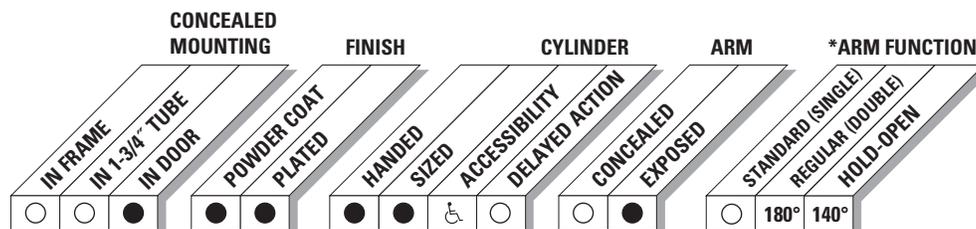


The concealed 3030 Series is designed to mount in a 1-3/4" interior door. The double lever arm provides superior door control and the choice of finishes and arm functions meet virtually all architectural requirements.

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10 C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Wood Screws and Torx Security Screws (optional)
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-1/8" Diameter Piston</li> <li>■ 1/2" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Mounting</b>	Concealed (in door); consult factory for installations with pivots
<b>Fluid</b>	All Weather Fluid	<b>Arms</b>	Regular arm
<b>Handing</b>	Handed	<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>Size</b>	Sized 1-4		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
<b>Warranty</b>	15 years		

**Special Templates**

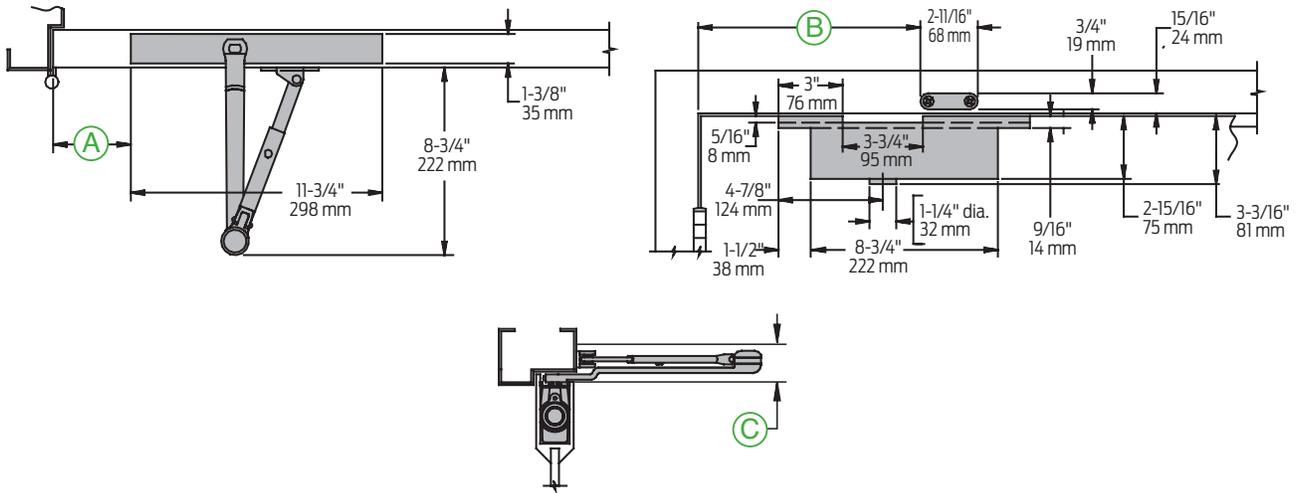
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



● AVAILABLE  
○ NOT AVAILABLE

♿ Closer available with less than 5.0 lbs. opening force on 36" door.

\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point or where a door cannot swing 180°
<b>Top Rail</b>	Minimum 4" (102 mm) required
<b>Door Thickness</b>	<ul style="list-style-type: none"> <li>1-3/4" (44 mm) minimum</li> <li>Please consult the door manufacturer to assure that the door integrity and warranty is maintained after installing the 3030 Series door closer in a 1-3/4" thick wood door</li> </ul>
<b>Maximum opening</b>	<p>Can be templated for</p> <p>100°:     A = 3-5/8" (92 mm)               B = 10-1/4" (260 mm)</p> <p>130°:     A = 2-5/8" (67 mm)               B = 9-1/4" (235 mm)</p> <p>180°:     A = 1-5/8" (41 mm)               B = 8-1/4" (210 mm)</p> <ul style="list-style-type: none"> <li>Hold-open points up to maximum opening or 140°, whichever is less, with hold-open arm.</li> </ul> <p>Arm clearance above door C = 1-1/4" (32 mm) minimum</p>

**Notes:**

- For interior or exterior doors
- Single acting cylinder in top rail of door
- Exposed arm on hinge side of door

Cylinder



**3031(2)(3)(4)-3071**  
Cast Iron Cylinder Assembly

- Handed
- With mounting plate
- Standard

Arms



**3030-3077**  
Regular arm

- Non-handed



**3030-3049**  
Hold-open arm

- Handed
- Provides hold-open function, adjustable at elbow
- Optional

### How-to-order 3030 Series closers

#### Select cylinder size

- 3031
- 3032
- 3033
- 3034

#### Select hand

- RH
- LH

#### Specify finish

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

#### Closer will be shipped with:

- Standard cylinder with mounting bracket
- Regular arm
- Wood and machine screw pack unless options listed below are selected.

### Closer options

#### Arm

- Hold-open (H)

#### Finishes

- Custom Powder Coat (RAL) \_\_\_\_\_
- Plated Finish, US \_\_\_\_\_
- SRI primer (use with powder coat finishes only)

#### Screw pack

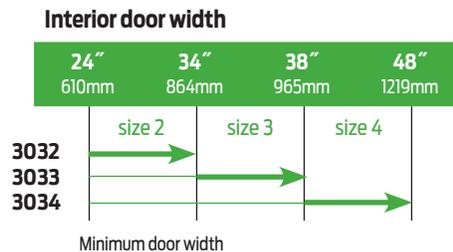
- TORX Machine Screw (TORX)

#### Special template

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

### Table of sizes

- Select closer based on width of door
- 3030 Series cylinders available in size 1, 2, 3, or 4
- Closing power of all 3030 Series closers may be increased 15%



Indicates recommended range of door width for closer size.

### Reduced opening force 3030 Series closers

**CAUTION!** Any manual door closer, including those certified by BHMA to conform to ANSI Standard A156.4, that is selected, installed and adjusted based on ADA or other reduced opening force requirements may not provide sufficient power to reliably close and latch a door.

Refer to POWER OPERATORS section for information on systems that meet reduced opening force requirements without affecting closing power.

\* Maximum opening force.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	N/A	N/A	N/A
	5.0* lbs.	3031	3031	3032

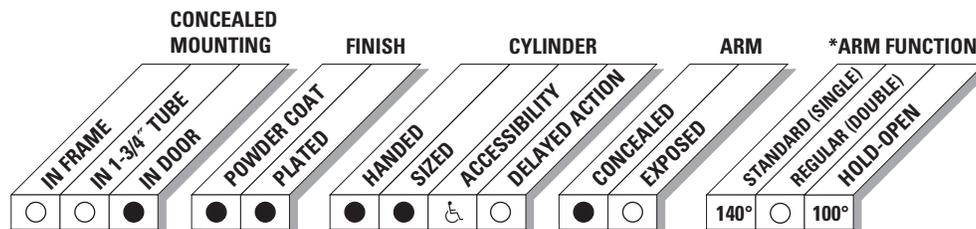


The concealed 3130 Series is designed to mount in a 1-3/4" interior door. The single lever arm and roller assembly provides complete concealment and the choice of finishes and track functions meet virtually all architectural requirements.

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10 C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Wood Screws and Torx Security Screws (optional)
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-1/8" Diameter Piston</li> <li>■ 1/2" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Mounting</b>	Concealed (in door); consult factory for installation with pivots
<b>Fluid</b>	All Weather Fluid	<b>Arms</b>	Standard arm and track
<b>Handing</b>	Handed	<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>Size</b>	Sized 1-3		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
<b>Warranty</b>	15 years		

**Special Templates**

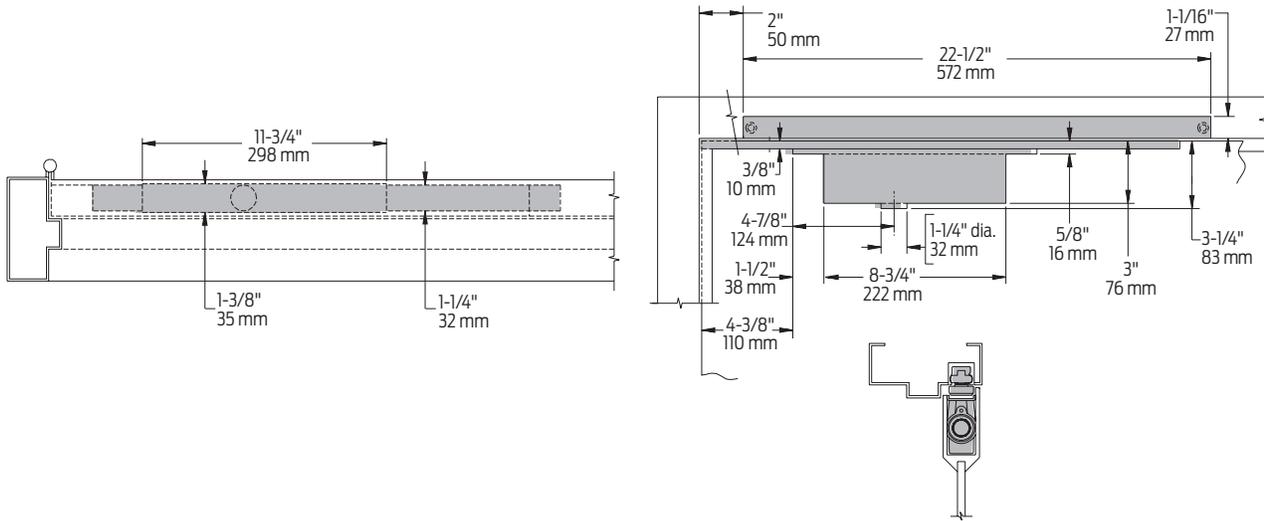
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



● AVAILABLE  
○ NOT AVAILABLE

♿ Closer available with less than 5.0 lbs. opening force on 36" door.

\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	<ul style="list-style-type: none"> <li>Recommended at hold-open point or where a door cannot swing 140°</li> <li>Optional track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop</li> </ul>
<b>Top Rail</b>	Minimum 4" (102 mm) required
<b>Door Thickness</b>	<ul style="list-style-type: none"> <li>1-3/4" (44 mm) minimum.</li> <li>Please consult the door manufacturer to assure that the door integrity and warranty is maintained after installing the 3130 Series door closer in a 1-3/4" thick wood door</li> </ul>
<b>Door Width</b>	2' 2" (660 mm) minimum
<b>Maximum opening</b>	<ul style="list-style-type: none"> <li>Templating allows 140°, trim permitting. 100° with optional bumper installed</li> <li>Adjustable hold-open points from 85° to 100°, with hold-open track</li> </ul>

**Notes:**

- For interior doors
- Single acting cylinder and standard arm in top rail of door
- Concealed track in head frame
- Consult factory for installations with pivots.

### Cylinder



**3131(2)(3)-3071**  
Cast Iron Cylinder Assembly

- Handed
- With mounting plate
- Standard

### Arm



**3130-3077T**  
Standard Arm

- Handed
- Track roller not included with arm
- Standard

### Tracks



**3130-3038**  
Track

- Non-handed
- Non hold-open
- Will accept hold-open clip and/or bumper assembly
- Standard



**3130-3038B**  
Standard Track with Bumper

- Non-handed
- Non hold-open
- Will accept hold-open clip
- Optional



**3130-3038H**  
Hold-Open track

- Non-handed
- Will accept bumper assembly
- Optional



**3130-3038HB**  
Hold-Open Track with Bumper

- Non-handed
- Optional

### Installation Accessories



**3130-169**  
Track Bumper

- Mounts in track to assist backcheck, does not replace auxiliary stop
- Limits maximum opening
- Consists of bumper, bumper post, and mounting screw



**3130-3054**  
Hold-Open Clip

- Mounts in track to provide hold-open function
- Hold-open point controlled by clip location
- Requires 3130-3034H Hold-Open Track Roller



**3130-3034**  
Track Roller

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



**3130-3034H**  
Hold-Open Track Roller

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

### How-to-order 3130 Series closers

#### Select cylinder size

- 3131
- 3132
- 3133

#### Select hand

- RH
- LH

#### Specify finish

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

#### Closer will be shipped with:

- Standard cylinder with mounting bracket
- Standard arm with finish plate
- Standard track
- Wood and machine screw pack unless options listed below are selected.

### Closer options

#### Track

- Standard with Bumper (BUMPER)
- Hold-open (H)
- Hold-open with Bumper (HBUMPER)

#### Finishes

- Custom Powder Coat (RAL) \_\_\_\_\_
- Plated Finish, US \_\_\_\_\_
- SRI primer (use with powder coat finishes only)

#### Screw pack

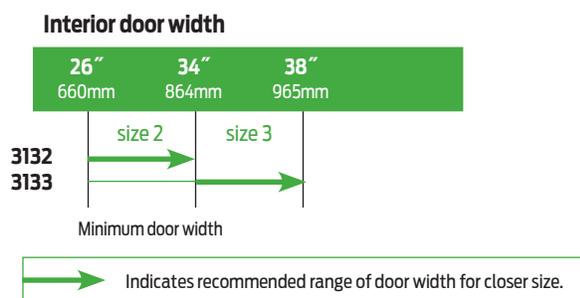
- TORX Machine Screw (TORX)

#### Special template

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

### Table of sizes

- Select closer based on width of door.
- 3130 Series cylinders available in size 1, 2, or 3.
- Closing power of 3130 Series closers is not adjustable



### Reduced opening force 3130 Series closers

**CAUTION!** Any manual door closer, including those certified by BHMA to conform to ANSI Standard A156.4, that is selected, installed and adjusted based on ADA or other reduced opening force requirements may not provide sufficient power to reliably close and latch a door.

Refer to POWER OPERATORS section for information on systems that meet reduced opening force requirements without affecting closing power.

\* Maximum opening force.

	<b>DOOR WIDTH</b>	<b>36"</b>	<b>42"</b>	<b>48"</b>
	8.5* lbs.	N/A	N/A	N/A
	5.0* lbs.	3131	3131	3132

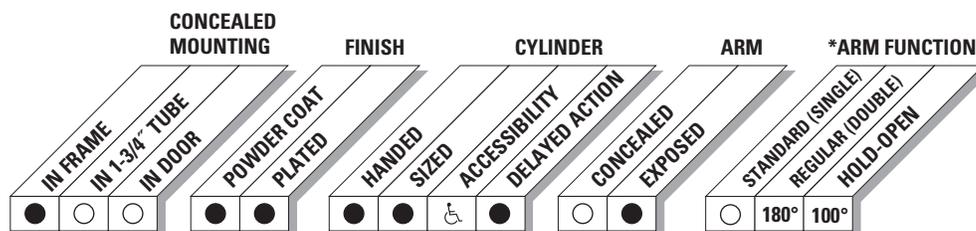


The concealed 5010 Series is a heavy duty closer designed for institutional, high traffic, or other applications exposed to weather or abuse. The double lever arm provides superior door control and a choice of finishes, cylinder functions, and arm functions that meet virtually all architectural requirements.

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10 C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Wood Screws and Torx Security Screws (optional)
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-1/8" Diameter Piston</li> <li>■ 11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Mounting</b>	Concealed (in frame); aluminum frame requires 4" (102 mm) x 4" tube
<b>Fluid</b>	All Weather Fluid	<b>Arms</b>	Regular Arm
<b>Handing</b>	Handed	<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>Size</b>	Sized 1-6		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
<b>Warranty</b>	15 years		

**Special Templates**

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



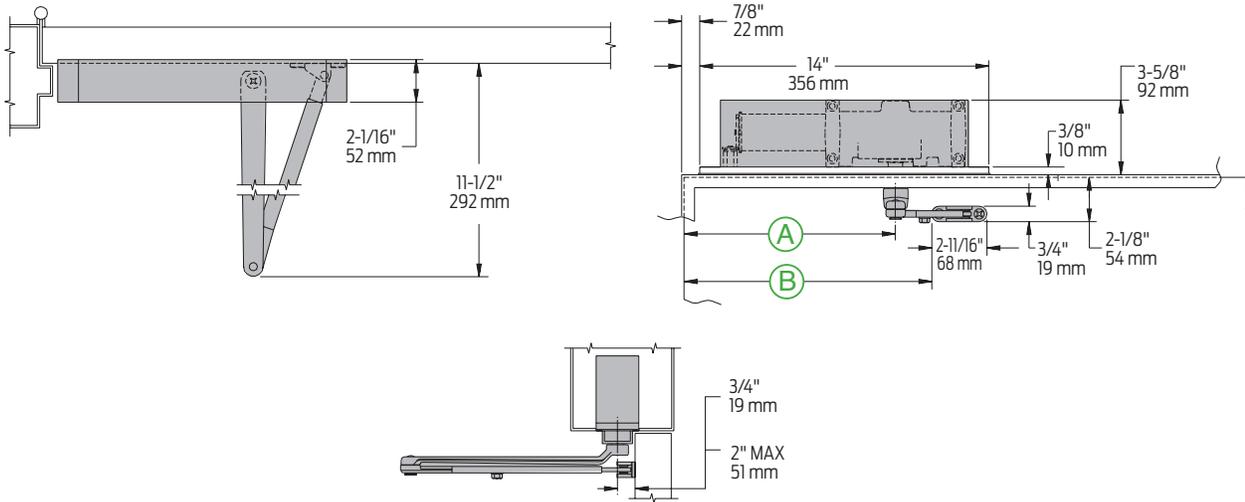
● AVAILABLE  
○ NOT AVAILABLE

♿ Closer available with less than 5.0 lbs. opening force on 36" door.  
\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.

# 5010 Series

## Mounting details

### Concealed Mounting



<b>Butt Hinges</b>	Should not exceed 6" (152 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point or where a door cannot swing 180°
<b>Top Rail</b>	Minimum 2-1/8" (54 mm) required
<b>Delay Action</b>	<ul style="list-style-type: none"> <li>■ Add suffix "DEL" to selected cylinder (eg. 5014 DEL) (not available with 5016 cylinder)</li> <li>■ Delays closing from maximum opening to approximately 70°</li> <li>■ Delay time adjustable up to approximately 1 minute</li> </ul>
<b>Maximum opening</b>	<p>Butt hung doors can be templated for</p> <p>100°:      A = 10-3/16" (259 mm)               B = 12" (305 mm)</p> <p>180°:      A = 5-1/2" (140 mm)               B = 7-5/16" (186 mm) trim permitting</p> <ul style="list-style-type: none"> <li>■ Hold-open points up to 100° only with hold-open arm</li> <li>■ Center pivot mounting restricts opening to 140°</li> <li>■ Offset pivot mounting allows up to 180°, trim permitting</li> </ul>

**Notes:**

- For interior or exterior doors
- Single acting cylinder in head frame
- Exposed arm on hinge side of door

Cylinder



**5011(2)(3)(4)(5)(6)-3071**  
Cast Iron Cylinder Assembly

- Handed
- With mounting plate
- Standard

Arms



**5010-3077**  
Regular Arm

- Non-handed



**5010-3049**  
Hold-Open Arm

- Handed
- Provides hold-open function for 100° Template, adjustment at elbow
- Optional

### How-to-order 5010 Series closers

#### Select cylinder size

- 5011
- 5012
- 5013
- 5014
- 5015
- 5016 (DEL not available)

#### Select hand

- RH
- LH

#### Specify finish

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

#### Closer will be shipped with:

- Standard cylinder with finish plate
- Standard arm
- Regular arm
- Wood and machine screw pack unless options listed below are selected.

### Closer options

#### Cylinder function

- Delayed Action (DEL)

#### Arm

- Hold-Open (H)

#### Finishes

- Custom Powder Coat (RAL) \_\_\_\_\_
- Plated Finish, US \_\_\_\_\_
- SRI primer (use with powder coat finishes only)

#### Screw pack

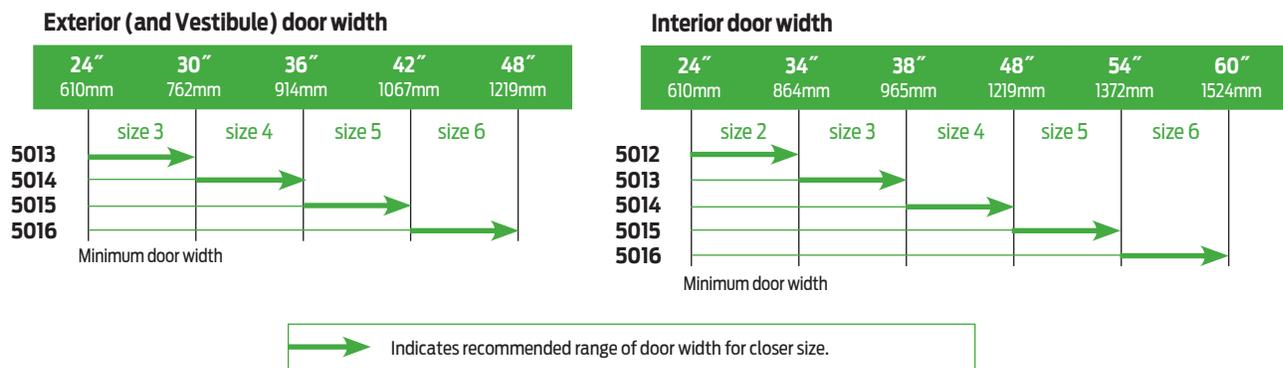
- TORX Machine Screw (TORX)

#### Special template

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

### Table of sizes

- Select closer based on width of door
- Series cylinders available in size 1, 2, 3, 4, 5, or 6
- Closing power of all 5010 Series closers may be increased 50%
- Specify next higher size closer where strong drafts exist
- Delayed action not available with 5016 cylinder



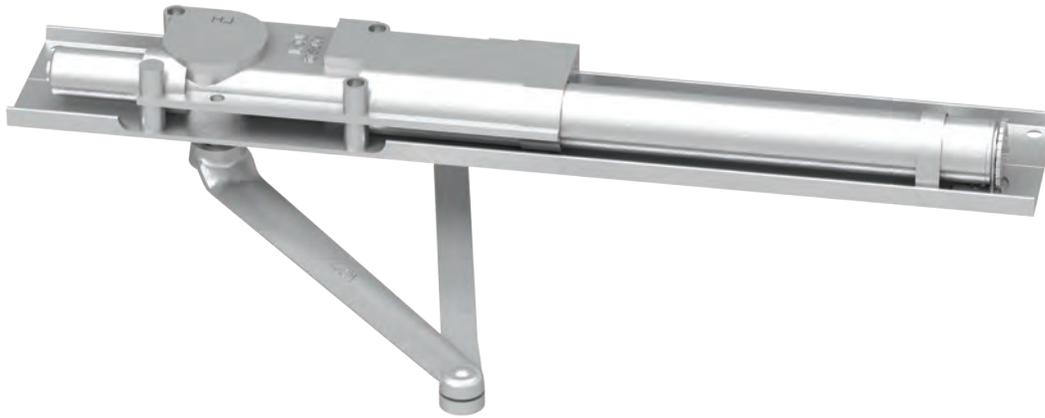
### Reduced opening force 5010 Series closers

**CAUTION!** Any manual door closer, including those certified by BHMA to conform to ANSI Standard A156.4, that is selected, installed and adjusted based on ADA or other reduced opening force requirements may not provide sufficient power to reliably close and latch a door.

Refer to POWER OPERATORS section for information on systems that meet reduced opening force requirements without affecting closing power.

\* Maximum opening force.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	5012	5013	5013
5.0* lbs.	5011	5011	5012	

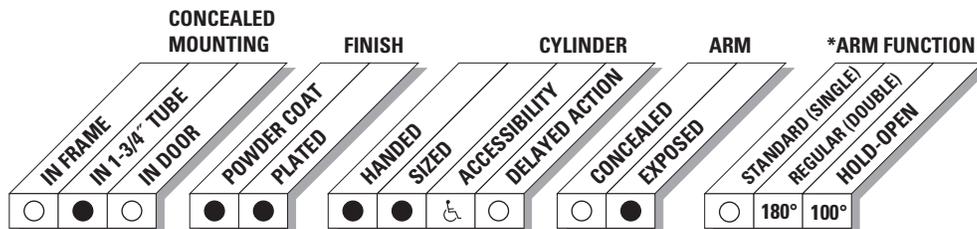


The concealed 5030 Series PACER® is a heavy duty closer designed to fit in a narrow, minimum 1-3/4" aluminum transom. The double lever arm provides superior door control and the choice of finishes and arm functions meet virtually all architectural requirements.

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10 C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Wood Screws and Torx Security Screws (optional)
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-1/8" Diameter Piston</li> <li>■ 11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Mounting</b>	Concealed (in tube); aluminum frame requires minimum 1-3/4" (44 mm) x 4-1/2" (114 mm) tube
<b>Fluid</b>	All Weather Fluid	<b>Arms</b>	Regular Arm
<b>Handing</b>	Handed	<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>Size</b>	Sized 1; 3-6		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
<b>Warranty</b>	15 years		

**Special Templates**

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



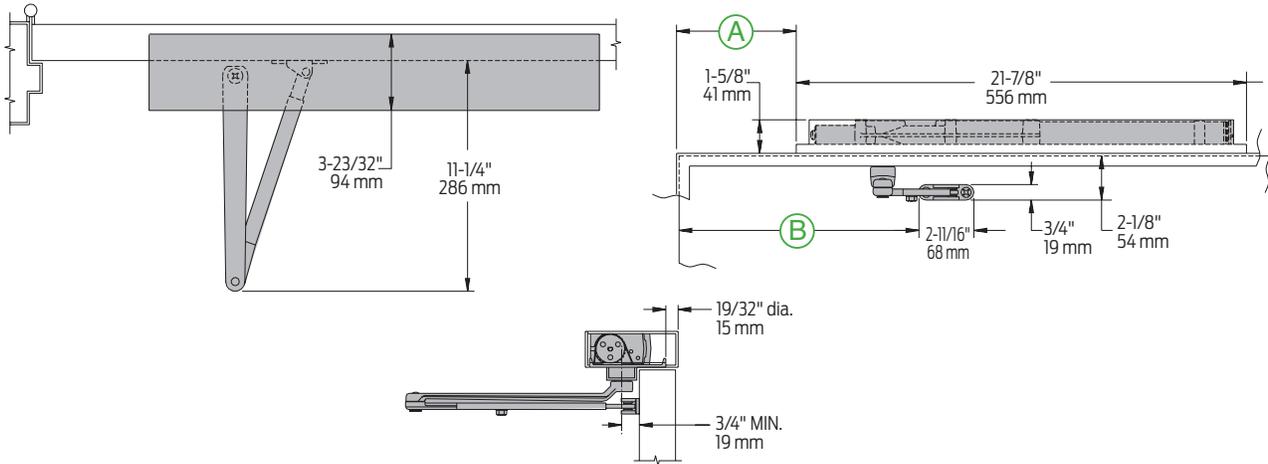
● AVAILABLE  
○ NOT AVAILABLE

♿ Closer available with less than 5.0 lbs. opening force on 36" door.  
\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.

# 5030 Series

## Mounting details

### Concealed Mounting



<b>Butt Hinges</b>	Should not exceed 6" (152 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point or where the door cannot swing 180°
<b>Wood Frame</b>	<ul style="list-style-type: none"> <li>Installation simplified by WOOD MOUNTING CLIP SET 5030-416 for center pivoted or 5030-417 for offset pivoted and butt hung installations</li> <li>Consult factory for preparation details</li> </ul>
<b>Top Rail</b>	Minimum 2-1/8" (54 mm) required
<b>Door Thickness</b>	Maximum 1-3/4" (44 mm), for doors thicker than 1-3/4" consult factory
<b>Maximum opening</b>	<p>Butt hung doors can be templated for</p> <p>100°:      A = 5-13/16" (148 mm)               B = 11-13/16" (300 mm)</p> <hr/> <p>180°:      A = 2-1/16" (52 mm)               B = 8-1/16" (205 mm)               trim permitting</p> <ul style="list-style-type: none"> <li>Hold-open points up to 100° only with hold-open arm</li> <li>Center pivot mounting restricts opening to 120°. Hold-open up to 120° with hold-open arm</li> <li>Offset pivot mounting allows up to 115°, trim permitting. Hold-open up to 115° with hold-open arm</li> </ul>

**Notes:**

- For interior or exterior doors
- Single acting cylinder in head frame
- Exposed arm on push side of door

### Cylinder



#### 5031(3)(4)(5)(6)-3071 Cast Iron Cylinder Assembly

- Handed
- With mounting plate
- Standard

### Arms



#### 5030-3077 Regular Arm

- Non-handed



#### 5030-3049 Hold-Open Arm

- Handed
- Provides hold-open function for 100° template, adjustable at elbow
- Optional

### Installation Accessories



#### 5030-416 Wood Mounting Clip Set

- Simplifies mounting center pivoted 5030 closer in wood frame
- Includes latch stile clip, hinge stile clip, and cover.
- For use with Ives Series center pivots
- Consult factory for special template



#### 5030-417 Wood Mounting Clip Set

- Simplifies mounting offset pivoted or butt hung 5030 closer in wood frame.
- Includes two clips.
- For use with offset pivots.
- Consult factory for special template.

### How-to-order 5030 Series closers

#### Select cylinder size

- 5031
- 5033
- 5034
- 5035
- 5036

#### Select hand

- RH
- LH

#### Specify finish

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

#### Closer will be shipped with:

- Standard cylinder with mounting plate
- Regular arm
- Wood and machine screw pack unless options listed below are selected.

### Closer options

#### Arm

- Hold-Open (H)

#### Finishes

- Custom Powder Coat (RAL) \_\_\_\_\_
- Plated Finish, US \_\_\_\_\_
- SRI primer (use with powder coat finishes only)

#### Installation accessories

- Wood Clip Set, 5030-416
- Wood Clip Set, 5030-417

#### Screw pack

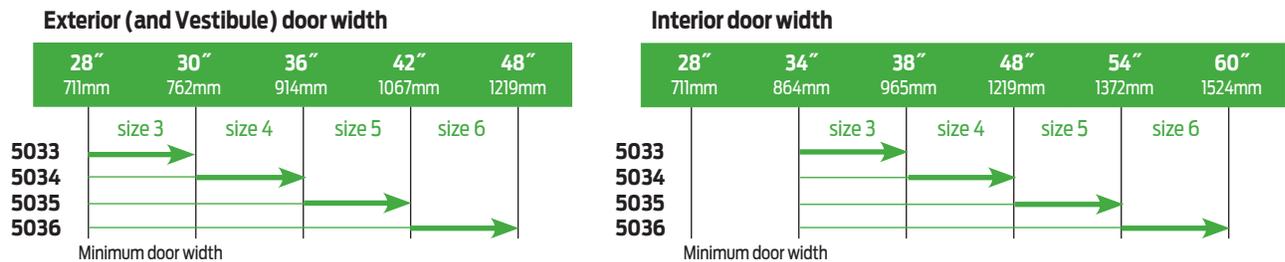
- TORX Machine Screw (TORX)

#### Special template

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

### Table of sizes

- Select closer based on width of door
- 5030 Series cylinders available in size 1, 2, 3, 4, 5 or 6
- Closing power of all 5030 Series closers may be increased 50%
- Specify next higher size closer where strong drafts exist



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

### Reduced opening force 5030 Series closers

**CAUTION!** Any manual door closer, including those certified by BHMA to conform to ANSI Standard A156.4, that is selected, installed and adjusted based on ADA or other reduced opening force requirements may not provide sufficient power to reliably close and latch a door.

Refer to POWER OPERATORS section for information on systems that meet reduced opening force requirements without affecting closing power.

\* Maximum opening force.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	5033	5033	5033
5.0* lbs.		5031	5031	5033

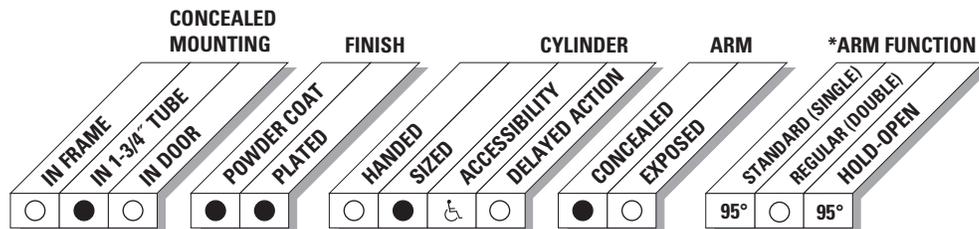


The concealed 6030 Series PACER® is a heavy duty, double acting closer designed to fit in a narrow, minimum 1-3/4" header. The single lever arm and roller assembly provides smooth, quiet door control and the choice of finishes and track functions meet virtually all architectural requirements. Installation at left illustrated with center pivot set (not included).

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10 C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Wood Screws and Torx Security Screws (optional)
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-1/8" Diameter Piston</li> <li>■ 11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Mounting</b>	Concealed (in tube); double acting
<b>Fluid</b>	All Weather Fluid	<b>Arms</b>	Standard arm with track
<b>Handing</b>	Non-Handed	<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>Size</b>	Sized 1-5		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
<b>Warranty</b>	15 years		

**Special Templates**

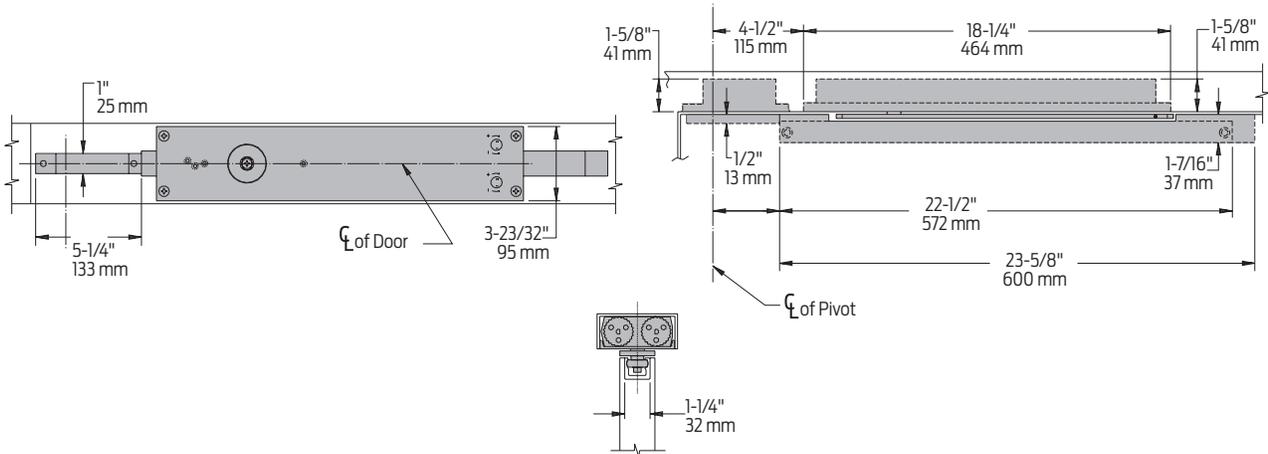
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



● AVAILABLE  
○ NOT AVAILABLE

♿ Closer available with less than 5.0 lbs. opening force on 36" door.

\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.



<b>Auxiliary Stop</b>	Recommended where a door cannot swing 95°
<b>Center Pivot Set</b>	Must be used but ordered separately
<b>Door Width</b>	30" (762 mm) minimum with 1-3/4" (44 mm) pivot centers
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>■ 1-7/16" (36 mm) mortise required</li> <li>■ 3/8" (10 mm) cutout required at top of the door, both sides.</li> </ul>
<b>Door Thickness</b>	1-3/4" (44 mm) minimum
<b>Centering Adjustment</b>	Centering is provided by rotating the track roller to center the door in the opening.
<b>Wood Frame</b>	<ul style="list-style-type: none"> <li>■ Installation simplified by WOOD MOUNTING CLIP SET, 6030-416</li> <li>■ Consult product support for special template</li> </ul>
<b>Maximum opening</b>	<ul style="list-style-type: none"> <li>■ Center pivot template allows 95°</li> <li>■ Adjustable hold-open points from 85° to 95°, with hold-open track</li> </ul>

**Notes:**

- For interior or exterior doors
- Double acting cylinder in cased frame
- Concealed arm and track in door top rail
- Center pivots only

### Cylinder



#### 6031(2)(3)(4)(5)-3071 Cast Iron Cylinder Assembly

- Non-handed
- With mounting plate
- Standard

### Arm



#### 6030-3077T Standard Arm

- Non-handed
- 5/16" (8 mm) thick arm
- Track roller not included with arm

### Tracks



#### 6030-3038B Standard Track with Bumper

- Non-handed
- Non hold-open
- Will accept hold-open clip
- Standard



#### 6030-3038HB Hold-Open Track with Bumper

- Non-handed
- Optional

### Installation Accessories



#### 6030-416 Wood Mounting Clip Set

- Simplifies mounting closer in wood frame
- Includes latch stile clip, hinge stile clip, and cover
- For use with Ives Series center pivots
- Consult factory for special template



#### 6030-169 Track Bumper

- Mounts in track to assist backcheck
- Limits maximum opening
- Consists of bumper, bumper post, and mounting screw

*NOTE: Track bumper does not replace auxiliary stop.*



#### 6030-3054 Hold-Open Clip

- Mounts in track to provide hold-open function
- Hold-open point controlled by clip location
- Requires 6030-3034H Hold-Open Track Roller



#### 6030-3034 Track Roller

- Quiet, low friction roller assembly includes eccentric with 3/4" (19 mm) adjustment to center 36" (914 mm) door



#### 6030-3034H Hold-Open Track Roller

- Hold-open roller
- Quiet, low friction roller assembly

### How-to-order 6030 Series closers

#### Select cylinder size

- 6031
- 6032
- 6033
- 6034
- 6035

#### Specify finish

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

#### Closer will be shipped with:

- Standard cylinder with mounting plate
- Standard arm
- Standard track with bumper
- Wood and machine screw pack unless options listed below are selected.

### Closer options

#### Track

- Hold-open with Bumper (HBUMPER)

#### Finishes

- Custom Powder Coat (RAL) \_\_\_\_\_
- Plated Finish, US \_\_\_\_\_
- SRI primer (use with powder coat finishes only)

#### Installation accessories

- Wood Clip Set, 6030-416

#### Screw pack

- TORX Machine Screw (TORX)

#### Special template

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

### Table of sizes

- Select closer based on width of door
- 6030 Series cylinders available in size 1, 2, 3, 4, or 5
- Closing power of all 6030 Series closers may be increased 35%
- Specify next higher size closer where strong drafts exist

#### Exterior (and Vestibule) door width



#### Interior door width



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

### Reduced opening force 6030 Series closers

**CAUTION!** Any manual door closer, including those certified by BHMA to conform to ANSI Standard A156.4, that is selected, installed and adjusted based on ADA or other reduced opening force requirements may not provide sufficient power to reliably close and latch a door.

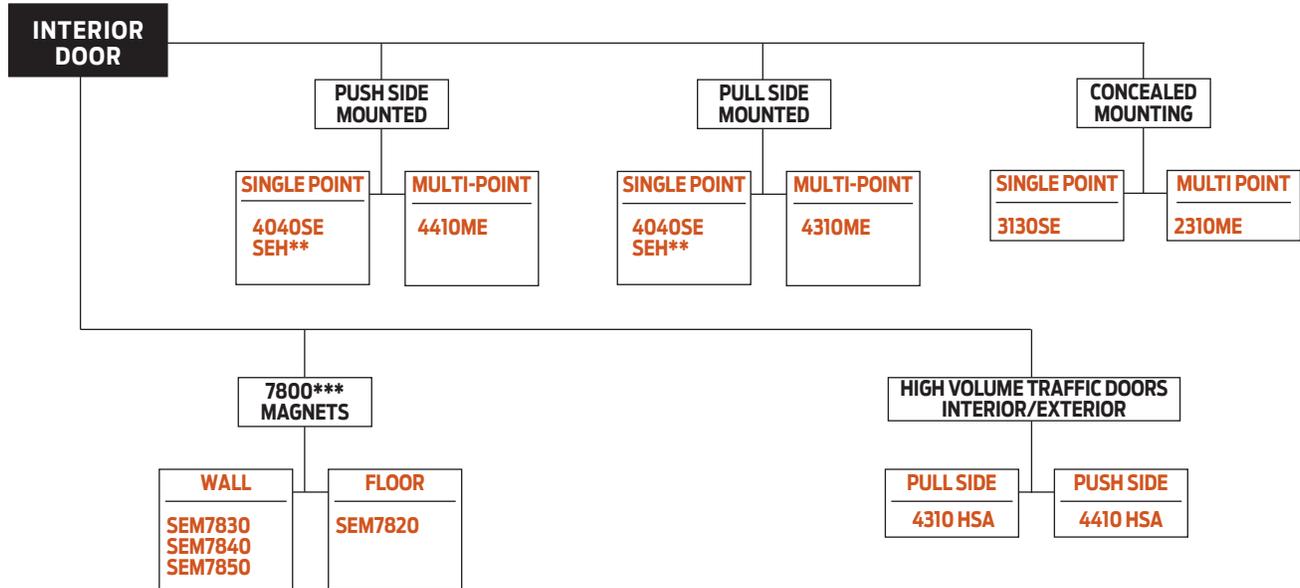
Refer to POWER OPERATORS section for information on systems that meet reduced opening force requirements without affecting closing power.

\* Maximum opening force.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	6033	6034	6035
5.0* lbs.	6031	6032	6032	

## Product selection guide

SENTRONIC® Series LCN closer/holders combine heavy duty closers with electrically controlled hold-open functions to control fire and smoke barrier doors. This guide is based on the desired mounting of the unit.



\*\* See SEH section (cylinder not included).

\*\*\* SEM 7800 Series are die cast.

## Product comparison

This chart shows a basic comparison of Sentronic closer/holders. Refer to the specific product chapter for complete details..

CLOSER SERIES	MOUNTING					FINISH		COVER		CYLINDER			*ARM FUNCTION									
	HINGE (PULL) SIDE	TOP JAMB (PUSH)	STOP FACE (PUSH)	CONCEALED (FRAME)	CONCEALED (DOOR)	POWDER COAT	PLATED	PLASTIC	METAL	HANDED	NON-SIZED	SIZED	SINGLE POINT HOLD-OPEN	MULTI-POINT HOLD-OPEN	BYPASS 80/140	STANDARD (SINGLE)	REGULAR (DOUBLE)	SWING FREE	DOUBLE EGRESS			
3130SE	○	○	○	○	●	●	●	○	○	●	○	●	○	○	○	○	○	○	110°	○	○	○
4040SE	●	○	●	○	○	●	●	●	●	○	○	○	○	○	○	○	○	○	110°	○	○	95°
2310ME	○	○	○	●	○	●	●	○	○	●	○	○	○	○	○	○	○	○	160°	○	○	○
4310ME	●	○	○	○	○	●	●	○	○	●	○	○	○	○	○	○	○	○	○	○	160°	95°
4410ME	○	●	○	○	○	●	●	○	○	●	○	○	○	○	○	○	○	○	○	150°	○	○
4310HSA	●	○	○	○	○	●	●	○	○	●	○	○	○	○	○	○	○	○	160°	○	○	95°
4410HSA	○	●	○	○	○	●	●	○	○	●	○	○	○	○	○	○	○	○	○	150°	○	○

● AVAILABLE  
○ NOT AVAILABLE

\* Maximum hold-open with standard template. See individual closer series for degrees of opening and hold-open per installation.

### SENTRONIC® CLOSER/HOLDERS

Automatic detection and containment of fire and smoke are the best ways to minimize danger to life and property. Patented Sentronic door closer/holders are designed to hold swinging doors open in normal use and release and automatically close the doors under fire conditions. Conforms to major building codes, life safety codes (eg. NFPA 101) and ANSI A156.15.

### SINGLE POINT HOLD-OPEN (SE)

SE Series offers adjustable single point hold-open function controlled by solenoid assembly located in the SE track.

### MULTI-POINT HOLD-OPEN (ME)

ME Series offers infinitely adjustable, multi-point hold-open function controlled by solenoid on the cylinder assembly.

### HOLDER SCANNER ACTIVATED (HSA)

Electronically controlled closer/holder designed to provide easy passage for groups of pedestrians through high traffic doors. Best suited for high traffic emergency exit doors.

### MAGNETS (SEM) - ELECTROMAGNETIC DOOR HOLDERS

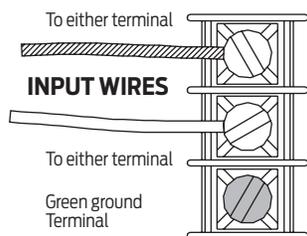
SEM Series magnets work with manual door closers to provide single point hold-open. Now available in new **tri-voltage** with 35 lbs. of holding force.

### APPLICATIONS

- For fire and smoke barrier doors.
- Integrated into larger system.
- Surface and concealed mountings.
- Remote control hold-open function of executive and conference area doors.
- Adapter plates and other installation accessories available for unusual conditions.

### GENERAL NOTES

- Note 1: For installations where 120V AC input voltage is supplied, 120V/24V transformer, 4040SE-3210, is required to reduce line voltage for 24V holding solenoid. Units are available in either 24V or 120V input, please specify.
- Note 2: Transformer 4040SE-3210 mounted on cover plate to fit 4" (102 mm) x 4" x 2-1/8" (54 mm) junction box (by others).
- Note 3: SE track quick-connector is required for 1/2" conduit.
- Note 4: SE test switch assembly includes fuse to protect solenoid. Works with ionization, photoelectric and heat sensing detectors (by others).



**SE WIRING DIAGRAM**

### LISTINGS AND APPROVALS

Sentronic closer/holders are listed by Underwriters Laboratories, Inc. in the following product categories under FIRE DOORS (GSNV), Combination Door Closers and Holders (GTIS) file R7050. SEM 7800 Series magnets are listed under Door Holders (GTPR) file R8327.

Consult the factory for other listings, such as; cUL, Department of Labor and Industry of the Commonwealth of Pennsylvania, The Board of Standards and Appeals of the City of New York, Fire and Panic Safety Standards of the California State Fire Marshal.

### HOLDING SOLENOIDS CURRENT DRAW

#### SE/ME

24V AC/DC (+10% -15%) @ 90 mA max.  
120V AC/DC (+10% -15%) @ 30 mA max.

#### SEM (TRI-VOLT)

12V DC (+10% -15%) @ 30 mA max.  
24V AC/DC (+10% -15%) @ 20 mA max.  
120V AC (+10% -15%) @ 20 mA max.

#### HSA

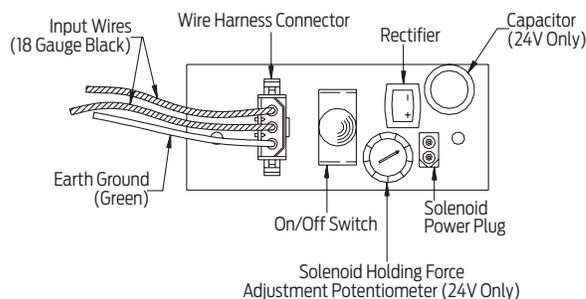
24V AC/DC (+10% -15%) @ 120 mA max.

### TRANSFORMER DATA

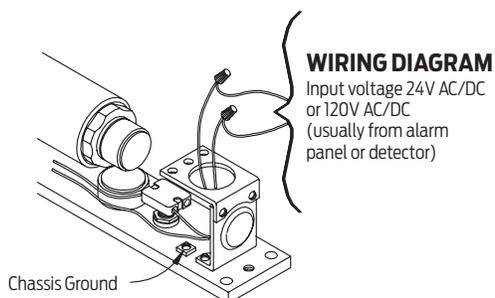
120V AC 50-60 Hz (primary); 24V AC @ 400 mA max. (secondary)  
An LCN supplied transformer will power (recommended) 2 SE, 3 SE/ME, and 15 SEM.

### ME WIRING

ME "ON/OFF" switch assembly includes trim pot to adjust pull out force and fuse to protect solenoid.



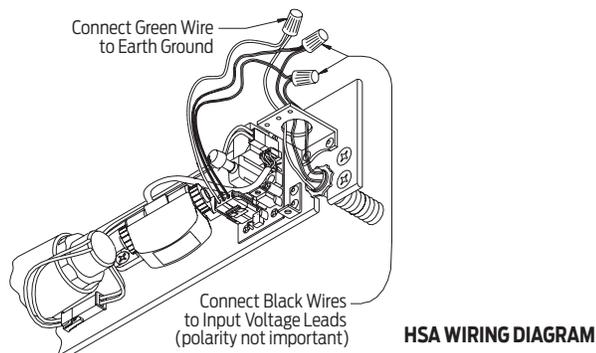
**ME (4310, 4410) WIRING DIAGRAM (24V only)**



**ME (2310) WIRING DIAGRAM**

## HSA WIRING

HSA "On/Off" switch assembly includes trim pot to adjust hold-open time and fuse to protect solenoid.



## FEATURES COMMON TO FIRE/LIFE SAFETY CLOSERS

- 24V AC/DC or 120V AC input, please specify for SE or ME.
- When current is interrupted, hold-open releases and door closes.
- Adjustable hydraulic backcheck cushions opening swing prior to 90°.
- Separate regulation of general closing speed and latching speed.
- Available in a wide range of powder coated finishes to blend with door and frame. SEM magnets available in Aluminum and Dark Bronze only.
- Circuit automatically handles AC or DC input.
- Can be pushed safely and easily out of hold-open.
- Functions as a full rack and pinion door closer when hold-open is not engaged or current is interrupted.
- Works with ionization, photoelectric and heat sensing detectors (by others).

## WARRANTY

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

## SPECIFICATIONS

Refer to "SPECIFICATIONS" section for suggested architectural specifications.

## DESIGN ASSISTANCE

LCN has been providing reliable solutions to unique door control problems since 1925.

Contact LCN for assistance or technical information at **877-671-7011** or FAX **800-248-1460 (order entry)**, Fax **815-879-1495** for Application Engineering.

## MATERIALS

- High strength **cast iron** cylinder.
- **Forged steel** main arm.
- One piece **forged steel** piston.
- **All weather fluid** eliminates seasonal adjustments.
- **High efficiency, full complement**, low friction bearings.
- Tamper resistant regulating screws.
- Quiet, low friction track and roller combination for all single lever arm closers.

## 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.
- Plated finishes are available as an option to accent door and frame.

## MAINTENANCE

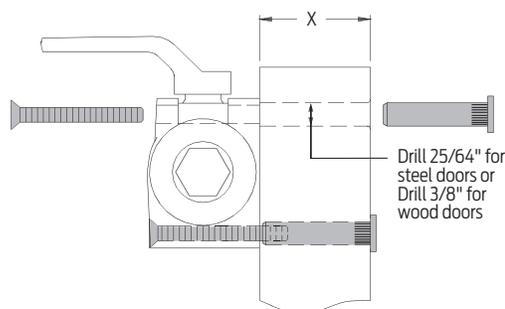
Closers mounted according to LCN installation instructions require no periodic adjustments. Quarterly inspections are recommended. Refer to the installation instructions for complete, product specific details.

## POSITIVE PRESSURE

LCN closers have been certified for three hours by UL to be in compliance with UL 10 C. Contact LCN for specific details on door closer fire ratings.

## FASTENERS

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



NOTE 1: For Thru Bolts, specify door thickness if other than 1-3/4" (44 mm).  
NOTE 2: Phillips head, metric machine screws are available on special order.



The Sentronic® SEM 7800 Series are heavy duty, electrically controlled door holding magnets. Magnets are fail safe and hold until the current is interrupted. A manual door closer is used to control and close the door. A choice of floor, recessed wall, or surface mounted wall magnets are available.

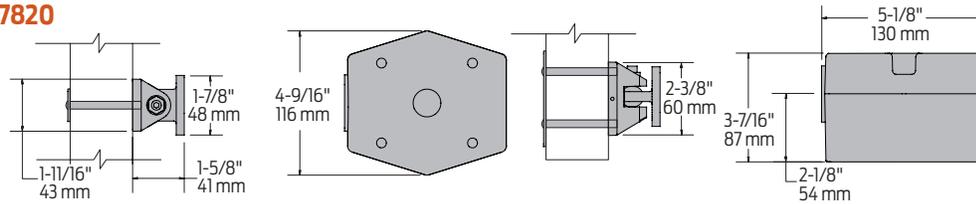
<b>Certifications</b>	Grade 1 - ANSI A156.15, UL 10C for metal smoke barrier or labeled door, Life Safety Code, NFPA 101, 100 Hour Salt Spray, Meets BAA - Buy American Act
<b>Voltage</b>	Tri-voltage design with 35 lbs. of holding force
<b>Housing</b>	Die cast
<b>Fasteners</b>	Wood and machine screw pack
<b>Finishes/Colors/ Powder Coat</b>	Available in Aluminum and Dark Bronze only
<b>Options</b>	Now available with armature extensions (see page 11)

# SEM7800 Series

## Magnets

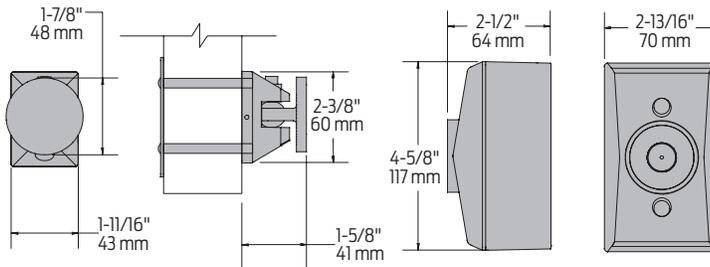
Features and mounting details

### 7820



<b>Mounting</b>	Floor mounted
<b>Total Projection</b>	6-3/4" (171 mm)

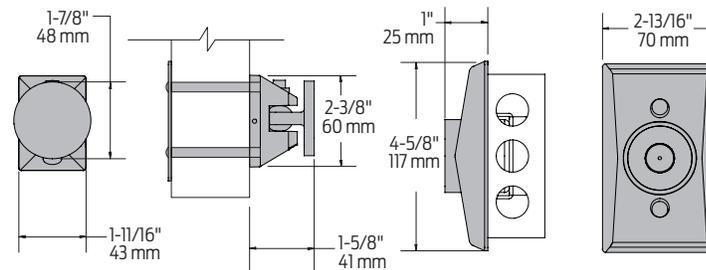
### 7830



<b>Mounting</b>	Surface wall mounted
<b>Total Projection</b>	4-1/8" (105 mm)

- Suitable for use in pocket door installations

### 7840



<b>Mounting</b>	<ul style="list-style-type: none"> <li>■ Low profile recessed wall mount</li> <li>■ 2" (51 mm) x 4" (102 mm) x 1-1/2" (38 mm)</li> </ul>
-----------------	--

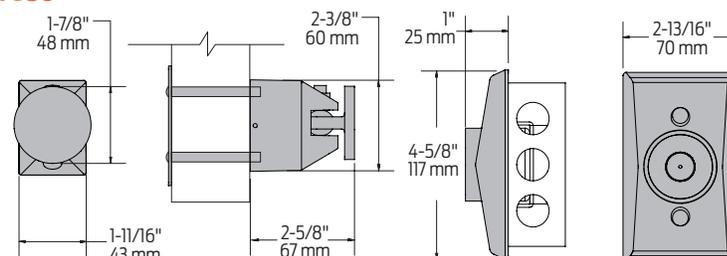
<b>Total Projection</b>	2-5/8" (67 mm)
-------------------------	----------------

- Suitable for use in pocket door installations

Note:

Outlet box not included.

### 7850



<b>Mounting</b>	<ul style="list-style-type: none"> <li>■ Standard profile recessed wall mount</li> <li>■ 2" (51 mm) x 4" (102 mm) x 1-1/2" (38 mm)</li> </ul>
-----------------	---

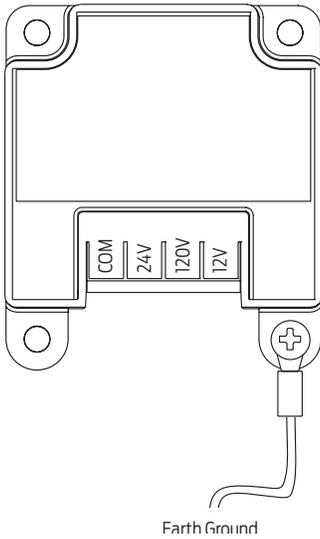
<b>Total Projection</b>	3-5/8" (92 mm)
-------------------------	----------------

- Suitable for use in pocket door installations

Note:

Outlet box not included.

**Voltage input**



**Electrical schematic**

**Operation:**  
Electromagnets are typically used with fire alarm systems. Doors are held open in the non-alarm condition. When the fire alarm panel enters the alarm condition, power to the electromagnets is removed, the doors close under door closer control, and function as a manual door. When the fire alarm panel returns to the non-alarm condition, power is reapplied to the electromagnets and the doors can be held open again.

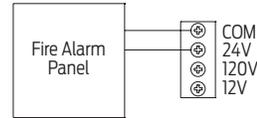


Fig. 1 24V AC/DC Wiring  
Polarity is inimportant

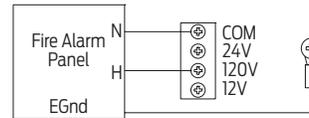


Fig. 2 120V AC Wiring

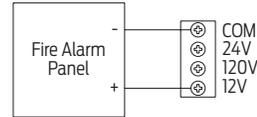


Fig. 3 12V DC Wiring  
Polarity as shown

Electrical Specifications  
Max. Current Draw  
.030A @ 12VDC  
.020A @ 24VAC/DC  
.020A @ 120VAC

<b>Holding Force</b>	35 lbs. @ nominal input voltage
<b>Maximum Current Draw</b>	<ul style="list-style-type: none"> <li>■ .020A @ 24VAC/DC, 120VAC</li> <li>■ .030A @ 12VDC</li> </ul>

**Magnets**



**SEM7820-516**  
Floor Magnet

- Magnet coil
- Standard



**SEM7830-516**  
**SEM7840-516**  
**SEM7850-516**  
Wall Magnet

- Magnet coil
- Standard

**Armatures**



**SEM7820-825**  
**SEM7830-825**  
**SEM7840-825**  
Door Armature

- Die cast low profile armature
- Standard



**SEM7850-828**  
Door Armature

- Die cast armature
- Standard

**Cover**



**SEM7830-72**  
**SEM7840-72**  
**SEM7850-72**  
Standard Cover

- Die cast cover
- Standard

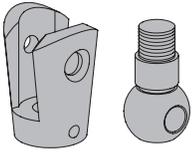
**Box**



**SEM7830-268**  
Wall Box

- Die cast surface wall mount box
- Standard

**Extensions**



**SEM7810-514**  
Coupler Assembly Kit

- Required for each door needing extension(s)
- Kit includes coupler link and ball pivot (alone serves as a 1-1/2" extension)



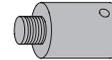
**SEM7810-E050**  
Extension - 1/2"

- Metal
- Standard



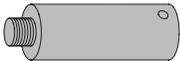
**SEM7810-E075**  
Extension - 3/4"

- Metal
- Standard



**Extension, SEM7810-E100**  
Extension - 1"

- Metal
- Standard



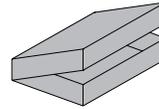
**SEM7810-E200**  
Extension - 2"

- Metal
- Standard



**Extension, SEM7810-E400**  
Extension - 4"

- Metal
- Standard



**SEM7810-517**  
Extension kit

- Extension kit includes:
- 10 .....7810SEM-E050
  - 10 .....7810SEM-E075
  - 10 .....7810SEM-E100
  - 5 .....7810SEM-E200
  - 20 .....7810SEM-514

*Note: Using just the Coupler Assembly Kit (SEM7810-514) will create a 1-1/2" link.  
Extension Links are available in different lengths and can be combined together to achieve the desired length. Max. recommended length = 12"*

# SEM7800 Series

## Ordering Information

### How-to-order SEM 7800 series magnets

#### Select magnet series

- SEM7820
- SEM7830
- SEM7840
- SEM7850

#### Specify finish

- Standard Powder Coat \_\_\_\_\_  
Aluminum, Dark Bronze

#### Magnets will be shipped with:

- Die cast housing
- Cover
- Armatures
- WMS screw pack

### How-to-order SEM 7810 extensions

#### Select magnet series

- SEM7810-514 (qty.) \_\_\_\_\_
- SEM7810-E050 (qty.) \_\_\_\_\_
- SEM7810-E075 (qty.) \_\_\_\_\_
- SEM7810-E100 (qty.) \_\_\_\_\_
- SEM7810-E200 (qty.) \_\_\_\_\_
- SEM7810-E400 (qty.) \_\_\_\_\_
- SEM7810-517 (qty.) \_\_\_\_\_

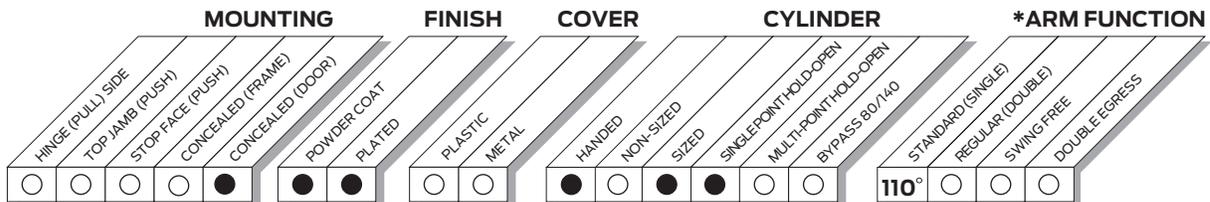


The 3130SE SENTRONIC® is a concealed in the door, closer/ holder designed to provide single point hold-open for fire and smoke barrier doors. Door is held open until current interruption releases the holding mechanism and the door closes. Single lever (track) arm closer is specifically designed for interior doors.

<b>Certifications</b>	Grade 1 - ANSI A156.15, UL/for metal smoke barrier or labeled door, Life Safety Code, NFPA 101, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Wood and machine screw pack
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-1/8" Diameter Piston</li> <li>■ 9/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Mounting</b>	Concealed (in door) for interior smoke barrier and labeled doors
<b>Fluid</b>	All Weather Fluid	<b>Arms</b>	Standard, handed arm and non-handed track
<b>Handing</b>	Handed	<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>Size</b>	Size 3 or 4, non-adjustable		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
<b>Warranty</b>	2 years		

**Special Templates**

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



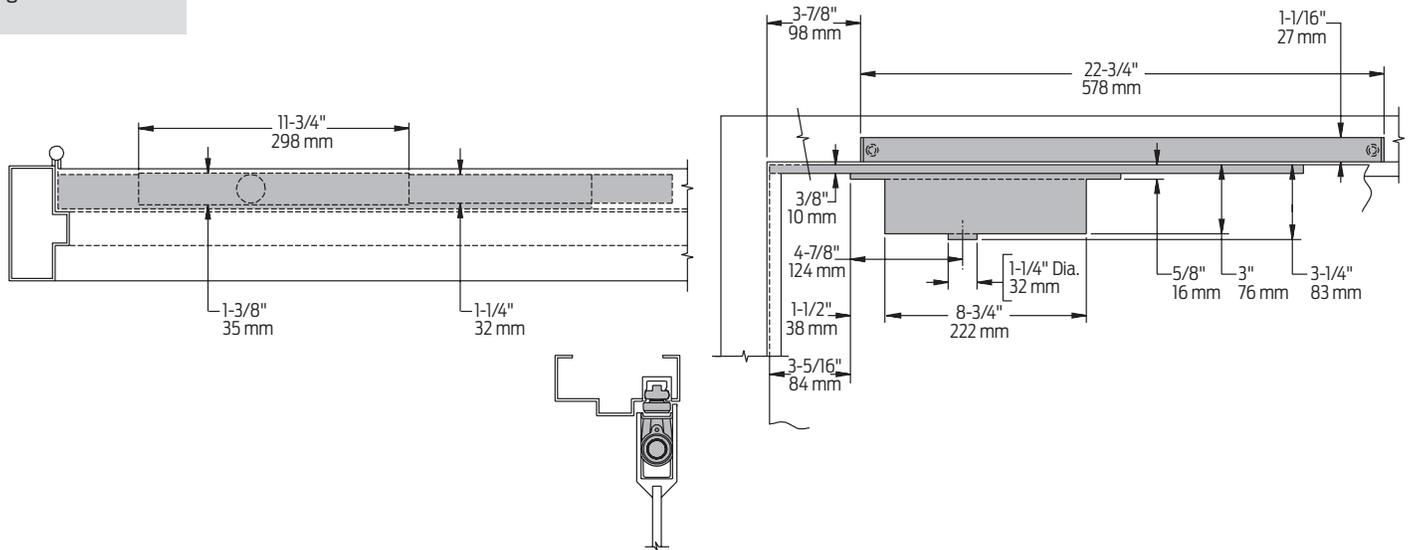
● AVAILABLE  
○ NOT AVAILABLE

\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.

# 3130SE Series

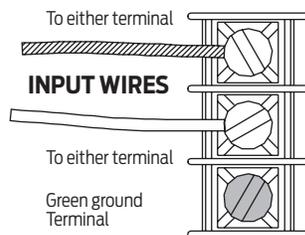
## Mounting details

### Concealed Mounting



<b>Butt Hinges</b>	<ul style="list-style-type: none"> <li>Should not exceed 5" (127 mm) in width</li> <li>Consult factory for pivot hung installations</li> </ul>
<b>Auxiliary Stop</b>	Recommended at hold-open point
<b>Top Rail</b>	Minimum 4" (102 mm)
<b>Door Thickness</b>	<ul style="list-style-type: none"> <li>1-3/4" (44 mm) minimum</li> <li>Please consult the door manufacturer to assure that the door integrity and warranty is maintained after installing the 3130SE Series door closer in 1-3/4" (44 mm) thickness wood doors</li> </ul>
<b>Door Width</b>	<ul style="list-style-type: none"> <li>2' 4" (711 mm) minimum for single door with SE</li> <li>2' 8" (813 mm) minimum for door with SEL</li> </ul>
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>Templating allows 110°</li> <li>Hold-open points between 85° and 110° in approximately 3° increments</li> <li>SEL arm and track locate hold-open at 110°, 120° and 130°</li> </ul>
<b>SE, SEL Electrical Options</b>	<ul style="list-style-type: none"> <li>These track assemblies require a single power circuit for the holding solenoid</li> <li>SE or SEL holding solenoid is either 24V or 120V input, please specify</li> <li>An optional 4040SE-3210 or 8310-824 TRANSFORMER reduces 120V AC line voltage to 24V AC</li> <li>Circuitry accepts either AC or DC input</li> </ul>
<b>Options</b>	<ul style="list-style-type: none"> <li>Long (SEL) track and arm</li> <li>24V or 120V input, please specify</li> </ul>

#### SE Wiring Diagram



- For interior smoke barrier and labeled fire doors
- Functions as full rack and pinion door closer when hold-open is not engaged or current is interrupted
- Interfaces with fire alarm system

### Cylinder



**3130SE-3071**  
SE Cylinder Assembly

- Handed
- Cast iron
- For various applications see "Table of Sizes" on 3130SE Series page 16
- Standard

### Arms



**3130SE-3077T**  
Standard Arm

- Handed
- Adjustable to select hold-open point
- Standard



**3130SEL-3077T**  
Long Arm

- Handed
- Provides hold-open point from 110° to 130°, determined by track templating
- Used with SEL TRACK 3130SEL-3038 only
- Optional

### Tracks



**3130SE-3038**  
SE Track

- Non-handed
- Circuitry accepts either AC or DC input
- 24V holding solenoid (24) or 120V holding solenoid (120), please specify
- Standard



**3130SEL-3038**  
SEL Long Track

- Non-handed
- Used with LONG ARM, 3130SEL-3077T, only
- Provides hold open point from 110° to 130°, determined by templating. Circuitry accepts either AC or DC input
- 24V holding solenoid (24) or 120V holding solenoid (120), please specify
- Optional

### Installation Accessories



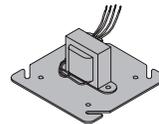
**3130SE-81**  
Conduit Quick-Connector

- Two piece connector for use with 1/2" conduit
- See page 21 for illustration



**3130SE-3034SE**  
Track Roller & Track Slider

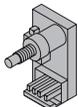
- Quiet, low friction roller assembly
- Shoulder dimension "X" = 1/8" (3 mm)
- Alloy metal slider for use in SE series tracks only



**4040SE-3210**  
Transformer

- Reduces line voltage from 120V to 24V AC
- Mounted on plate for 4" (102 mm) x 4" x 2-1/8" (54 mm) junction box (by others)

### Switch



**3130SE-3436**  
Test Switch

### How-to-order 3130SE Series closers

#### Select cylinder size

- 3133SE
- 3134SE

#### Select hand

- RH
- LH

#### Voltage

- 24V AC/DC
- 120V AC/DC

#### Specify finish

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

#### Closer will be shipped with:

- Standard arm
- Track roller and slider
- Standard track
- Wood & machine screw pack  
unless options listed below are selected.

### Closer options

#### Arm

- Long Arm\* (LONG)
- \* use with SEL track only

#### Finishes

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

#### Installation accessories

- Transformer, 4040SE-3210

#### Screw pack

- TORX Machine Screw (TORX)

#### Special template

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

### Table of sizes

- Select closer based on width of door
- Sized 3130SE series cylinders available in size 3 or 4
- Closing power of all 3130SE Series closers is not adjustable

#### Interior door width

	28" 711mm	34" 864mm	38" 965mm	48" 1219mm
			size 3	size 4
3133SE	→			
3134SE	→			

Minimum door width

→ Indicates recommended range of door width for closer size.

NOTE: For SE, minimum door width 28" (711mm)  
For SEL, minimum door width 32" (813mm)

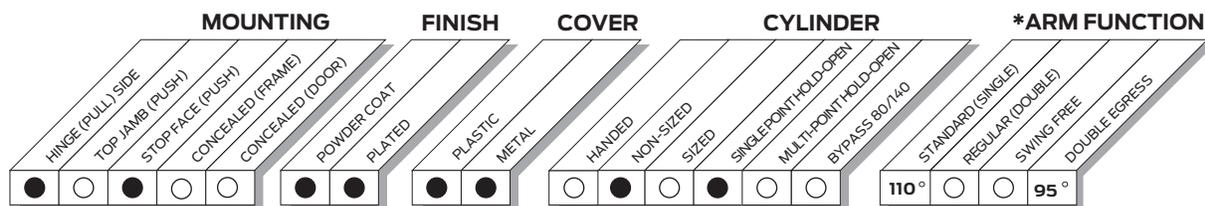


The 4040SE SENTRONIC<sup>®</sup> is a heavy duty, non-handed, nonsized closer/holder designed to provide single point hold-open for fire and smoke barrier doors. The door is held open until current interruption releases the holding mechanism and the door closes. Single lever (track) arm closer is specifically designed for interior doors. Choice of finishes, track functions, and installation accessories meet virtually all life safety requirements.

<b>Certifications</b>	Grade 1 - ANSI A156.15, UL 10C, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101	<b>Cover</b>	<ul style="list-style-type: none"> <li>Clip-on plastic, standard</li> <li>Metal, optional</li> </ul>
<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 screw pack
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Hinge (Pull Side), Stop Face (Push Side)
<b>Handing</b>	Non-Handed	<b>Arms</b>	Standard arm and SE track, standard Double egress arm and SEL track, optional
<b>Size</b>	Adjustable Spring Size, up to 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	<b>Wiring</b>	Concealed or surface, interfaces with fire alarm systems

**Special Templates**

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



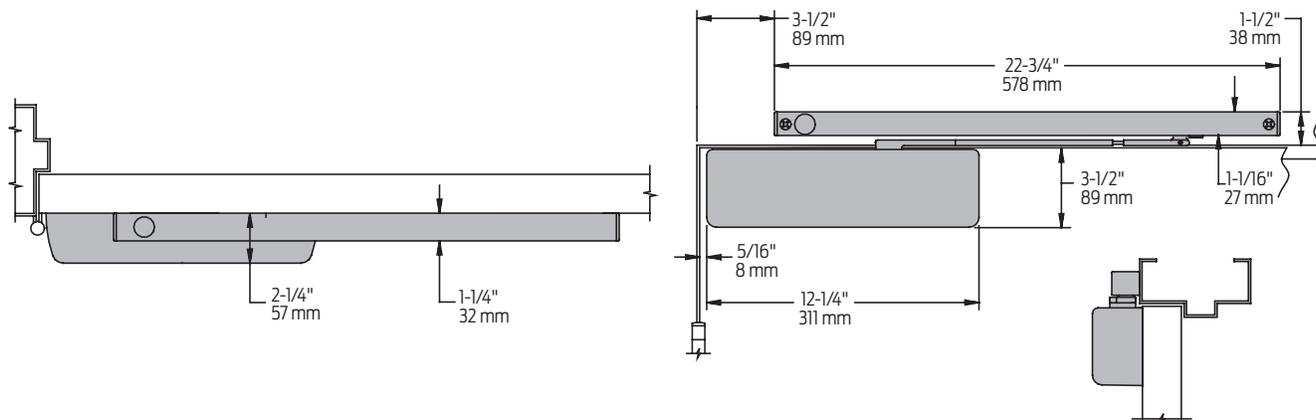
● AVAILABLE  
○ NOT AVAILABLE

\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.

# 4040SE Series

## Mounting details

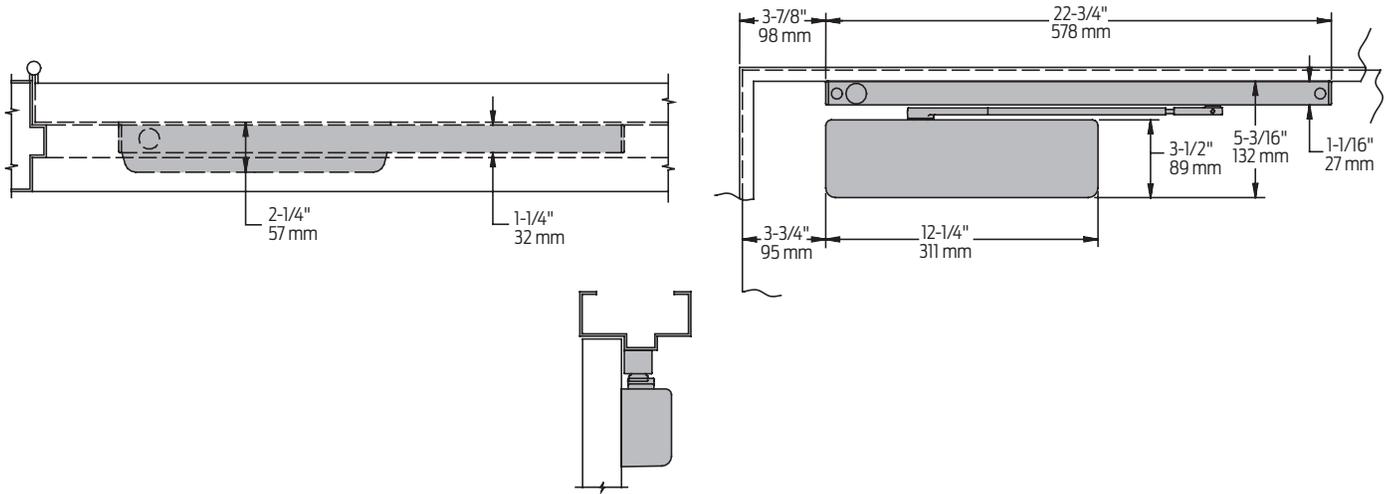
Hinge (Pull)  
Side Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Swing Clear Hinges</b>	Consult factory
<b>Auxiliary Stop</b>	Recommended at hold-open point
<b>Reveal</b>	<ul style="list-style-type: none"> <li>Should not exceed 1/8" (3 mm) for standard arm</li> <li>Should not exceed 2-11/16" (68 mm) for double egress arm</li> </ul>
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Minimum 3-1/2" (89 mm)</li> <li>Installation with PLATE, 4040SE-18 requires SPECIAL TEMPLATE and 1-3/4" (44 mm) minimum top rail</li> </ul>
<b>Head Frame</b>	Requires 2" (51 mm) minimum
<b>Flush Ceiling</b>	2" (51 mm) head frame does not require special templating
<b>Door Width</b>	<ul style="list-style-type: none"> <li>2' 4" (711 mm) minimum for single door with SE</li> <li>4' 8" (1422 mm) minimum for paired doors with SE</li> </ul>
<b>Flush Ceiling</b>	2-3/8" (60 mm) behind door required for 90° installation
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>Templating allows 110°</li> <li>Hold-open points between 85° and 110° in approximately 3° increments</li> <li>Pull side mounting on a double egress frame requires a handed double egress arm</li> <li>Maximum hold-open to 95°</li> <li>2-11/16" (67 mm) maximum reveal on pull side</li> <li>SEL track provides hold-open points between 90° and 120°, in approximately 3° increments</li> </ul>
<b>SE, SEL Electrical Options</b>	<ul style="list-style-type: none"> <li>These track assemblies require a single power circuit for the holding solenoid</li> <li>SE or SEL holding solenoid is either 24V or 120V input, please specify</li> <li>An optional 4040SE-3210 or 8310-824 TRANSFORMER reduces 120V AC line voltage to 24V AC.</li> <li>Circuitry accepts either AC or DC input</li> </ul>
<b>Options</b>	<ul style="list-style-type: none"> <li>Long (SEL) track</li> <li>Handed double egress arm for reveal under 2-11/16" (67 mm)</li> </ul>
<b>SE Wiring Diagram</b>	See "FIRE/LIFE SAFETY" section page 19 for typical wiring and electrical diagram

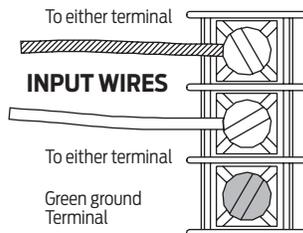
**Notes:**

- Information applies to 4040 SE unless otherwise specified
- Hold-open force is adjustable
- Momentary on/off switch board assembly for testing door release also provides over-voltage protection. Field replaceable
- Functions as a full rack and pinion closer when hold-open is not engaged or current is interrupted



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Minimum 5-3/4" (146 mm)</li> <li>Installation with PLATE, 4040SE-18PA requires SPECIAL TEMPLATE and 2" (51 mm) minimum top rail</li> </ul>
<b>Stop Width</b>	1-1/4" (32 mm) minimum
<b>Door Width</b>	<ul style="list-style-type: none"> <li>2' 4" (711 mm) minimum for single door with SE</li> <li>4' 8" (1422 mm) minimum for paired doors with SE</li> </ul>
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>Templating allows 110°</li> <li>Hold-open points between 85° and 110° in approximately 3° increments</li> <li>SEL track provides hold-open points between 90° and 120°, in approximately 3° increments</li> </ul>
<b>SE, SEL Electrical Options</b>	<ul style="list-style-type: none"> <li>These track assemblies require a single power circuit for the holding solenoid</li> <li>SE or SEL holding solenoid is either 24V or 120V input, please specify</li> <li>An optional 4040SE-3210 or 8310-824 TRANSFORMER reduces 120V AC line voltage to 24V AC</li> <li>Circuitry accepts either AC or DC input</li> </ul>
<b>Options</b>	<ul style="list-style-type: none"> <li>Long (SEL) track</li> </ul>

#### SE Wiring Diagram



#### Notes:

- Information applies to 4040 SE closers unless otherwise specified
- Momentary on/off switch board assembly for testing door release also provides over-voltage protection. Field replaceable
- Functions as a full rack and pinion closer when hold-open is not engaged or current is interrupted

### Cylinder



**4040SE-3071**  
Cylinder Assembly

- Non-handed
- Cast iron
- Standard

### Covers



**4040SE-72**  
Plastic Cover

- Non-handed
- Clip-on
- Standard



**4040SE-72MC**  
Metal Cover

- Handed
- Required for plated finishes and custom powder coat finishes
- Optional

### Arms



**4040SE-3077T**  
Standard Arm

- Non-handed
- Adjustable to select hold-open point



**4040SE-3077DE**  
Double Egress Arm

- Handed
- For pull side installations on double egress doors and frames
- Not required for push side mounting on double egress frames
- Optional

### Tracks



**4040SE-3038**  
SE Track

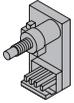
- Non-handed
- For SE closers. Mounts on either head frame or stop
- 24V or 120V AC/DC input for holding solenoid, please specify.
- Includes test switch assembly with fuse
- Standard



**4040SEL-3038**  
SEL Long Track

- Non-handed
- Mounts on either head frame or stop
- 24V or 120V AC/DC input standard for holding solenoid, please specify
- Includes test switch assembly with fuse
- Optional

### Switch



**4040SE-3436**  
Test Switch

### Installation Accessories



**4040SE-18**  
Plate

- Required where top rail is less than 3-1/2" (89 mm)
- Requires minimum 2" (51 mm) top rail
- Installations require a SPECIAL TEMPLATE



**4040SE-18PA**  
Plate

- Required where top rail is less than 5-3/4" (146 mm)
- Requires minimum 2" (51 mm) top rail
- Installations require a SPECIAL TEMPLATE



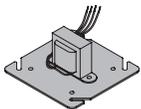
**4040SE-81**  
Conduit Quick-Connector

- Two piece connector for use with 1/2" conduit



**4040SE-3034SE**  
Track Roller & Track Slider

- Quiet, low friction roller assembly
- Shoulder dimension "X" = 1/8" (3 mm)
- Alloy metal slider for use in SE series tracks only



**4040SE-3210**  
Transformer

- Reduces line voltage from 120V to 24V AC
- Mounted on cover for 4" (102 mm) x 4" x 2-1/8" (54 mm) junction box (by others)

### How-to-order 4040SE Series closers

#### Select cylinder size

- SE
- SEL

#### Voltage

- 24V AC/DC
- 120V AC/DC

#### Specify finish

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

#### Closer will be shipped with:

- Standard cylinder
- Standard clip-on cover
- Standard arm
- Standard track
- Wood & machine screw pack  
unless options listed below are selected.

### Closer options

#### Cover

- Metal (MC) (please specify right or left hand)

#### Finishes

- Custom Powder Coat (RAL) (handed metal cover required)
- Plated Finish, US \_\_\_\_\_ (handed metal cover required)

#### Arm

- Double Egress (DE) (please specify right or left hand)

#### 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"

#### Installation accessories

- Plate, 4040SE-18
- Plate, 4040SE-18PA
- Transformer, 4040SE-3210

#### Special template

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

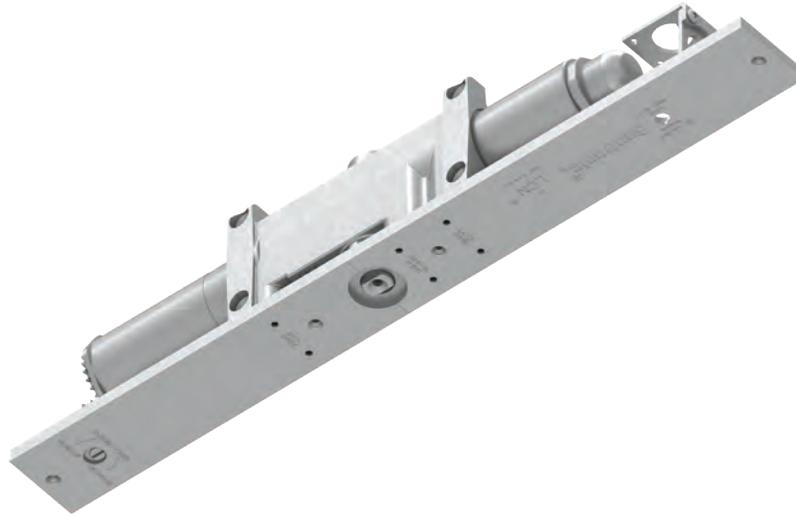
### Table of sizes

- 4040SE series cylinders accommodate interior doors up to 48" (1219 mm) wide
- Closing power of 4040SE Series closers is adjustable through a range of sizes up to size 4



Indicates recommended range of door width for closer size.

*NOTE: For SE on paired door, min. width 60" (1524 mm).  
For SE, minimum door width 28" (711 mm).  
For SEL, minimum door width 30" (762 mm).  
Details are listed on the MOUNTING DETAILS pages.*

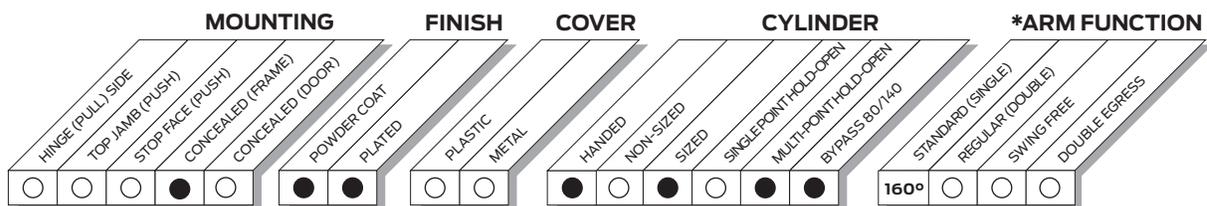


The 2310ME SENTRONIC® is a concealed heavy duty, electrically controlled closer/holder designed to provide infinitely adjustable hold-open for fire and smoke barrier doors. Door is held open until current interruption releases mechanism and the door closes. Single lever (track) arm closer is specifically designed for interior doors. Choice of finishes, cylinder functions, and installation accessories meet virtually all life safety requirements.

<b>Certifications</b>	Grade 1 - ANSI A156.15, UL 10C, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101	<b>Fasteners</b>	Wood and machine screw pack
<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>11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Mounting</b>	Concealed (in frame)
<b>Fluid</b>	All Weather Fluid	<b>Arms</b>	Standard handed arm and non-handed track ( two piece metal finish plate)
<b>Handing</b>	Handed	<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> <li>Optional SRI primer - powder coat only</li> <li>Optional plated finishes</li> </ul>
<b>Size</b>	Sized, 4 only	<b>Wiring</b>	<ul style="list-style-type: none"> <li>Concealed or exposed</li> <li>Built in on/off switch controls hold-open function</li> <li>Interfaces with fire alarm system</li> </ul>
<b>Warranty</b>	2 years		

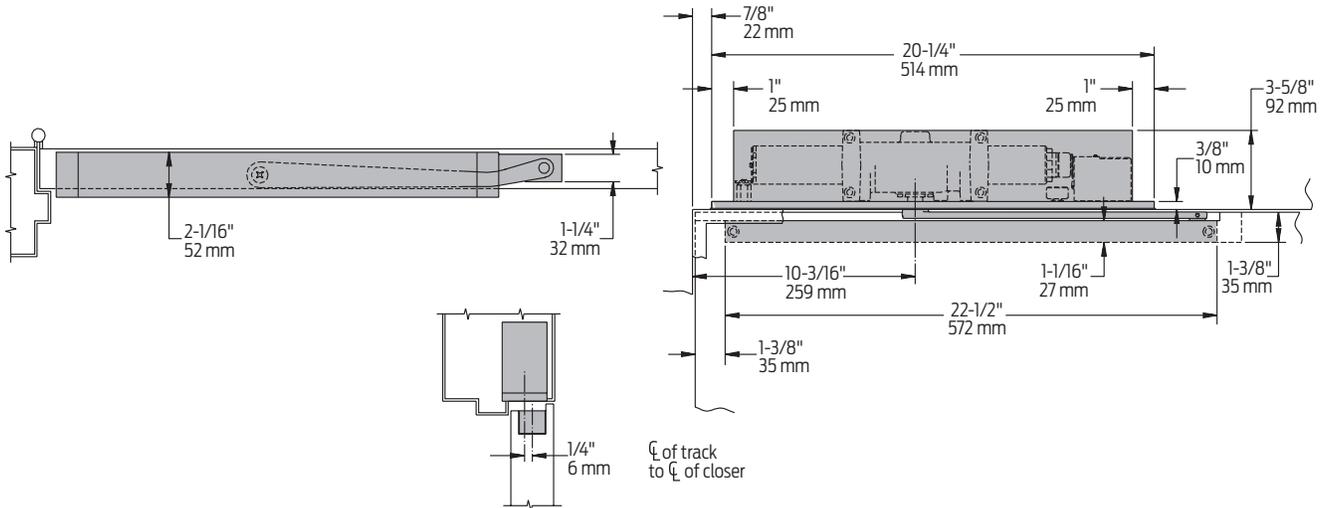
**Special Templates**

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



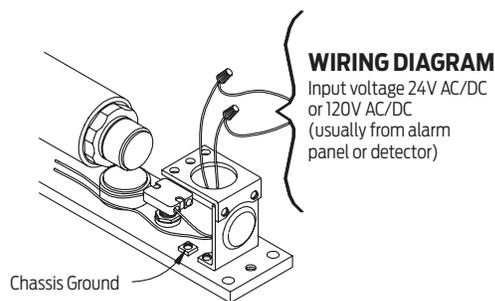
● AVAILABLE  
○ NOT AVAILABLE

\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>1-3/8" (35 mm) mortise required</li> <li>5/16" (8 mm) cutout required at top of door, stop face only</li> </ul>
<b>Door Thickness</b>	1-3/4" (44 mm) minimum
<b>Door Width</b>	2' 4" (711 mm) minimum
<b>Hollow Metal Frame</b>	<ul style="list-style-type: none"> <li>Requires minimum 4" (102 mm) x 4" frame</li> <li>Consult factory or template for preparation details</li> </ul>
<b>Bypass</b>	<ul style="list-style-type: none"> <li>(suffix "B80" or "B140") eliminates hold-open function up to a specified point of door swing</li> <li>B80 cylinder from 0° to 80°</li> <li>B140 cylinder from 0° to 140°</li> </ul>
<b>Maximum Opening</b>	Templating allows 180° with hold-open points up to 160°
<b>Options</b>	<ul style="list-style-type: none"> <li>Hold-open bypass</li> <li>24V or 120 volt input, please specify</li> </ul>

#### Me (2310) Wiring Diagram



#### Notes

- For interior smoke barrier and labeled fire doors
- Functions as full rack and pinion door closer when hold-open is not engaged or when current is interrupted

### Cylinders



**2310ME-3971**  
ME Cylinder Assembly

- Handed
- Cast iron
- Specify 24V or 120V
- Standard



**2310ME-3071**  
ME Cylinder/Plate Assembly

- Handed
- "On/Off" switch assembly controls the hold-open function.
- Circuitry accepts either AC or DC input. Specify 24V or 120V
- Standard

### Arm



**2310ME-3077T**  
Standard Arm

- Handed

### Track



**2310ME-3038**  
Standard Track

- Non-handed
- Standard

### Switch



**2310ME-3351**  
Switch

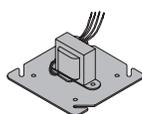
- "On/Off" switch assembly provides continuous hold-open function
- 24V or 120V, please specify

### Installation Accessories



**2310ME-420**  
Fire Shield

- 22 gauge steel liner mounts in the track mortise of the door's top rail for 20 minute labeled wood doors with hollow metal frames



**2310ME-3210**  
Transformer

- Reduces line voltage from 120V to 24V AC
- Mounted on plate for 4" (102 mm) x 4" x 2-1/8" (54 mm) junction box (by others)



**2310ME-3034**  
Track Roller

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

### How-to-order 2310ME Series closers

#### Select hand

- RH
- LH

#### Voltage

- 24V AC/DC
- 120V AC/DC

#### Specify finish

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

#### Closer will be shipped with:

- Finish plates
- Standard arm
- Standard track
- Track roller
- Wood & machine screw pack  
unless options listed below are selected.

## Closer options

#### Cylinder function

- Bypass 80° (B80)
- Bypass 140° (B140)

#### Finishes

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

#### Screw pack

- TORX Machine Screw (TORX)

#### Installation accessories

- Fire Shield, 2310ME-420
- Transformer, 2310ME-3210

#### Special template

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

## Table of sizes

- Closing power of 2314ME Series closers may be increased 15%

#### Interior door width



→ Indicates recommended range of door width for closer size.

NOTE: For SE, minimum door width 28" (711mm)  
For SEL, minimum door width 32" (813mm)

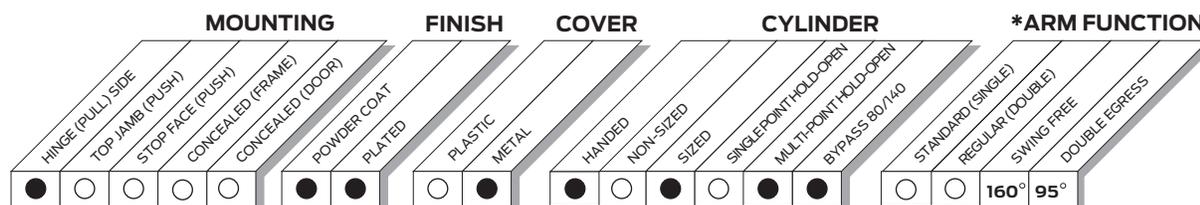


The 4310ME SENTRONIC® is a heavy duty, electrically controlled closer/holder designed to provide infinitely adjustable hold-open for fire and smoke barrier doors. Door is held open until current interruption releases mechanism and the door closes. Single lever (track) arm closer is specifically designed for interior doors. Choice of finishes, cylinder functions, and installation accessories meet virtually all life safety requirements. An ME provides only the closer / holder function.

<b>Certifications</b>	Grade 1 - ANSI A156.15, UL 10C, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101	<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>11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Fasteners</b>	Wood and machine screw pack
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Hinge (Pull Side)
<b>Handing</b>	Handed	<b>Arms</b>	Swing free arm, standard Double egress, optional
<b>Size</b>	Sized, 4 only	<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>
<b>Wiring</b>	<ul style="list-style-type: none"> <li>Concealed or exposed electrical connectors</li> <li>Built in "On/Off" switch controls hold-open function</li> <li>Interfaces with fire alarm systems</li> </ul>		

### Special Templates

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



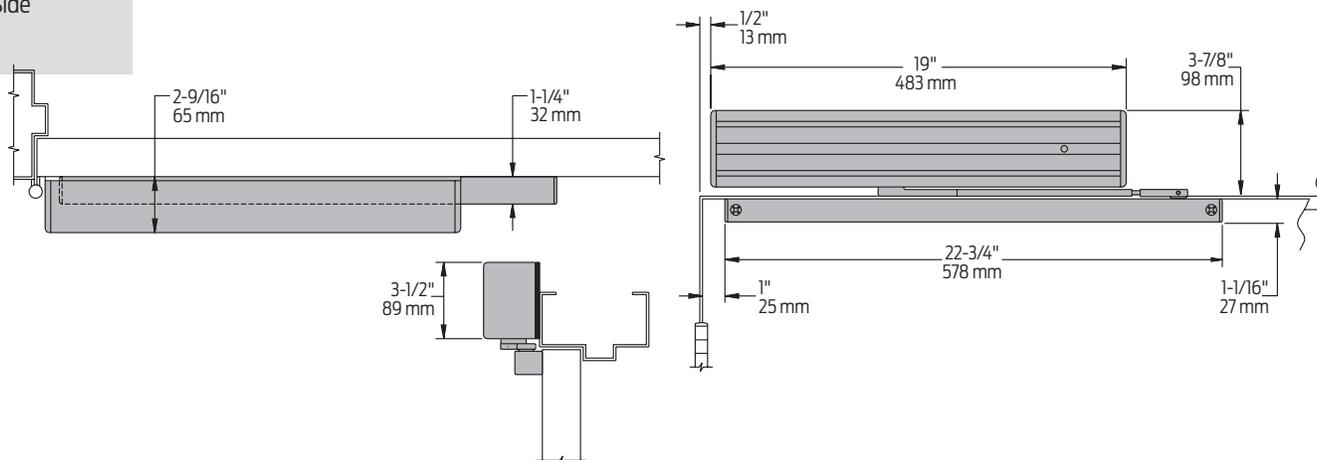
● AVAILABLE  
○ NOT AVAILABLE

\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.

# 4310ME Series

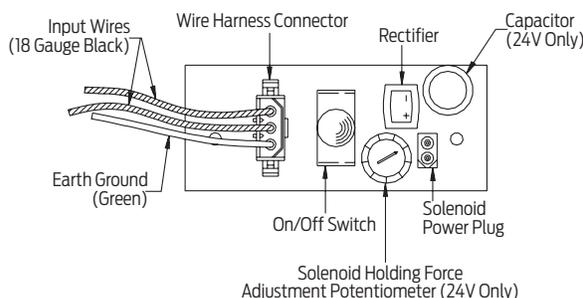
## Mounting details

### Hinge (Pull) Side Mounting



<b>Butt Hinges</b>	Should not exceed 4-1/2" (114 mm) in width
<b>Top Rail</b>	1-1/16" (27 mm) minimum
<b>Reveal</b>	<ul style="list-style-type: none"> <li>Should not exceed 1/8" (3 mm) for Swing-Free arm</li> <li>Should not exceed 2-11/16" (68 mm) for double egress arm</li> </ul>
<b>Head Frame</b>	Requires 2" (51 mm) minimum
<b>Clearance</b>	1-1/4" (32 mm) behind door required for installation
<b>Bypass</b>	<ul style="list-style-type: none"> <li>(suffix "B80 or B140") eliminates hold-open function up to a specified point of the doors swing</li> <li>B80 cylinder from 0° to 80°</li> <li>B140 cylinder from 0° to 140°</li> </ul>
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>Templating allows 180° with hold-open points up to 160°</li> <li>Optional double egress arm limited to 95°</li> <li>Please note that many track style door closers are capable of allowing 180° of door swing.</li> <li>Be aware that the majority of track style closers are at their weakest closing force in the 180° – 130° range</li> <li>Consult factory for applications where exterior or large/heavy door must swing 180°</li> </ul>
<b>ME Electrical Options</b>	<ul style="list-style-type: none"> <li>These assemblies have a single electrical circuit with a choice of voltages</li> <li>A separate TRANSFORMER, 4040SE-3210, can be used to reduce line voltage to 24V AC</li> <li>Circuitry accepts either AC or DC input</li> <li>Please specify 24V or 120V</li> </ul>
<b>Options</b>	<ul style="list-style-type: none"> <li>Hold-open bypass</li> <li>24V or 120 volt input, please specify</li> </ul>

### ME (4310, 4410) Wiring Diagram



#### Notes:

- Information applies to ME closer
- Functions as full rack and pinion door closer when hold-open is not engaged or when current is interrupted with Swing-Free arm engaged
- Swing free arm allows door to be moved without door closer resistance

### Cylinder



**4310ME-3971**  
ME Cylinder Assembly

- Handed
- Cast iron
- Specify 24V or 120V
- Standard



**4310ME-3071**  
ME Cylinder/Plate Assembly

- Handed
- “On/Off” switch assembly controls hold-open function
- Circuitry accepts either AC or DC input
- 24V or 120V, please specify
- Standard

### Cover



**4310ME-72MC**  
Metal Cover

- Handed
- Standard

### Arms



**4310ME-3077SF**  
Swing-Free Arm

- Handed
- After door is placed in hold-open, secondary pivot point allows up to 160° swing without door closer resistance



**4310ME-3077DE**  
Double Egress Arm

- Handed
- For double egress doors and frames
- 2-11/16” (68 mm) maximum reveal
- Optional

### Track

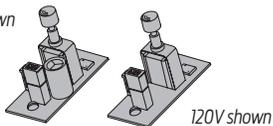


**4310ME-3038**  
Track

- Non-handed
- Standard

### Switch

24V shown



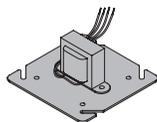
#### 4310ME-3351 Switch Assembly

- Provides continuous hold-open function
- 24V or 120V, please specify



#### 4310ME-3034 Track Roller

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



#### 4310-3210 Transformer

- Reduces line voltage from 120V to 24V AC
- Mounted on cover for 4" (102 mm) x 4" x 2-1/8" (54mm) junction box (by others)



#### 4310ME-3354 ME Wiring Harness

- Three wire harness with 6" (152 mm) leads for field wiring connections

### How-to-order 4310ME Series closers

#### Select hand

- RH
- LH

#### Voltage

- 24V AC/DC
- 120V AC/DC

#### Specify finish

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

#### Closer will be shipped with:

- Standard cover
- Swing-free (sf) arm
- Standard track
- Track roller
- Wood & machine screw pack  
unless options listed below are selected.

### Closer options

#### Cylinder function

- Bypass 80° (B80)
- BBypass 140° (B140)

#### Arm

- Double Egress (DE)

#### 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".

#### Installation accessories

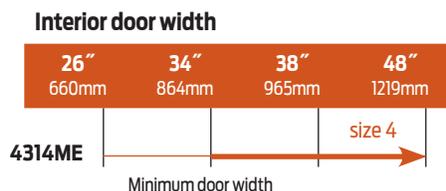
- Transformer, 4310ME-3210

#### Special template

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

### Table of sizes

- Closing power of 4314ME Series closers may be increased 15%



Indicates recommended range of door width for closer size.



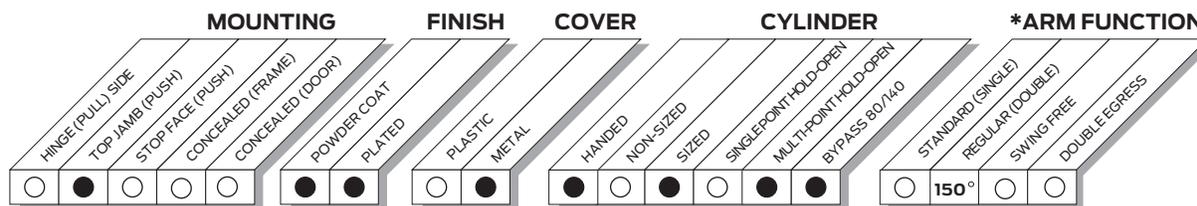
The 4410ME SENTRONIC® is a heavy duty, electrically controlled closer/holder designed to provide infinitely adjustable hold-open for fire and smoke barrier doors. Door is held open until current interruption releases mechanism and the door closes. Double lever arm closer is specifically designed for interior doors. Choice of finishes, cylinder functions, and installation accessories meet virtually all life safety requirements.

<b>Certifications</b>	Grade 1 - ANSI A156.15, UL 10C, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101
<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>■ 11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>
<b>Fluid</b>	All Weather Fluid
<b>Handing</b>	Handed
<b>Size</b>	Sized, 4 only
<b>Warranty</b>	2 years

<b>Cover</b>	Metal, Standard
<b>Fasteners</b>	Wood and machine screw pack
<b>Mounting</b>	Top jamb (Push Side)
<b>Arms</b>	Regular arm
<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>
	<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
<b>Wiring</b>	<ul style="list-style-type: none"> <li>■ Concealed or surface</li> <li>■ Interfaces with fire alarm systems</li> </ul>

**Special Templates**

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



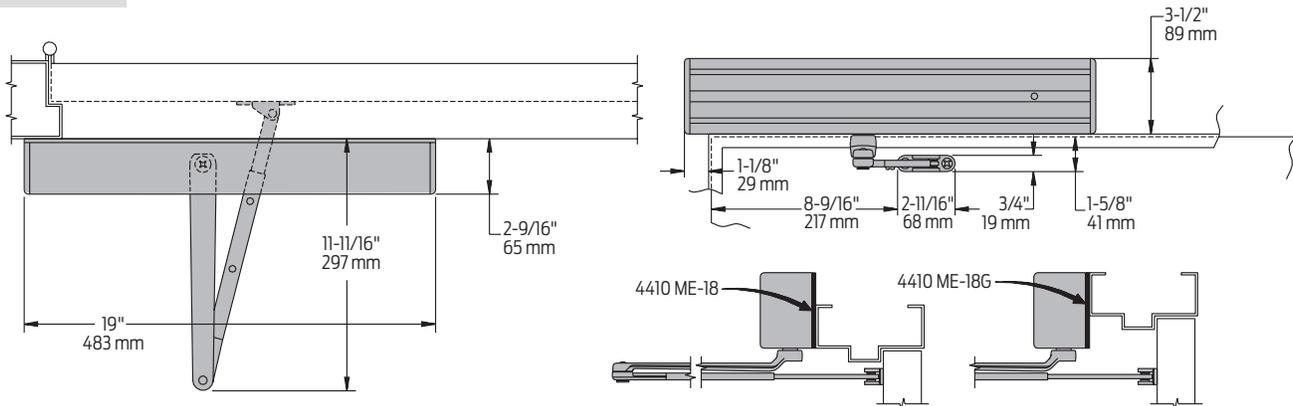
● AVAILABLE  
○ NOT AVAILABLE

\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.

# 4410ME Series

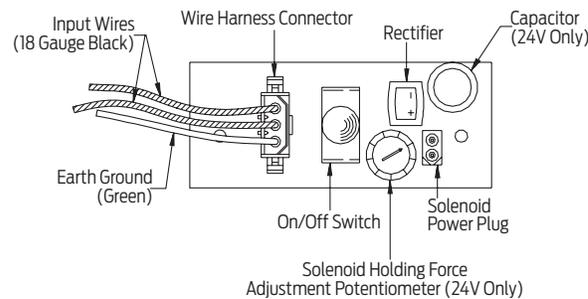
## Mounting details

### Top Jamb (Push Side) Mounting



<b>Butt Hinges</b>	Should not exceed 4-1/2" (114 mm) in width
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>1-3/4" (44 mm) minimum</li> <li>3-3/4" (95mm) minimum with flush ceiling</li> </ul>
<b>Reveal</b>	<ul style="list-style-type: none"> <li>3-7/8" (98 mm) maximum regular or long arm</li> <li>For reveals greater than 3-7/8" consult factory</li> </ul>
<b>Head Frame</b>	<ul style="list-style-type: none"> <li>Requires 1-1/2" (38 mm) minimum</li> <li>2" (51 mm) minimum with flush ceiling</li> </ul>
<b>Flush Ceiling</b>	Requires PLATE, 4410ME-18G substituted for standard mounting plate
<b>Bypass</b>	<ul style="list-style-type: none"> <li>(Suffix "B80" or "B140") eliminates hold-open function up to a specified point of door swing</li> <li>B80 cylinder from 0° to 80°</li> <li>B140 cylinder from 0° to 140°</li> </ul>
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>Templating allows 160°, with hold-open points up to 150°</li> <li>Optional long arm allows 180°, hold-open points up to 170°</li> </ul>
<b>ME Electrical Options</b>	<ul style="list-style-type: none"> <li>These assemblies have a single electrical circuit with a choice of voltages</li> <li>A separate TRANSFORMER, 4040SE-3210, can be used to reduce line voltage to 24V AC. Circuitry accepts either AC or DC input</li> <li>Please specify 24V or 120V</li> </ul>
<b>Options</b>	<ul style="list-style-type: none"> <li>Hold-open bypass</li> <li>Optional long arm allows 180° with hold-open points up to 170°</li> <li>Optional -18G plate accommodates flush ceiling conditions</li> <li>24V or 120V volt input, please specify</li> </ul>

### ME (4310, 4410) Wiring Diagram



### Cylinders



**4414ME-3971**  
ME Cylinder Assembly

- Handed
- Cast iron
- Specify 24V or 120V
- Standard



**4414ME-3071**  
ME Cylinder/Plate Assembly

- Handed
- "On/Off" switch assembly controls hold-open function
- Circuitry accepts either AC or DC input
- Please specify 24V or 120V
- Standard

### Cover



**4410ME-72MC**  
Metal Cover

- Handed

### Arms



**4410ME-3077**  
Regular Arm

- Non-handed
- 3-7/8" (98 mm) maximum reveal

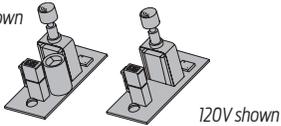


**4410ME-3077L**  
Long Arm

- For increasing opening to 180°
- 3-7/8" (98 mm) maximum reveal
- Optional

### Switch

24V shown



#### 4410ME-3351 Switch Assembly

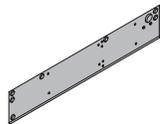
- Provides continuous hold-open function
- Available as 24V or 120V, please specify

### Installation Accessories



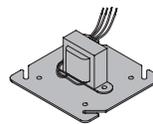
#### 4410ME-18 Mounting Plate

- Standard



#### 4410ME-18G Mounting Plate

- Substituted for standard plate on flush ceiling installations
- Optional



#### 4410ME - 3210 Transformer

- Reduces line voltage from 120V to 24V AC
- Mounted on cover for 4" (102 mm) x 4" x 2-1/8" (54 mm) junction box (by others)



#### 4410ME-3354 ME Wiring Harness

- Three wire harness with 6" (152 mm) leads for field wiring connections

### How-to-order 4410ME Series closers

**Select hand**

- RH
- LH

**Voltage**

- 24V AC/DC
- 120V AC/DC

**Specify finish**

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

**Closer will be shipped with:**

- Standard cover
- Regular arm
- Wood & machine screw pack  
unless options listed below are selected.

### Closer options

**Cylinder function**

- Bypass 80° (B80)
- Bypass 140° (B140)

**Arm**

- Long (LONG)

**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"

**Installation accessories**

- Plate, 4410ME-18G  
(substituted for standard mounting plate)
- Transformer, 4410ME-3210

**Special template**

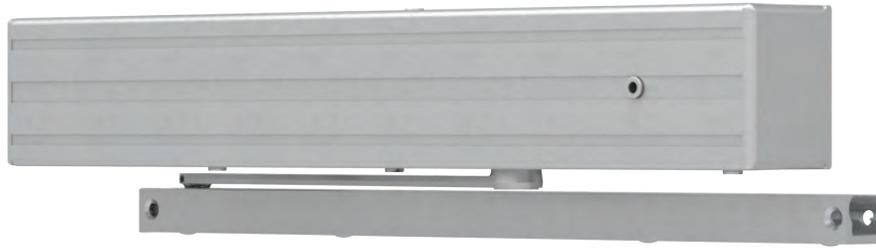
- ST- \_\_\_\_\_

### Table of sizes

- Closing power of 4414ME Series closers may be increased 15%



→ Indicates recommended range of door width for closer size.

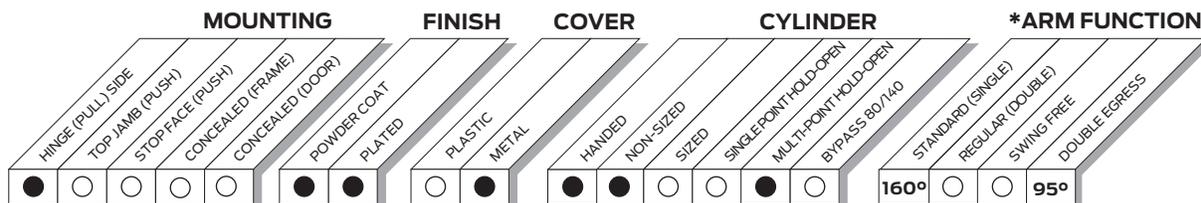


The 4310HSA SENTRONIC® is an electrically controlled closer/holder designed to provide easy passage for groups of pedestrians through high traffic doors. Pedestrians, moving through the doorway, trigger the built-in scanner. When the door is opened to 80° or more, the door is electrically held open to minimize wear and tear on applied door hardware. After the last pedestrian in a group passes through the doorway, the system timer releases the hold-open, closing the door under control of the heavy duty closer. Single lever (track) arm closer is specifically designed for pull side mounting. Choice of finishes and accessories meet virtually all high traffic installation requirements.

<b>Certifications</b>	Grade 1 - ANSI A156.4, ANSI 156.15, NFPA 101, UL 10C, 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>11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Arms</b>	<ul style="list-style-type: none"> <li>Standard arm (with track)</li> <li>Double egress arm, optional</li> </ul>
<b>Fluid</b>	All Weather Fluid	<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>Handing</b>	Handed	<b>Wiring</b>	<ul style="list-style-type: none"> <li>Optional SRI primer - powder coat only</li> <li>Optional plated finishes</li> <li>Concealed or surface wiring</li> <li>24V AC/DC input only</li> <li>120V requires 4310HSA-3210 transformer</li> <li>HSA features a scanner activated hold-open function, fixed 15 seconds or 30 seconds</li> </ul>
<b>Size</b>	Field adjustable, shipped at size 3		
<b>Warranty</b>	2 years		
<b>Fasteners</b>	Wood and machine screw pack		
<b>Mounting</b>	Hinge (Pull Side) interior doors		

**Special Templates**

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



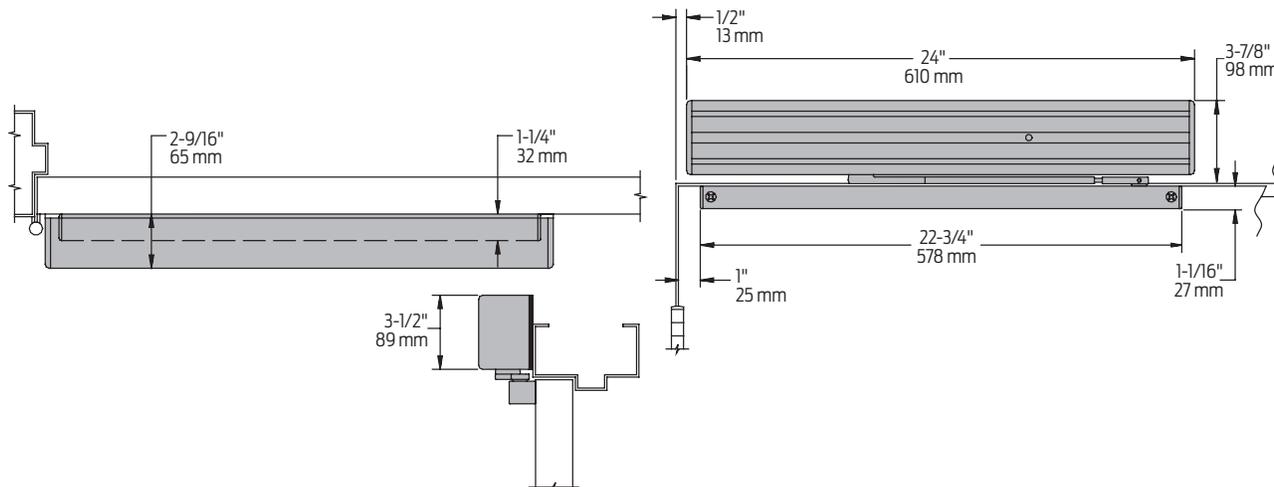
● AVAILABLE  
○ NOT AVAILABLE

\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.

# 4310 HSA Series

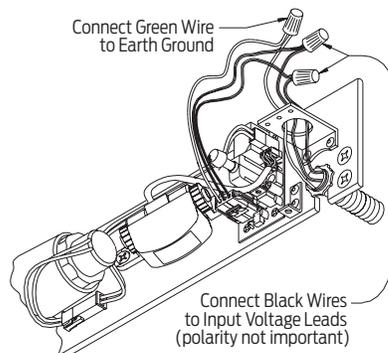
## Mounting details

### Hinge (Pull) Side Mounting



<b>Butt Hinges</b>	Should not exceed 4-1/2" (114 mm) in width
<b>Top Rail</b>	1-1/16" (27 mm) minimum
<b>Reveal</b>	<ul style="list-style-type: none"> <li>Should not exceed 1/8" (3 mm) for standard arm</li> <li>Should not exceed 2-11/16" (68 mm) for double egress arm</li> </ul>
<b>Head Frame</b>	Requires 2" (51 mm) minimum
<b>Clearance</b>	1-1/4" (32 mm) minimum.
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>Templating allows 180°</li> <li>Optional double egress arm limited to 95°</li> <li>Infinite hold-open points from 80° up to 160°</li> </ul>
<b>Options</b>	<ul style="list-style-type: none"> <li>120 volt input requires 4310HSA-3210 transformer to change 120V AC to 24V AC</li> </ul>

### HSA (4310) Wiring Diagram



#### Notes:

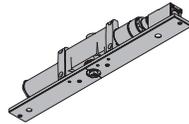
- Functions as full rack and pinion door closer when current is interrupted or continuous hold-open is not engaged
- Built-in "On/Off" switch provides continuous hold-open function

### Cylinders



**4311HSA-3971**  
HSA Cylinder Assembly

- Handed
- Cast iron
- 24V AC/DC input only for holding solenoid
- Standard



**4311HSA-3071**  
HSA Cylinder/Plate Assembly

- Handed
- Includes scanner module and system timer module
- "On/Off" switch assembly provides continuous hold-open function
- 24V AC/DC input only for holding solenoid and electronics modules
- Standard

### Cover



**4310HSA-72MC**  
Metal Cover

- Handed
- Standard

### Track



**4310HSA-3038**  
Track

- Non-handed
- Standard

### Arms



**4310HSA-3077T**  
Standard Arm

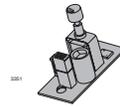
- Handed



**4310HSA-3077DE**  
Double Egress Arm

- Handed
- For double egress doors and frames
- 2 11/16" (67 mm) maximum reveal
- Optional

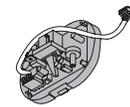
### Switch



**4310HSA-3448**  
Switch Assembly

- Provides continuous hold-open function
- Available in 24V only

### Scanner



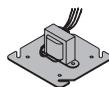
**4310HSA-3428**  
Scanner Module

### Installation Accessories



**4310HSA-3034**  
Track Roller

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



**4310HSA-3210**  
Transformer

- Reduces line voltage from 120V to 24V AC
- Mounted on plate for 4" (102 mm) x 4" x 2-1/8" (54 mm) junction box (by others)

### How-to-order 4310 HSA Series closers

#### Select hand

- RH
- LH

#### Voltage

- 24V AC/DC

#### Specify finish

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

#### Closer will be shipped with:

- 24 AC/DC HSA cylinders
- Metal cover
- Standard arm
- Standard track
- Track roller
- Wood & machine screw pack  
unless options listed below are selected.

## Closer options

#### Arm

- Double Egress (DE)

#### 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"

#### Installation accessories

- Transformer, 4310HSA-3210

#### Special template

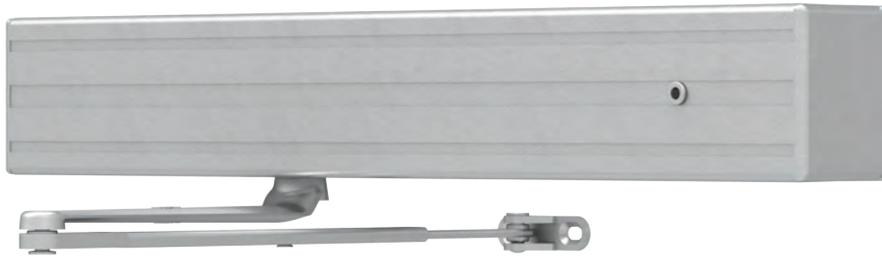
- ST- \_\_\_\_\_ (if required)

## Table of sizes

- Closing power of 4310 HSA Series closers is field adjustable, shipped at size 3



Indicates recommended range of door width for closer size.



The 4410HSA SENTRONIC® is an electrically controlled closer/holder designed to provide easy passage for groups of pedestrians through high traffic doors. Pedestrians, moving through the doorway, trigger the built-in scanner. When the door is opened to 80° or more, the door is electrically held open to minimize wear and tear on applied door hardware. After the last pedestrian in a group passes through the doorway, the system timer releases the hold-open, closing the door under control of the heavy duty closer. Double lever arm closer is specifically designed for push side mounting. Choice of finishes and accessories meet virtually all high traffic installation requirements.

**Certifications** Grade 1 - ANSI A156.4, ANSI 156.16, NFPA 101, UL 10C, 100 Hour Salt Spray, Meets BAA - Buy American Act

**Body Construction**

- Cast Iron Body
- Full Complement Bearing
- 1-1/2" Diameter Piston
- 11/16" Diameter Double Heat Treated Pinion Journal

<b>Fluid</b>	All Weather Fluid
<b>Handing</b>	Handed
<b>Size</b>	Field adjustable, shipped at size 3
<b>Warranty</b>	2 years
<b>Fasteners</b>	Wood and machine screw pack
<b>Mounting</b>	Top Jamb (Push Side)
<b>Cover</b>	Metal, Standard

**Arms**

- Regular Arm
- Long arm, optional

**Finishes/Colors/  
Powder Coat**

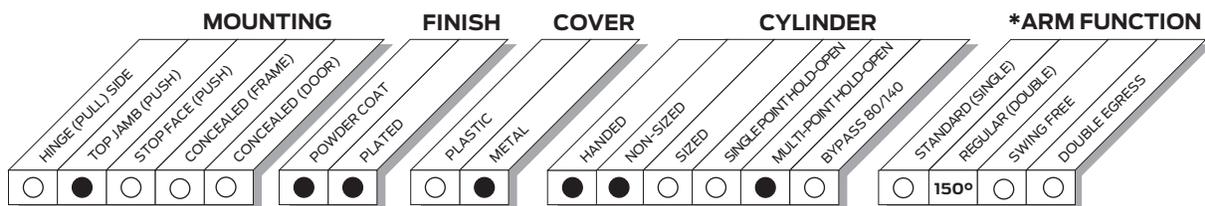
- Aluminum (689)
- Statuary Bronze (690)
- Light Bronze (691)
- Black (693)
- Dark Bronze (695)
- Brass (696)
- Custom colors optional
- Optional plated finishes

**Wiring**

- Concealed or surface
- 24V AC/DC input only
- 120V AC input requires 4410HSA-3210 transformer
- HSA features a scanner activated hold-open function, adjustable 15 seconds or 30 seconds
- Built-in "On/Off" switch provides continuous hold-open feature

**Special Templates**

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



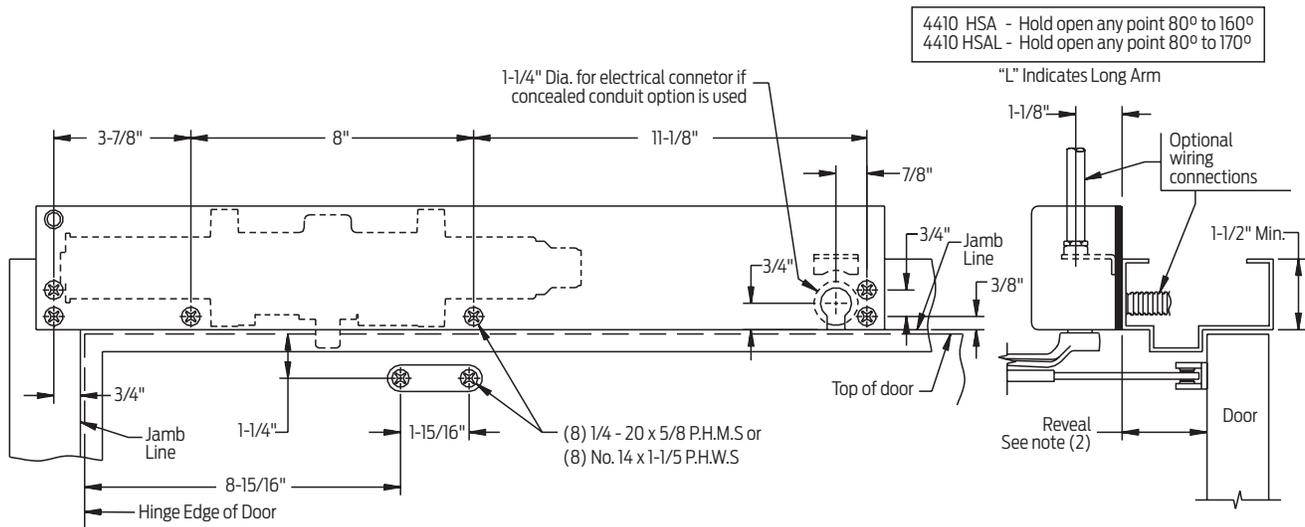
● AVAILABLE  
○ NOT AVAILABLE

\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.

# 4410 HSA Series

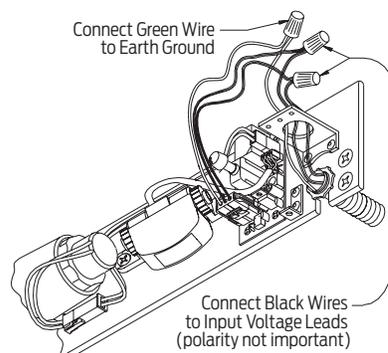
## Mounting details

### Top Jamb (Push) Side Mounting



<b>Butt Hinges</b>	Should not exceed 4-1/2" (114 mm) in width
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>1-3/4" (44 mm) minimum</li> <li>3-3/4" (95 mm) minimum with flush ceiling</li> </ul>
<b>Head Frame</b>	<ul style="list-style-type: none"> <li>Requires 1-1/2" (38mm) minimum</li> <li>2" (51 mm) minimum with flush ceiling</li> </ul>
<b>Reveal</b>	<ul style="list-style-type: none"> <li>3-7/8" (98 mm) maximum for regular or long arm</li> <li>For reveals greater than 3-7/8" consult factory</li> </ul>
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>Templating allows 160°</li> <li>Infinite hold-open points from 80° up to 150°</li> <li>Optional long arm allows 180°, hold-open points up to 170°</li> </ul>
<b>Options</b>	<ul style="list-style-type: none"> <li>Optional long arm allows 180° with hold-open points up to 170°</li> <li>Optional -18G plate accommodates flush ceiling conditions</li> <li>120 volt input requires 4410HSA-3210 transformer to change 120V AC to 24V AC</li> </ul>

### HSA Wiring Diagram

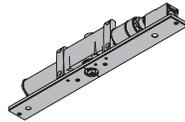


### Cylinders



#### 4412HSA-3971

- Handed
- Cast iron
- 24V AC/DC input only for holding solenoid
- Standard



#### 4412HSA-3071

##### HSA Cylinder / Plate Assembly

- Handed
- Includes scanner module and system timer module
- "On/Off" switch assembly provides continuous hold-open function
- 24V AC/DC input only for holding solenoid and electronics modules
- Standard

### Cover



#### 4410HSA-72MC Metal Cover

- Handed
- Standard

### Arms



#### 4410HSA-3077 Regular Arm

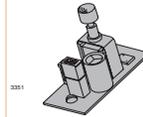
- Non-handed
- 3-7/8" (98 mm) maximum reveal



#### 4410HSA-3077L Long Arm

- For increased opening
- 3-7/8" (98 mm) maximum reveal
- Optional

### Switch



#### 4410HSA-3448 Switch Assembly

- Provides continuous hold-open function
- Available in 24V only

### Scanner



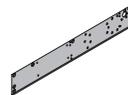
#### 4410HSA-3428 Scanner Module

### Installation Accessories



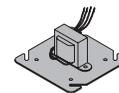
#### 4410HSA-18 Mounting Plate

- Standard



#### 4410HSA-18G Transformer Mounting Plate

- Substituted on flush ceiling installations
- Optional



#### 4410HSA-3210 Transformer

- Reduces line voltage from 120V to 24V AC
- Mounted on plate for 4" (102 mm) x 4" x 2-1/8" (54 mm) junction box (by others)

### How-to-order 4410 HSA Series closers

#### Select hand

- RH
- LH

#### Voltage

- 24V AC/DC

#### Specify finish

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

#### Closer will be shipped with:

- 24 AC/DC HSA cylinders
- Metal cover
- Regular arm
- Wood & machine screw pack  
unless options listed below are selected.

### Closer options

#### Arm

- Long Arm (LONG)

#### 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"

#### Installation accessories

- Plate, 4410HSA-18
- Plate, 4410HSA-18G  
(substituted for standard mounting plate)
- Transformer, 4410HSA-3210

#### Special template

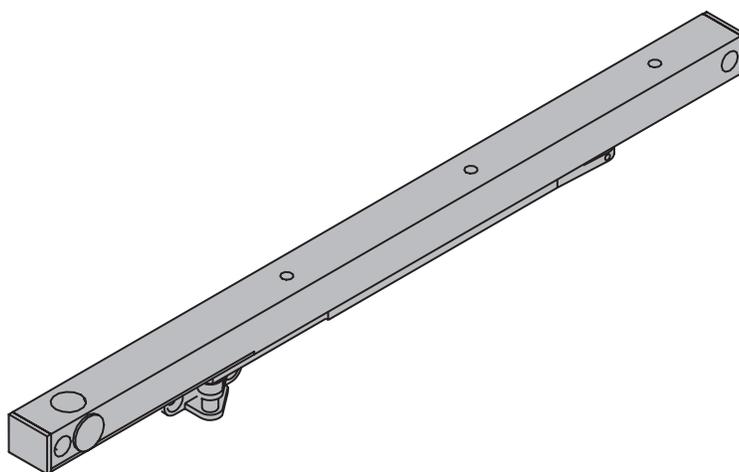
- ST- \_\_\_\_\_ (if required)

### Table of sizes

- Closing power of 4410 HSA Series closers is field adjustable, shipped at size 3



Indicates recommended range of door width for closer size.



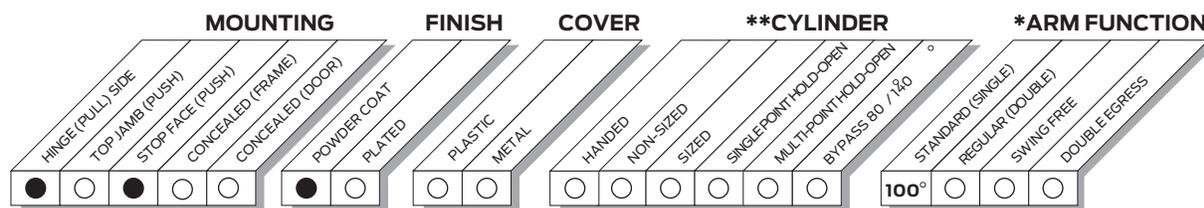
The SEH SENTRONIC® is a holder designed to provide single point hold-open for fire and smoke barrier doors that must be used with an opposite side mounted UL listed door closer. The door is held open until current interruption releases the holding mechanism and the door closes. Single lever (track) arm is specifically designed for interior doors. Choice of finishes, track functions, and installation accessories meet virtually all life safety requirements.

<b>Certifications</b>	Grade 1 - ANSI A156.15, UL 10C, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101
<b>Handing</b>	Non-Handed
<b>Templating</b>	22 3/4" x 1 1/4"
<b>Warranty</b>	2 years
<b>Fasteners</b>	Wood and machine screw pack
<b>Mounting</b>	Hinge (Pull Side)
<b>Arms</b>	<ul style="list-style-type: none"> <li>■ Standard, non-handed arm for any 4040SE Series</li> <li>■ Standard, non-handed track for SEH</li> <li>■ Specify 24V or 120V AC/DC input for holding solenoid</li> <li>■ Includes test switch assembly with fuse</li> </ul>

<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>Wiring</b>	<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
	<ul style="list-style-type: none"> <li>■ Concealed or surface</li> <li>■ 24V or 120V, please specify</li> <li>■ Interfaces with alarm system, please consult with factory for full details</li> </ul>

**Special Templates**

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



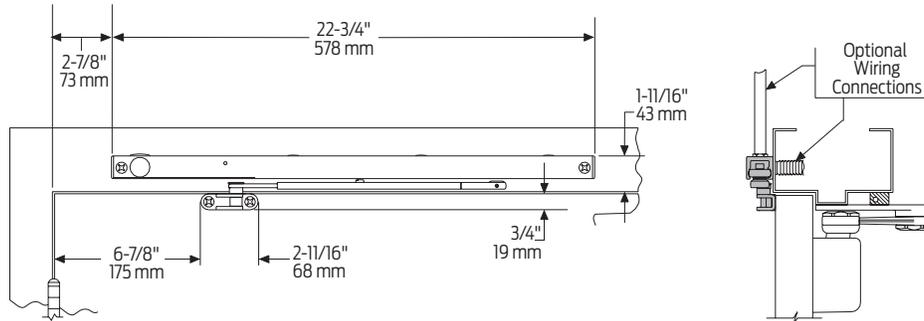
● AVAILABLE  
○ NOT AVAILABLE

\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.  
\*\* Cylinder sold separately.

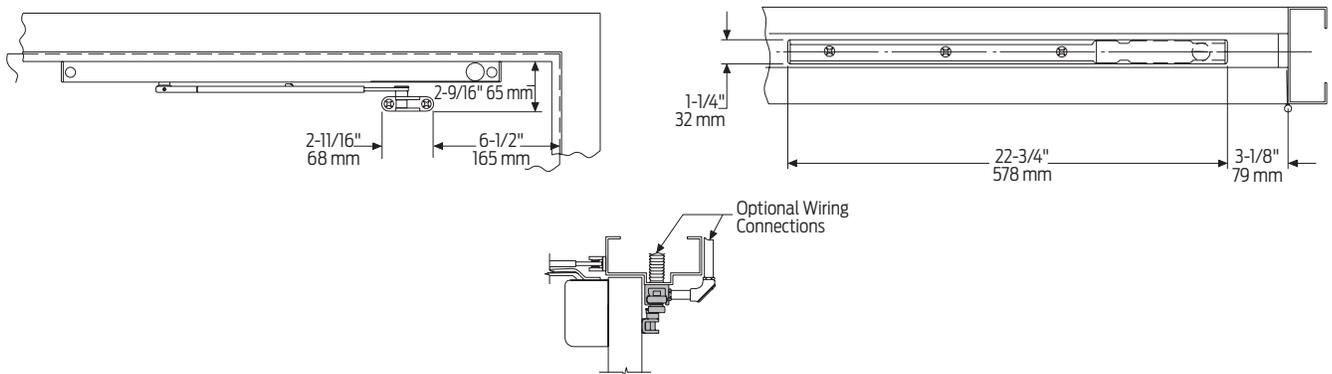
## Mounting details

Hinge (pull) side & Stop face (push side) Mountings

Hinge (pull) side mount



Stop face (push side) mount

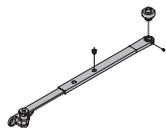


<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Swing Clear Hinges</b>	Consult factory
<b>Auxiliary Stop</b>	Recommended at hold-open point
<b>Reveal</b>	Should not exceed 1/8" (3 mm) for standard arm
<b>Head Frame</b>	Requires 2" (51 mm) minimum
<b>Stop Width</b>	1-1/4" (32 mm) minimum
<b>Flush Ceiling</b>	2" (51 mm) head frame does not require special templating
<b>Door Width</b>	<ul style="list-style-type: none"> <li>2' 4" (711 mm) minimum for single door with SEH</li> <li>4' 8" (1422 mm) minimum for paired doors with SEH</li> </ul>
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>Templating allows 100°</li> <li>Hold-open points between 80° and 100° in approximately 3° increments</li> </ul>
<b>SEH Electrical Options</b>	<ul style="list-style-type: none"> <li>These track assemblies require a single power circuit for the holding solenoid</li> <li>SEH holding solenoid is either 24V or 120V input, please specify</li> <li>An optional 4040SE-3210 TRANSFORMER or 8310-824 reduces 120V AC line voltage to 24V AC. Circuitry accepts either AC or DC input</li> </ul>
<b>Options</b>	<ul style="list-style-type: none"> <li>24V or 120V volt input for SEH, please specify</li> </ul>
<b>Wiring Diagram</b>	See "FIRE/LIFE SAFETY" section page 19 for typical wiring and electrical diagram

**Notes:**

- Information applies to SEH unless otherwise specified
- Standard SEH Series is a door holder that must be installed in conjunction with an opposite side mounted, UL listed door closer
- Hold-open force is adjustable
- Momentary on/off switch board assembly for testing door release also provides over-voltage protection. Field replaceable
- All SEH type holders require a separate closer for fire or smoke barrier door applications

### Arm



**SEH-3077T**  
Holder Arm

- Non-handed
- Can be combined with any 4040SE Series track to provide an electrically controlled hold-open function on either side of the door
- All SEH type holders require a separate closer for fire or smoke barrier door applications

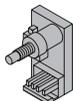
### Track



**SEH-3038**  
SEH Track

- Non-handed
- Mounts on either head frame or stop
- 24V or 120V AC/DC input for holding solenoid, please specify
- Includes test switch assembly with fuse
- Standard

### Switch



**SEH-3436**  
Test Switch

### Installation Accessories



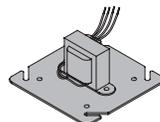
**SEH-81**  
Conduit Quick-Connector

- Two piece connector for use with 1/2" conduit



**SEH-3034SE**  
Track Roller & Track Slider

- Quiet, low friction roller assembly
- Shoulder dimension "X" = 1/4" (6 mm)
- Alloy metal slider for use in SE series tracks only



**4040SEH-3210**  
Transformer

- Reduces line voltage from 120V to 24V AC
- Mounted on cover for 4" (102 mm) x 4" x 2-1/8" (54 mm) junction box (by others)

**How-to-order SEH Series closers**

**Voltage**

- 24V AC/DC
- 120V AC/DC

**Specify finish**

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

**Closer will be shipped with:**

- Standard arm
- Standard track
- Wood & machine screw pack  
unless options listed below are selected.

**Options**

**Finishes**

- Custom Powder Coat (RAL)

**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"

**Installation accessories**

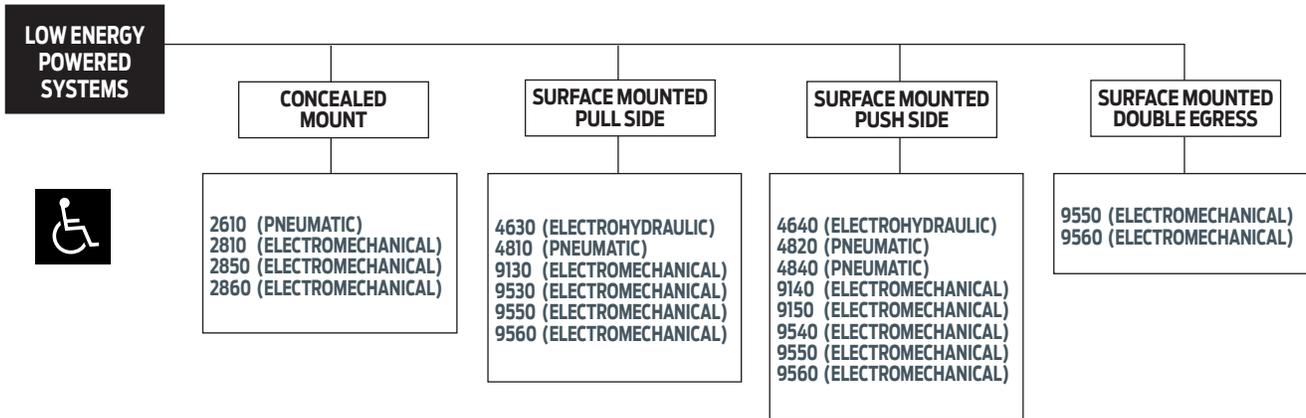
- Transformer, 4040SE-3210

**Special template**

- ST- \_\_\_\_\_ (if required)

**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?

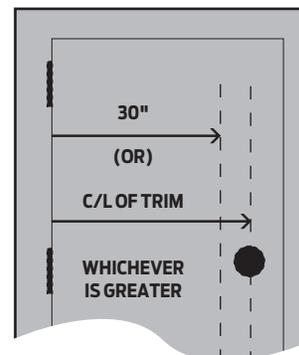
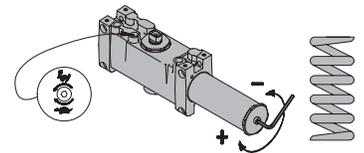
Two ADA criteria affect the door closer selection, adjustments, opening force, and time to close. Since the law does not clearly define the method of measurement, this is LCN's recommendation.

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.

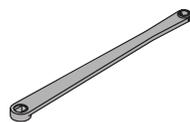
#### 3. ARM SELECTION:

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.

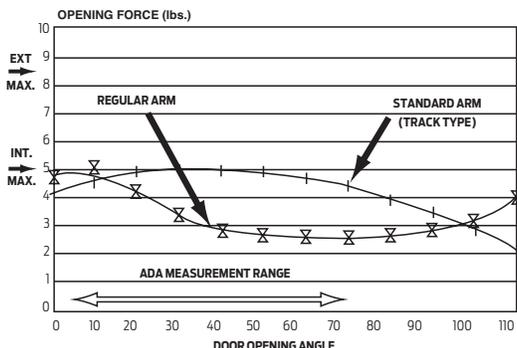
**REGULAR ARM**



**STANDARD ARM**



**TYPICAL ARM POWER CURVE**



#### 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

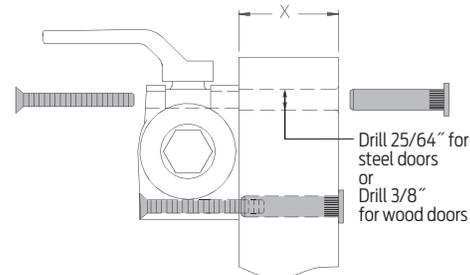
## AMERICAN NATIONAL STANDARDS INSTITUTE

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.

## PNEUMATIC (AIR) POWERED SYSTEMS

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

### UNIQUE FEATURES

#### ■ Multi-Door & Single-Door Solutions

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

#### ■ Quiet Operation

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

#### ■ Pneumatically (Air) Powered

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

#### ■ Easy Adjustment/Installation

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

#### ■ Multiple Mounting Configurations

Available in three different mounting configurations:

- Concealed in the frame (2610 Series).
- Top Jamb Surface Mounted on the pull side of the door (4810 Series).
- Top Jamb Surface Mounted on the push side of the door (4820 Series).
- Door Mounted, Parallel Arm on the push side of the door (4840 Series).

#### ■ Hazardous Location Use

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

#### ■ Blow-Open (Smoke Evacuations Systems)

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

### STANDARDS, LISTINGS & APPROVALS

- UL listed for self-closing doors without hold open under "SWINGING DOOR CLOSERS (GVEV)" file R1943.
- Tested and certified under ANSI Standard A156.19. Refer to Section 2.1 and consult factory for details.
- ANSI Standard A117.1, Section 4.13.13.
- ADA law, Section 4.13.12.
- UL 10B and UL 10C listing.
- Consult the factory for other listings

### WARRANTY

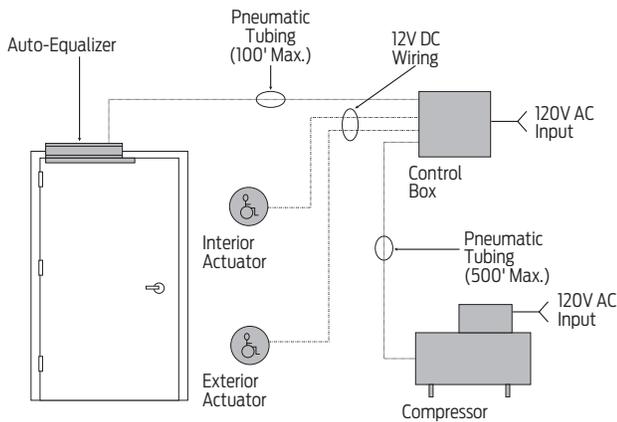
- 2 year limited warranty. See General Information Section for complete details.

### STANDARDS, LISTINGS & APPROVALS

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

# Typical Pneumatic Powered Systems

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



## SINGLE INTERIOR DOOR SYSTEM (WIRED)

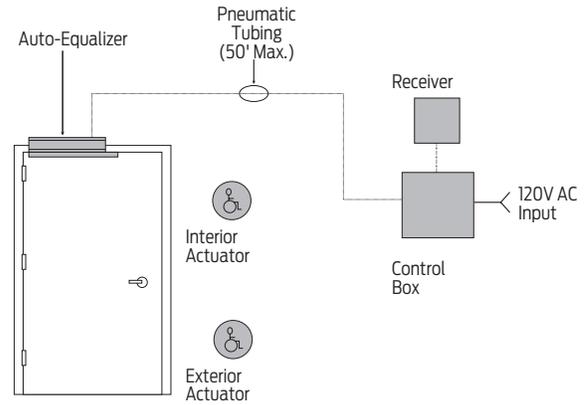
- Slow opening interior door leaf
- System may be expanded to include an additional simultaneous door
- No guide rails or safety devices

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

\*Contact Technical Support to verify compressor requirements.



## SINGLE INTERIOR DOOR SYSTEM (WIRELESS)

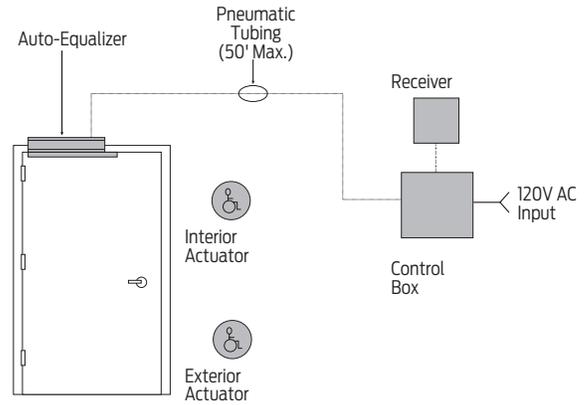
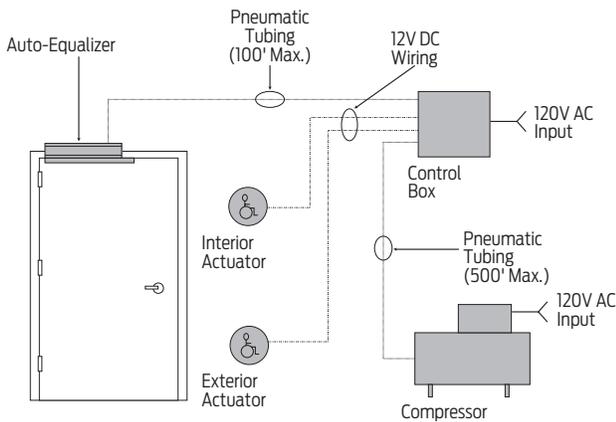
- Slow opening automatic door on door leaf
- Wireless actuators
- Stand alone system, no planned expansion
- No guide rails or safety devices

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

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



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

### 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 doors close
- Pressing the interior actuator reverses the process to exit the building
- This allows passage through the vestibule without both doors open for the entire cycle
- If a person stops in the vestibule and the system times out before they exit, pressing either vestibule actuator opens the appropriate door
- Sequential operation is not recommended with scanners or motion sensors
- If not actuated, the Auto Equalizer functions as a full featured door closer

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

\* Contact Technical Support to verify compressor requirements.

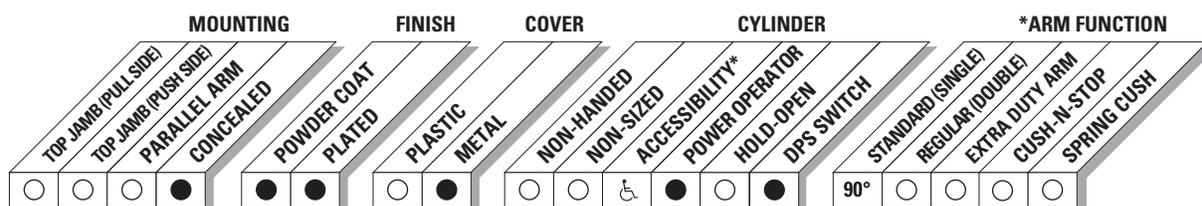


The 2610 AUTO EQUALIZER™ is LCN's pneumatically powered MULTI-DOOR solution. This low-energy power operator provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

<b>Certifications</b>	Grade 1 - ANSI A117.1, A156.19 UL228, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Wood and machine screws
<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>■ 11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Mounting</b>	Concealed, in frame
<b>Fluid</b>	All Weather Fluid	<b>Arms</b>	Single lever arm, mounting/finish plate, standard track
<b>Handing</b>	Handed	<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>Size</b>	Sized 3 and 4		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
<b>Warranty</b>	2 years		

**Special  
Templates**

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



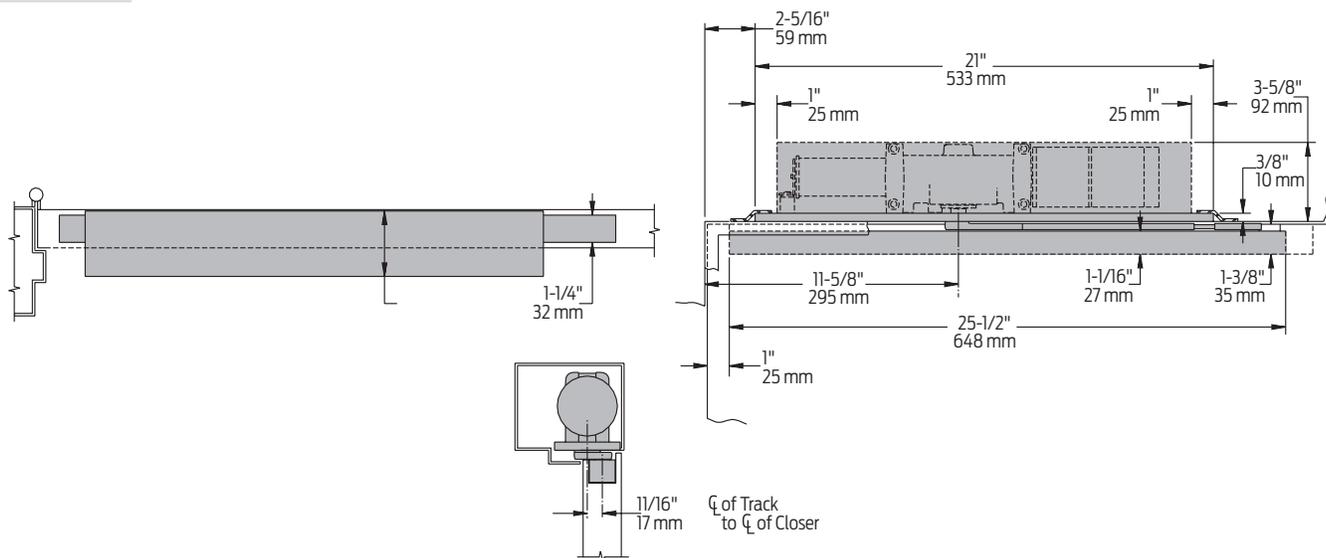
● AVAILABLE  
○ NOT AVAILABLE

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

# 2610 Series Auto Equalizer

## Mounting details

### Concealed Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended
<b>Head Frame</b>	Minimum 4" (102 mm) x 4" for hollow metal or aluminum tube construction
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>1-3/8" (35 mm) mortise required</li> <li>5/16" (8 mm) cutout required at top of the door, push side only</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section pages 8-9 for typical system wiring, and pages 28-29 for electrical and pneumatic data for control boxes
<b>Maximum opening</b>	<ul style="list-style-type: none"> <li>Butt hinge template allows 90° power opening and 160° 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> <li>Consult factory for all pivot mounted installations</li> </ul>

#### Notes:

- For interior or exterior doors
- Single acting cylinder in head frame
- Concealed arm and track in door top rail
- Consult factory for all pivot mounted installations.
- Multi-door solution utilizing 10,000,000 cycle heavy duty door closer
- Requires control box with integral compressor or control box using auxiliary air supply. See CONTROL BOX pages 28-29 and actuators and accessories, pages 115-131
- Guard rails/safety mats not required

## Cylinders



**2610-3971**  
Cast Iron Cylinder Assembly

- Handed
- For various applications see "Table of Sizes" on 2610 Series page 14
- Standard



**2610-3971 DPS**  
Cast Iron Cylinder Assembly

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



**2610-3071**  
Cast Iron Cylinder Assembly

- Handed
- Mounting plate
- For various applications see "Table of Sizes" on 2610 Series page 14
- Standard



**2610-3071 DPS**  
Cast Iron Cylinder Assembly

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

## Arm



**2610-3077T**  
Standard Arm

- Handed
- Track roller not included with arm

## Track



**2610-3038**  
Standard Track

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

## Installation Accessories



**2610-3034**  
Track Roller

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

### How-to-order 2610 Series

#### Select cylinder size

- 2613
- 2613 DPS
- 2614
- 2614 DPS

#### Select hand

- RH
- LH

#### Specify finish

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

#### Closer will be shipped with:

- Standard arm
- Track roller
- Standard track
- Wood & machine screw pack  
unless options listed below are selected.

### Closer options

#### Finishes

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

#### Screw pack

- Wood & Machine Screw (WMS)

#### Special template

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

### 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



NOTE: Minimum door width 30" (762 mm).

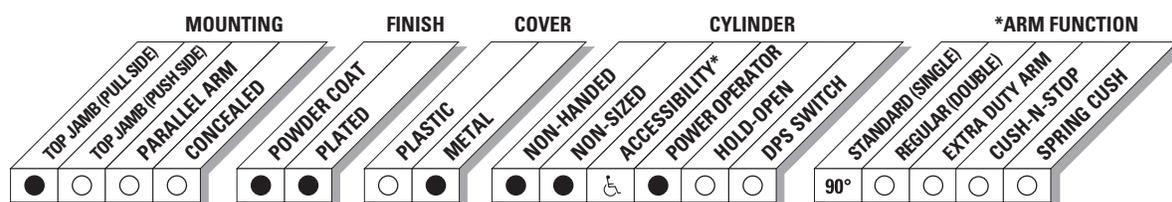


The 4810 AUTO EQUALIZER™ is LCN's pneumatically powered MULTIDOOR solution. This low-energy automatic operator provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

<b>Certifications</b>	Grade 1 - ANSI A117.1, A156.19, UL 10C 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>	Single lever arm with standard 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>

### Special Templates

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



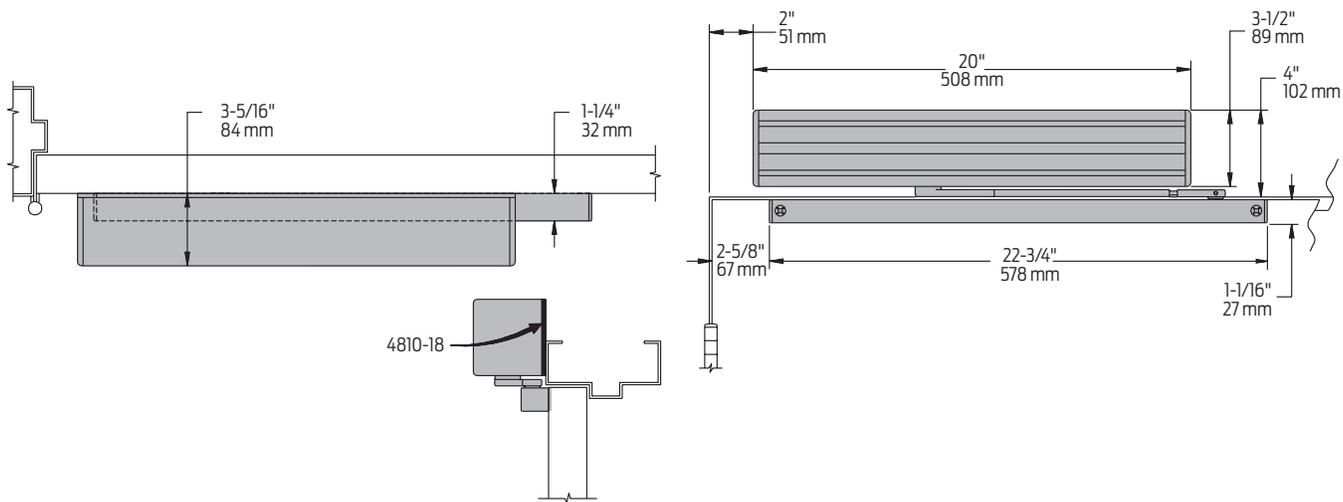
● AVAILABLE  
○ NOT AVAILABLE

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

# 4810 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>System Diagram</b>	See "AUTOMATIC OPERATORS" section pages 7-8 for typical system wiring, and pages 28-29 for electrical and pneumatic data for control boxes
<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:**

- Multi-door solution utilizing 10,000,000 cycle heavy duty door closer
- Requires control box with integral compressor or control box using auxiliary air supply
- See CONTROL BOX pages 28-29 and actuators and accessories, pages 115-131
- Guard rails/safety mats not required

**Cylinders**



**4811-3971**  
Cast Iron Cylinder Assembly

- Non-handed
- Standard



**4811-3071**  
Cast Iron Cylinder Assembly

- Non-handed
- Mounting plate
- Standard

**Cover**



**4810-72MC**  
Metal Cover

- Non-handed
- With black end caps
- Standard

**Track**



**4810-3038**  
Standard Track

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

**Arm**



**4810-3077T**  
Standard Arm

- Non-handed
- Track roller not included with arm

**Installation Accessories**



**4810-3034**  
Track Roller

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

**How-to-order 4810 Series**

**Specify finish**

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

**Closer options**

**Finishes**

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

**Screw pack**

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

**Special template**

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

**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 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**



**Interior door width**



NOTE: Minimum door width 28" (711 mm).

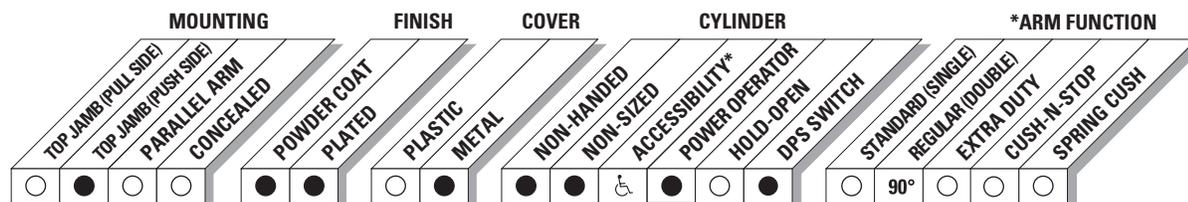


The 4820 AUTO EQUALIZER™ is LCN's pneumatically powered MULTI-DOOR solution. This low-energy automatic operator provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

<b>Certifications</b>	Grade 1 - ANSI A117.1, A156.19, UL 10C 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 screw
<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>

### Special Templates

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



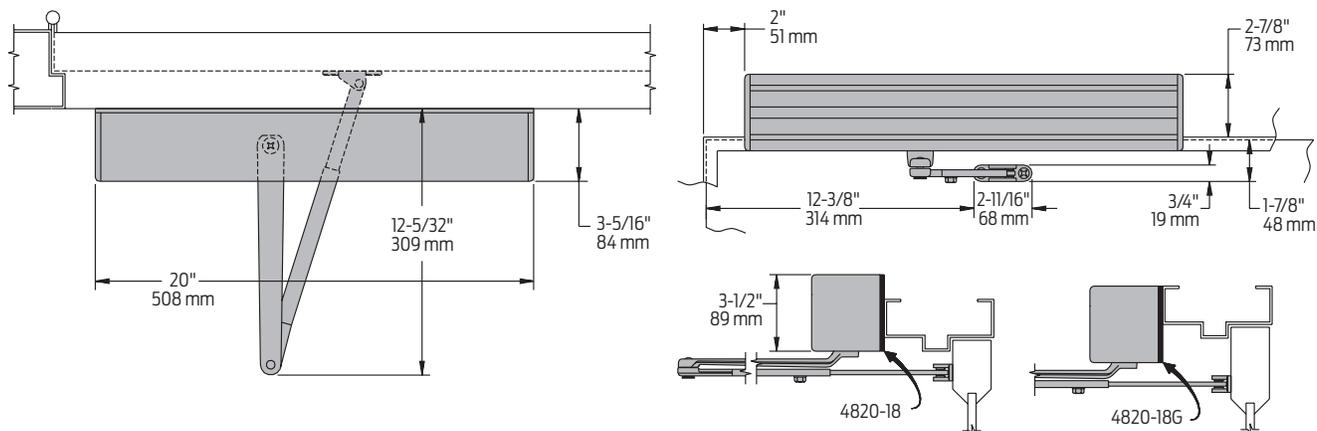
● AVAILABLE  
○ NOT AVAILABLE

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

# 4820 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, 4820-79LR</li> </ul>
<b>Head Frame</b>	<ul style="list-style-type: none"> <li>■ Minimum 1-3/4" (44 mm)</li> <li>■ With flush ceiling use PLATE, 4820-18G substituted for standard plate</li> </ul>
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>■ Minimum 1-3/4" (44 mm)</li> <li>■ Closer on 4820-18G plate requires 3" (76 mm) minimum</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section pages 7-8 for typical system wiring, and pages 28-29 for electrical and pneumatic data for control boxes
<b>Maximum opening</b>	Templating allows 90° power opening and 100° manual opening
<b>Options</b>	Door position switch (DPS) kit that signals when the door has reached the open position

#### Notes:

- Multi-door solution utilizing 10,000,000 cycle heavy duty door closer
- Requires control boxes with integral compressor and control box using auxiliary air supply
- See CONTROL BOX pages 27-29 and actuators and accessories, pages 118-133
- Guard rails/safety mats not required

## Cylinders



**4822-3971**  
Cast Iron Cylinder Assembly

- Non-handed
- Standard



**4822-3071**  
Cast Iron Cylinder Assembly

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

## Cover



**4820-72MC**  
Metal Cover

- Non-handed
- With black end caps
- Standard

## Arms



**4820-3077**  
Regular Arm

- Non-handed
- Standard



**4820-3077L**  
Long Arm

- 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

# 4820 Series Auto Equalizer

## Ordering Information

### How-to-order 4820 Series

#### Specify finish

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

#### Closer options

##### Finishes

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

##### Arm

- Long (LONG)

##### Screw pack

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

##### Installation Accessories

- Plate, 4820-18
- Plate, 4820-18G
- Door Position Switch Kit, 4820-3377 LH
- Door Position Switch Kit, 4820-3377 RH

##### 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 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



#### Interior door width



→ Indicates recommended range of door width for closer size.

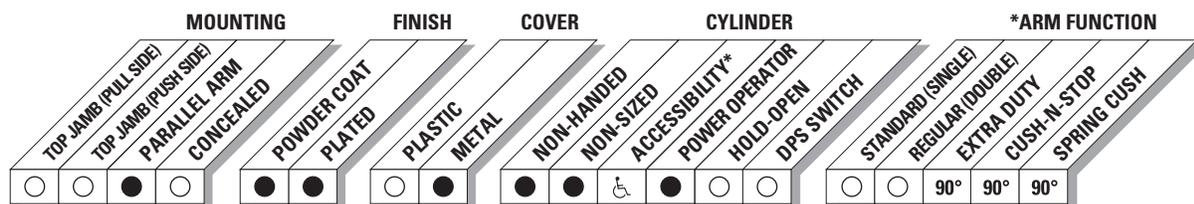


The 4840 AUTO EQUALIZER™ is LCN's pneumatically powered MULTIDOOR solution. This low-energy automatic operator provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

<b>Certifications</b>	Grade 1 - ANSI A117.1, A156.19, UL 10C 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 Specify door thickness if over 1-3/4"
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Parallel arm (Push Side)
<b>Handing</b>	Non-Handed	<b>Arms</b>	Extra heavy duty, standard Cush-n-stop and spring cush, optional
<b>Size</b>	Adjustable Spring Size 1-5	<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.



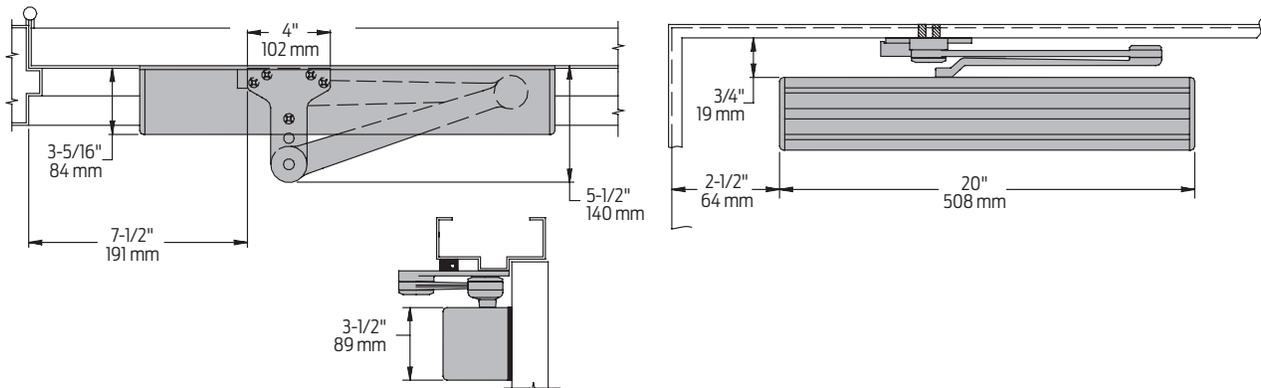
● AVAILABLE  
○ NOT AVAILABLE

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

# 4840 Series Auto Equalizer

## Mounting details

### Parallel Arm (Push Side) Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended when CUSH-N-STOP or SPRING CUSH arms are not used
<b>Clearance</b>	EDA or CUSH shoes is 5-1/2" (140 mm) from door face
<b>Top Rail</b>	Minimum 4-1/8" (105 mm). 6" minimum top rail for screw not to show in glass
<b>Head Frame</b>	(Flush) requires PA SHOE ADAPTER, 4840-419
<b>Stop Width</b>	Minimum 1" (25 mm)
<b>Blade Stop</b>	Clearance requires 1/2" (13 mm) BLADE STOP SPACER, 4840-61
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section pages 7-8 for typical system wiring, and pages 28-29 for electrical and pneumatic data for control boxes
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>■ Maximum power opening is 90° with all arms</li> <li>■ Maximum manual opening is 105° with EDA or SPRING CUSH arms</li> <li>■ Maximum manual opening is 100° with CUSH-N-STOP arm</li> </ul> <p><i>NOTE: For CUSH-N-STOP or SPRING CUSH arm installations with maximum opening less than listed above, consult factory for Special Template</i></p>

#### Notes:

- Multi-door solution utilizing 10,000,000 cycle heavy duty door closer
- Requires control boxes with integral compressor and control box using auxiliary air supply
- See CONTROL BOX pages 28-29 and actuators and accessories, pages 115-131
- Guard rails/safety mats not required

**Cylinders**



**4841-3971**  
Cast Iron Cylinder Assembly

- Non-handed
- Standard



**4841-3071**  
Cast Iron Cylinder Assembly

- Non-handed
- Mounting plate
- Standard

**Cover**



**4840-72MC**  
Metal Cover

- Non-handed
- With black end caps
- Standard

**Arms**



**4840-3077EDA**  
Extra Duty Arm

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



**4840-3077CNS**  
Cush-n-Stop Arm

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



**4840-3077SCNS**  
Spring CUSH Arm

- 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)



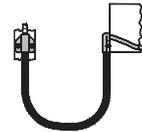
**4840-61  
Blade Stop Spacer**

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



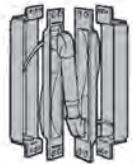
**4840-419  
PA Flush Panel Adapter**

- 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 closer end cap
- 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

### How-to-order 4840 Series closers

#### Specify finish

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

### Closer options

#### Finishes

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

#### Arm

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

#### Screw pack

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

#### Installation accessories

- Cush Shoe Support, 4840-30
- Blade Stop Spacer, 4840-61
- PA Flush Panel Adapter, 4840-419
- Door Loop Kit, 4840-459
- Pneumatic Transfer Hinge, 4840-460

#### Special template

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

#### Closer will be shipped with:

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

### 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



#### Interior door width

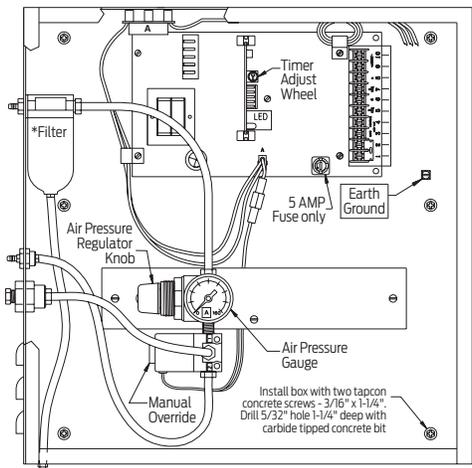


Indicates recommended range of door width for closer size.

## CONTROL BOXES

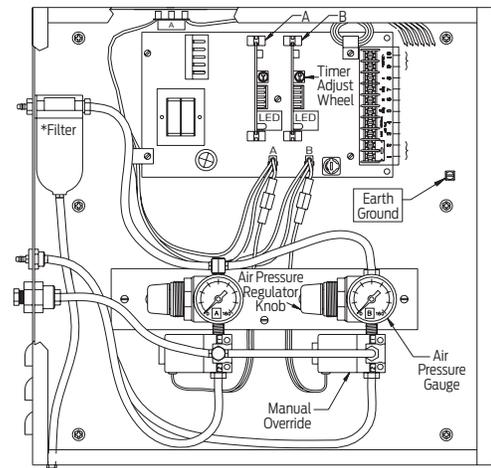
Heavy duty, surface mounted control box contains one or two electrically controlled pneumatic circuits. Air filtration, pneumatic regulation, and system timing is performed by the control box. 7980 Series control boxes also contain a built-in air pump to power the system. Each pneumatic circuit can be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

Pneumatic connections use standard barbed fittings and 925 tubing from the compressor to the control box to the operator. A package of barbed tee and butt connectors are supplied with each control box to simplify installations. Consult LCN for details. Other than a semi-annual inspection of the air filter assembly and muffler, no periodic system maintenance is required.



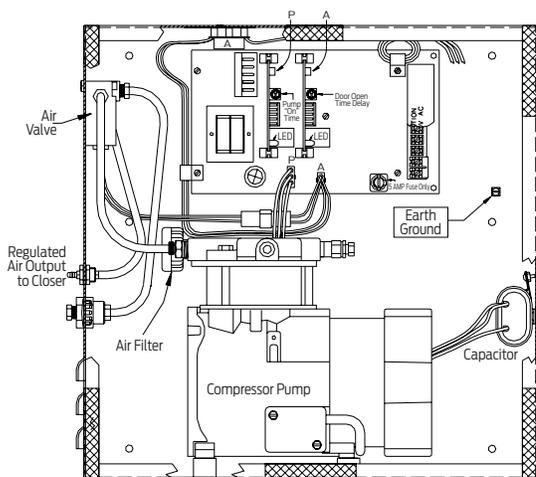
### 7901 AND ES7901 CONTROL BOX

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



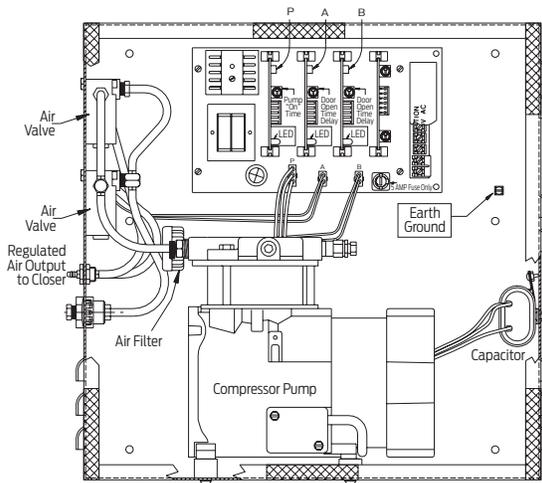
### 7902 AND ES7902 CONTROL BOX

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



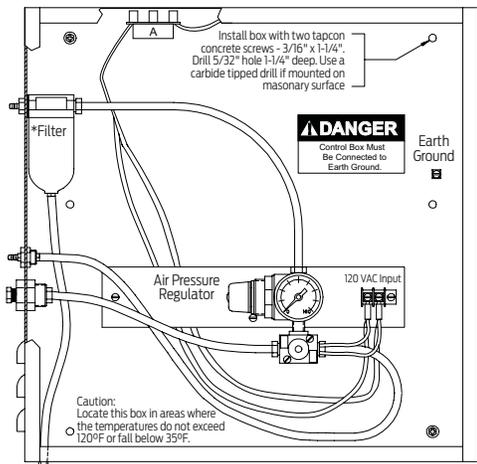
### 7981 AND ES7981 CONTROL BOX

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



## 7982 AND ES7982 CONTROL BOX

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



## 7949 and ES7949 Control Box

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

## Optional "ES" Boxes

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

## Control Box Installation Notes

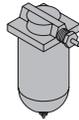
- Locate a 7900 Series control box so no more than 100 linear feet of LCN 925 pneumatic tubing is required between the control box and door. Maximum 50 linear feet for a 7980 and 7949 Series
- Locate a 7900/7980/7949 Series control box where the temperatures do not exceed 120°F or fall below 35°F
- 7901, 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



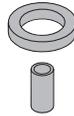
**-329**  
Air Filter

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



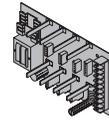
**-329G**  
Air Filter

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



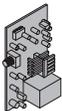
**-929**  
Filter and Seal

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



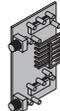
**-900**  
Power Supply Board

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



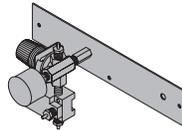
**-903**  
Timer Card

- 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



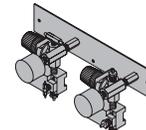
**-3426**  
Sequencer Card

- 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



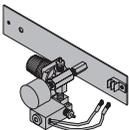
**-941**  
Valve Assembly

- 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

### 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



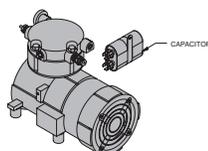
#### -962 Isolator

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



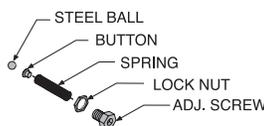
#### -293G Muffler

- 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 components 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 fire-rated
- Contact LCN for applications where tubing must run through rated plenums

## ELECTRIC AUTO EQUALIZERS

These Auto Equalizer products are an addition to the original pneumatic drive system. People moving through a door can use it as a normal rack & pinion door closer or, at the touch of a button, open the door automatically. An integrated digital control suite provides all electrical control functions.

These self-contained units are suitable for use on single leaf doors or pair of doors where each leaf is equipped with an operator. The operator provides all the control and power elements into a single operator package, only some actuators are required to complete the system.

- Introduced in 1995.
- Two surface mount models available. The 4630 mounts on the pull side of the door and the 4640 Series mounts on the push side of the door.
- Integrates a modified heavy-duty 4040 Series cast iron cylinder.
- 4600 Electric Operators are not approved for smoke evacuation systems.

## UNIQUE FEATURES

### ■ Digital Control Box

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

### ■ Dual Independent Program Memories

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

### ■ On-Board Diagnostics

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

### ■ On-Board Power Supply

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

### ■ "No Destruct" Drive System

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

### ■ Electronic Circuit Protection

The high voltage input circuit is protected by 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

### ■ Programming Mode

Allows tailoring the following functions to meet specific site conditions:

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

## ELECTRIC AUTO EQUALIZER SYSTEMS

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

## 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

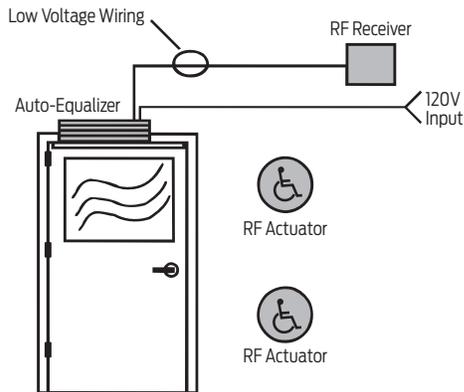
- 2 year limited warranty. See General Information Section for complete details.

## 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)

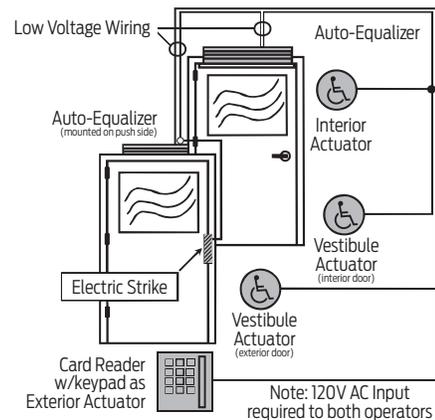
- An Interior Door
- No guide rails or safety devices
- Free Swinging (or Dogged) Door

#### 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)

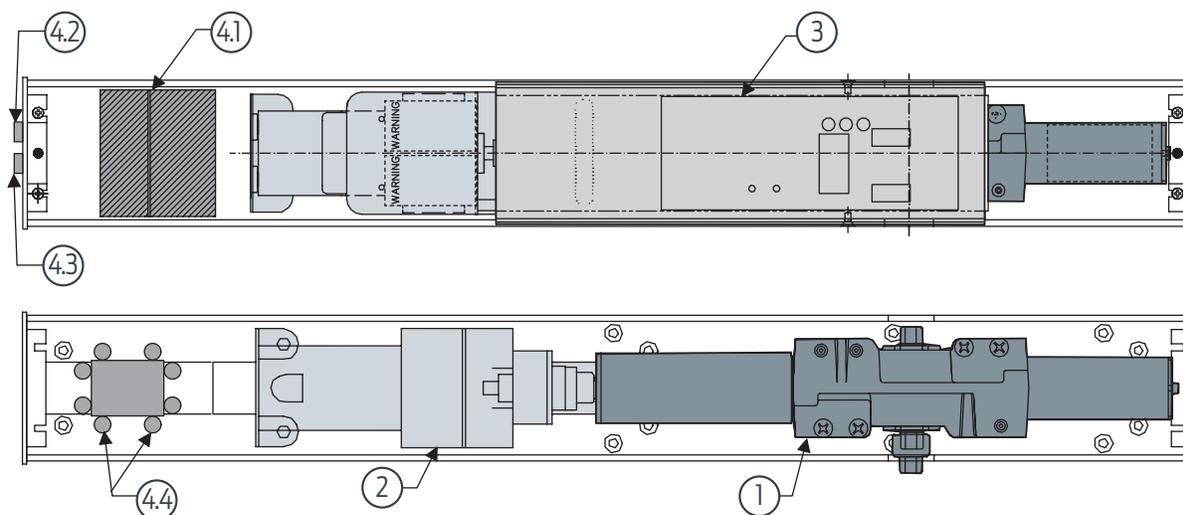
- Exterior & Vestibule doors
- Sequential Operation
- No guide rails or safety devices
- Controlled Access, Free Egress

#### 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

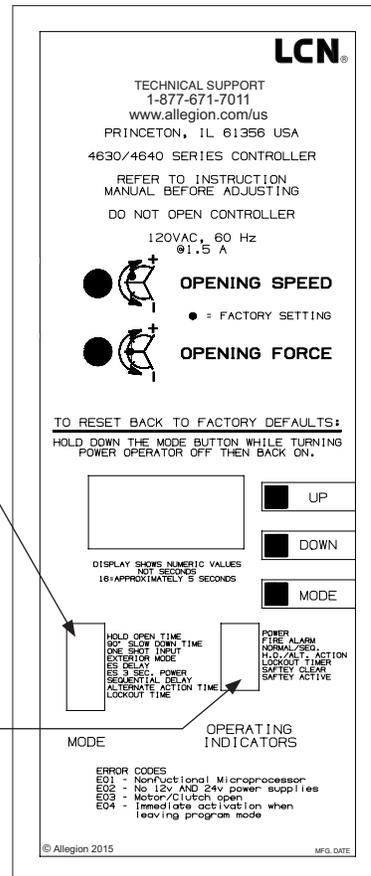
#### 4.3

- Hold Open Switch

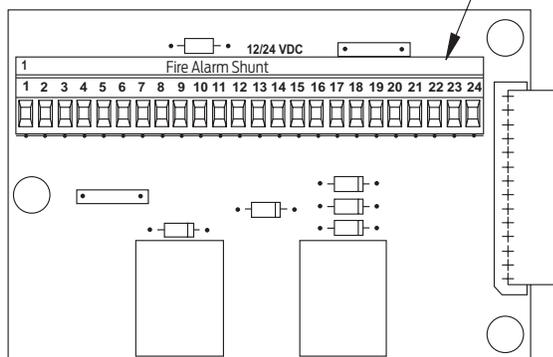
#### 4.4

- 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



**FIELD CONNECTION TERMINALS**



**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.

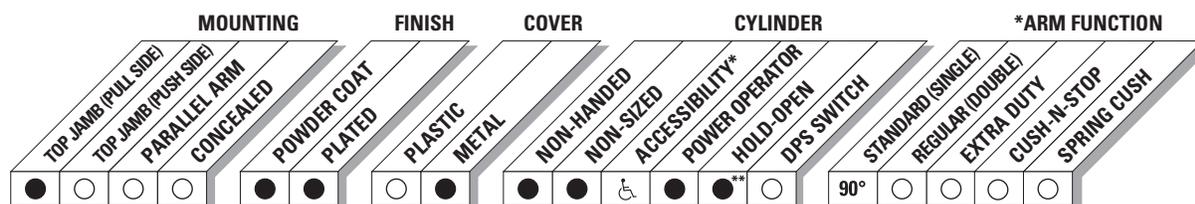


The 4630 AUTO EQUALIZER™ is LCN's SMART & RELIABLE electrically powered low-energy power operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally required automatic opening.

<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.



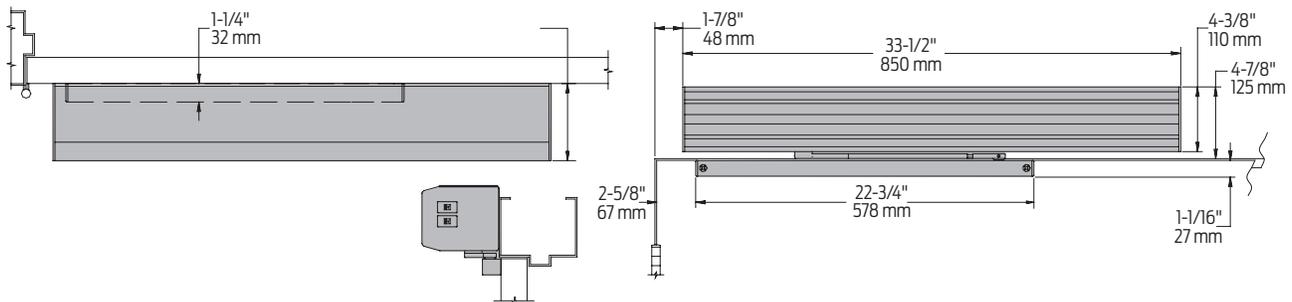
● AVAILABLE  
○ NOT AVAILABLE

♿ 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



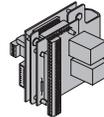
**4630-3179-1**  
On/Off Switch Assembly

- 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).

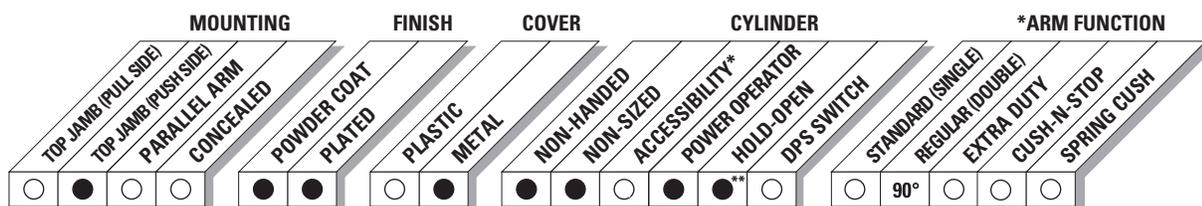


The 4640 AUTO EQUALIZER™ is LCN's SMART & RELIABLE electrically powered low-energy power operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

<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.



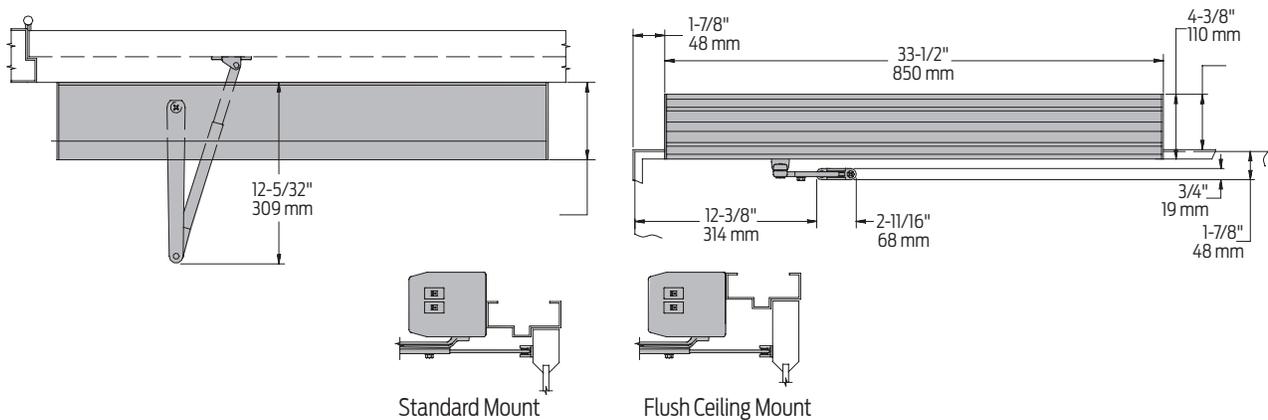
● AVAILABLE  
○ NOT AVAILABLE

♿ 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

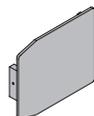
- Used for long arm with deep reveals

**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



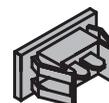
**4640-334-2  
Blank End Cap**

- Black powder coat only



**4640-334CS  
Switch End Cap**

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



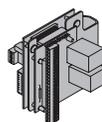
**4640-3179-1  
On/Off Switch Assembly**

- 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



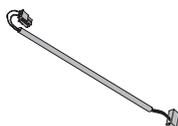
**4640-3454  
Motor/Clutch Assembly**

- 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

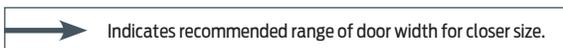
### Table of sizes

- 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).

### **ELECTROMECHANICAL AUTOMATIC OPERATORS**

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

- Surface mounted and overhead concealed mountings available.
- Available in two standard anodized finishes – Aluminum and Dark Bronze.

### **LOW ENERGY ELECTROMECHANICAL POWER OPERATORS**

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

### **STANDARDS, LISTINGS & APPROVALS**

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

### **WARRANTY**

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

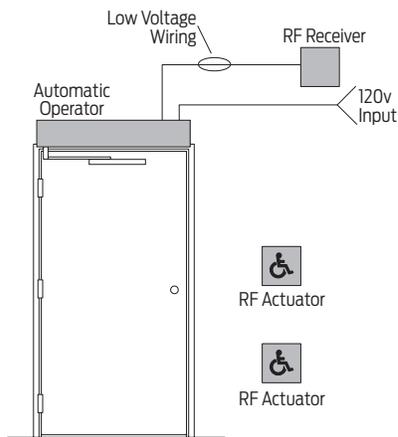
### **MAINTENANCE**

Low Energy Electromechanical Power Operators

- 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 Electromechanical LCN systems. Please consult your local SSC representative of LCN for assistance with specific installations and material requirements.

## SINGLE DOOR SYSTEMS



### SINGLE DOOR SYSTEM (WIRELESS)

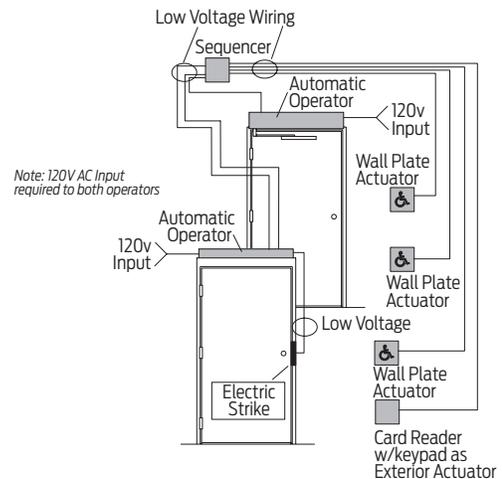
- An interior door
- Guide rails or safety devices not required
- Free swinging (or dogged) door

#### 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 power operator to open the door to 90 degrees
- The door is held there until the system times out
- Door closes via spring return
- Door opening speed, closing speed and hold open time is adjustable on the control box
- If not actuated, the power operator functions as a manual door

Bill Of Materials:	Qty.	Part No.	Description
	1	9531	Automatic Operator (RH)
	2	8310-3853WS	Wireless Actuators
	1	8310-865	Wireless Receiver

## VESTIBULE ENTRY OPERATION



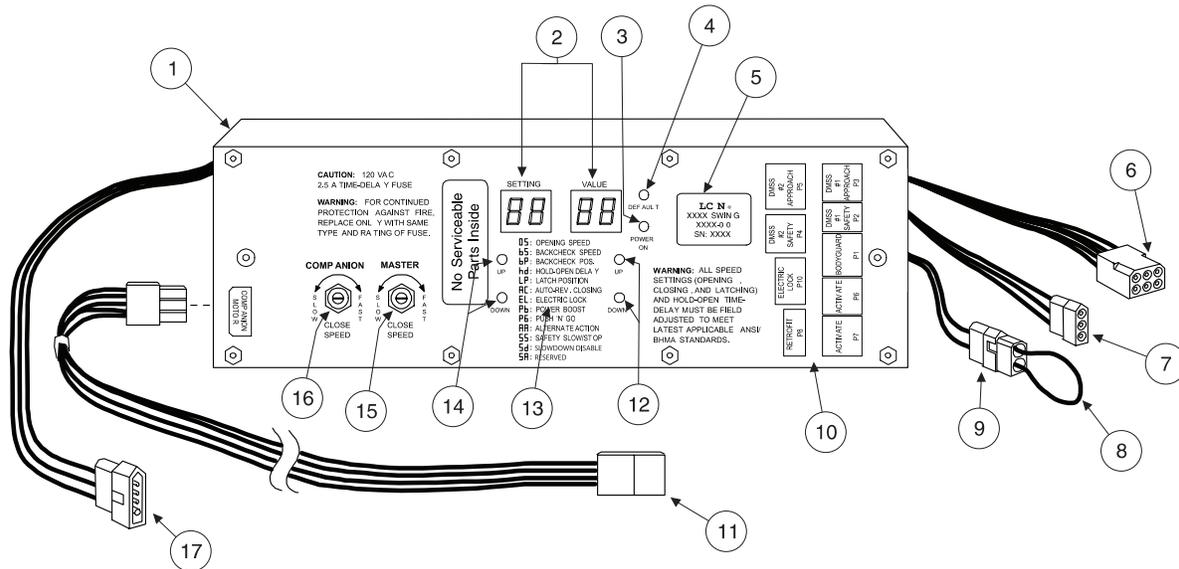
### VESTIBULE ENTRY SYSTEM (WIRED)

- Exterior & 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 power operator functions as a manual door

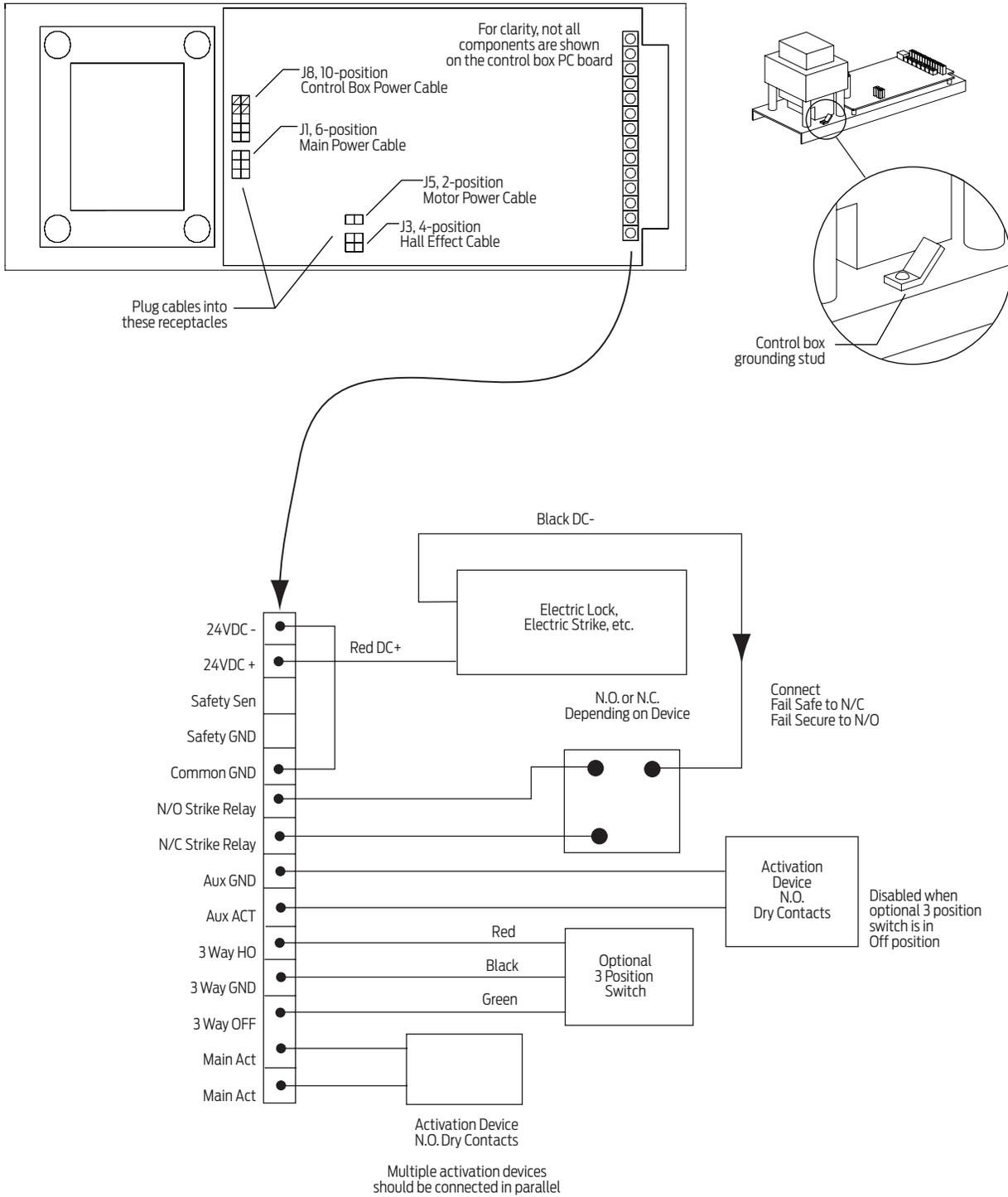
Bill Of Materials:	Qty.	Part No.	Description
	1	9542	Automatic operator (RH)
	1	9531	Automatic operator (RH)
	3	8310-853	Wall Plate Actuators
	1	8310-849	Sequencer
	Other products from Von Duprin and Schlage Electronics		



### CONTROL BOX - 2800, 9500 SERIES

1. Control Box, 115VAC 60Hz, or 240 VAC 50/60 Hz
2. Seven Segment Display
3. Power Indicator
4. Factory Default Push Button
5. Model Identification Label
6. 6-Pin Connector for Master Motor
7. 3-Pin Connector for 3 Position Switch
8. Breakaway Jumper Cable
9. 2-Pin Connector for Breakaway Switch
10. Accessory Direct Connect Diagram
11. 6-Pin Connector for Companion Motor (supply only w/ simultaneous pairs)
12. Value Adjustment Push Buttons
13. Setting Adjustment Menu
14. Function Adjustment Push Buttons
15. Closing Speed Adjustment Dial (Master)
16. Closing Speed Adjustment Dial (Companion)
17. 3-Pin Connector for AC power

**STANDARD CONTROL BOX - 9100 SERIES**



### **GENERAL ELECTRICAL DATA**

1. The 115/240 volt power supply must be a dedicated circuit from the main circuit breaker panel and must not be connected into a building lighting system operating fluorescent lights.
2. Location of conduits determined by mounting. See installation instructions for location.

### **2800, 9500, SERIES**

#### **Electrical Data**

1. 120 VAC 60Hz input @ 2.5 amps (2800 and 9500 Series).
2. 240 VAC 50/60 Hz @ 2.5 amps (2800, and 9500 Series).
3. 24 V AC output @ 1.5 amps (protected by self-resetting thermal fuse).
4. 24 V DC available with SO kit included.

### **9100, SERIES**

#### **Electrical Data**

1. 120 VAC input @ 1 amp.
2. 24 VDC output @ 2.5 amps.

### **On-Board Power Supply**

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

### **Electronic Circuit Protection**

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

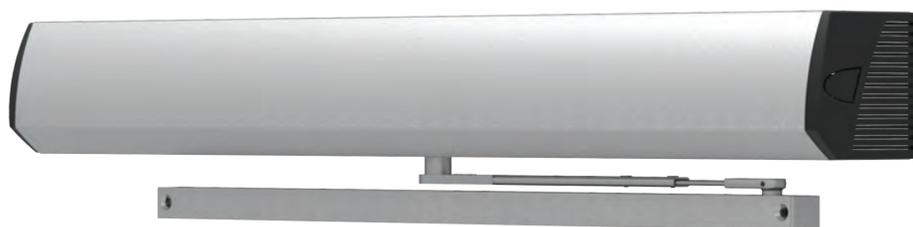
### **Visual Function Indicators**

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

### **Programming Mode**

Allow tailoring of the following functions to meet specific site conditions:

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



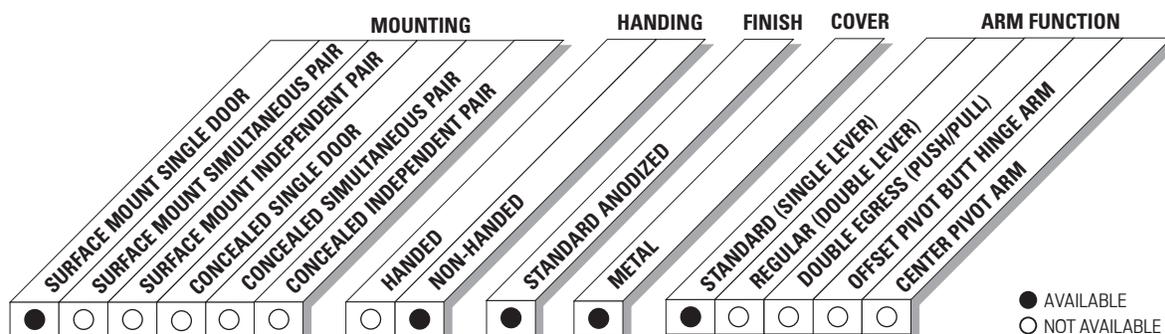
The 9130 BENCHMARK by LCN is an electrically powered low-energy operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for automatic opening applications that occasionally require manual opening. The BENCHMARK is a cost-effective solution for retrofitting an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

<b>Certifications</b>	Grade 1 - A156.19, UL325, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act
<b>Handing</b>	Non-Handed
<b>Door Width</b>	<ul style="list-style-type: none"> <li>■ 30" - 48"</li> <li>■ 30" minimum door width for 27"</li> <li>■ 36" door width only for full length pull operator</li> </ul>
<b>Warranty</b>	2 years

<b>Cover</b>	<ul style="list-style-type: none"> <li>■ Metal 27", standard</li> <li>■ Metal 36", optional</li> </ul>
<b>Fasteners</b>	Wood and machine screws
<b>Mounting</b>	Single interior door, surface mount, offset pivot / butt hinge (Pull Side)
<b>Arms</b>	Standard arm and track
<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Anodized aluminum, standard</li> <li>■ Dark bronze, optional</li> </ul>

**Special Templates**

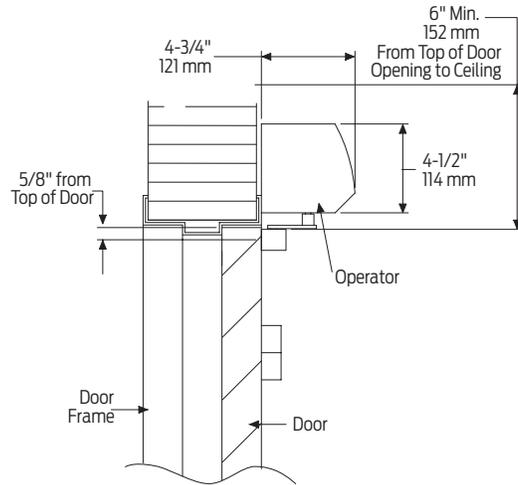
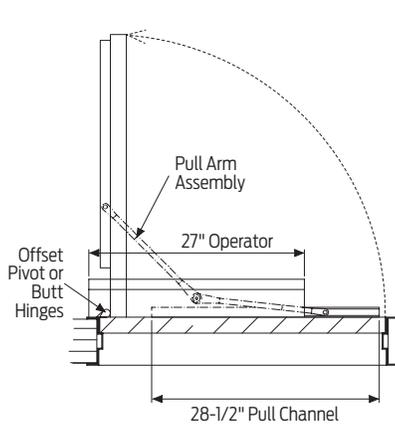
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



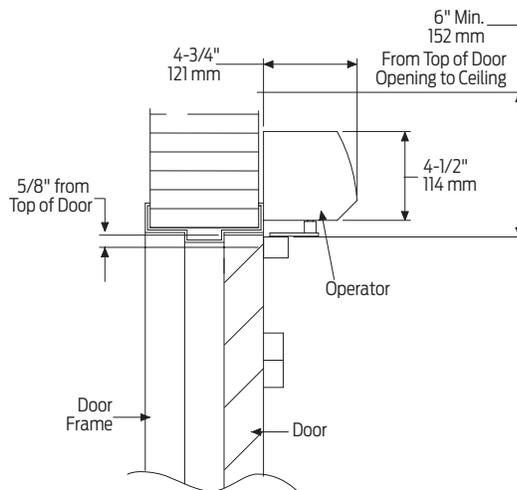
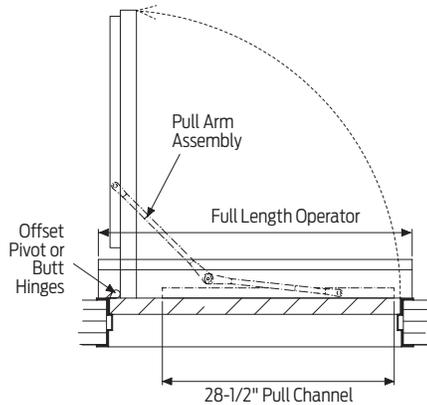
# 9130 Series Benchmark

## Mounting details

### Top Jamb Single Door Mounting



**Offset/butt hinge, center pivot, pull, standard cover**



**Offset/butt hinge, center pivot, pull, full cover**

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Reveal</b>	Should not exceed 1/8" (3 mm)
<b>Head Frame</b>	Minimum 2" (51 mm)
<b>Top Rail</b>	Minimum 2" (51 mm)
<b>Opening and Closing Time</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 30 seconds</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	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

## Motor Gearbox



**9130-3454S**  
Motor Gearbox Assembly

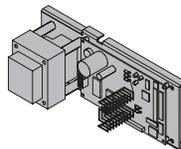
- Driving mechanism for operator (switch included)
- For 27" unit



**9130-3454**  
Motor Gearbox Assembly (W/O Switch)

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

## Control Box



**9130-3462**  
Control Box (120v)

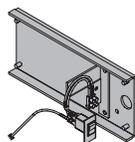
- Electronic controlling device with power supply output and power boost feature for Benchmark

## Brackets



**9130-3018**  
Mounting Bracket

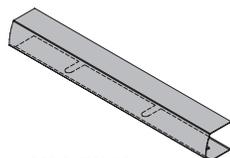
- Standard



**9130-3351-2**  
Switch Bracket

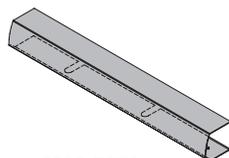
- 41" cable
- Bracket used to locate switch at end of cover on full length unit

## Covers



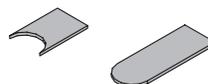
**9130-72MC**  
Metal Cover

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



**9130-72FC**  
Full Metal Cover

- 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

### Tracks



**9130-3038**  
Standard Track

- Non-handed
- Standard



**9130-73**  
Track End Cap

- Black plastic



**9130-3034**  
Roller Assembly

- Quiet low friction

### Arms



**9130-3077T**  
Standard Arm

- Non-handed
- Track roller not included



**9130-3077PLCM**  
Standard Arm

- Non-handed
- Standard non-handed track

**How-to-order 9130 Series closers**

**Specify Finish**

- Standard Anodized Finish \_\_\_\_\_  
Aluminum or Dark Bronze

**Operator options**

**Cover**

- 36" Full Cover

**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 screw pack  
unless options listed below are selected

**Table of sizes**



→ Indicates recommended range of door width for operator.

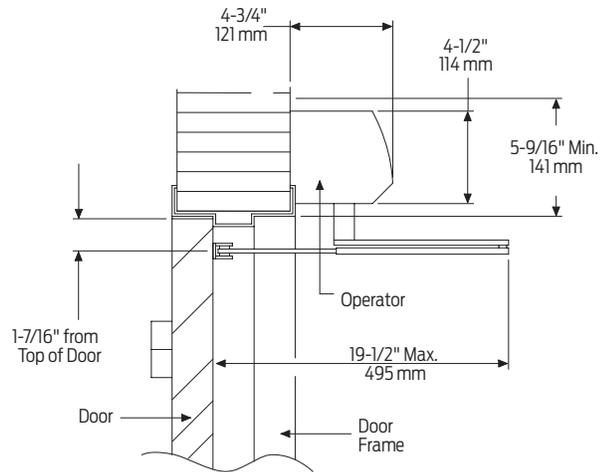
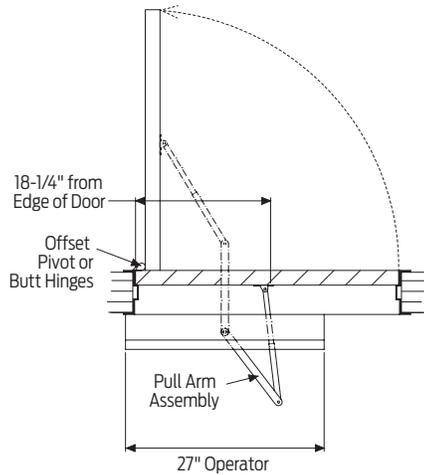
*NOTE: For All Benchmark Series.  
30" minimum door width for 27" pull operator.  
36" door width only for full length pull operator.*



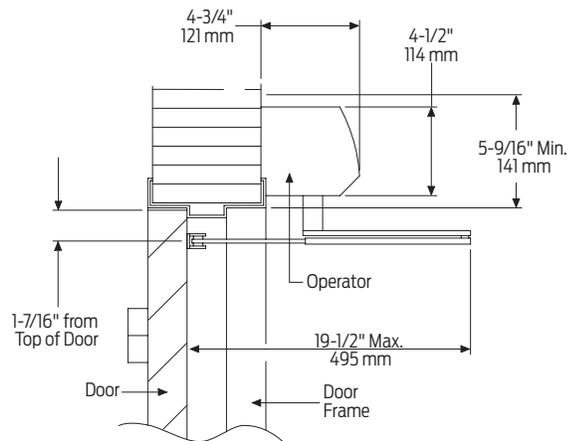
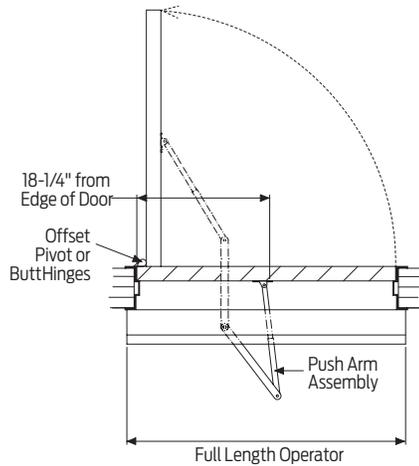
# 9140 Series Benchmark

## Mounting details

### Top Jamb Single Door Mounting



**Offset/butt hinge, center pivot, push, standard cover**



**Offset/butt hinge, center pivot, push, full cover**

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Reveal</b>	Push installations should not exceed 6" (152 mm) for REGULAR ARM and 9-3/4" (248 mm) for LONG ARM
<b>Head Frame</b>	Minimum 2" (51 mm)
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Minimum 2" (51 mm)</li> <li>Flush ceiling installation requires 5-1/4" (133 mm) minimum</li> </ul>
<b>Opening and Closing Time</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 30 seconds</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section pages 54 for typical system wiring and page 55 for electrical data
<b>Maximum Opening</b>	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

### Motor Gearbox



**9140-3454S**  
Motor Gearbox Assembly

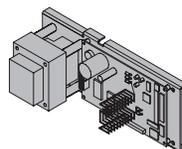
- Driving mechanism for operator (switch included)
- For 27" unit



**9140-3454**  
Motor Gearbox Assembly (W/O Switch)

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

### Control Box



**9130-3462**  
Control Box (120v)

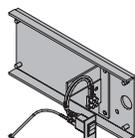
- Electronic controlling device with power supply output and power boost feature for Benchmark

### Brackets



**9140-3018**  
Mounting bracket

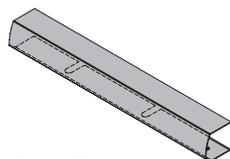
- Standard



**9140-3351-1**  
Switch Bracket

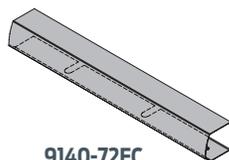
- 29" cable
- Used with a 36" door
- Used to locate switch at end of cover on full length unit

### Covers



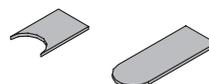
**9140-72MC**  
Metal Cover

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



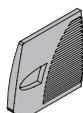
**9140-72FC**  
Full Metal Cover

- 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

**Arms**



**9140-3077**  
Regular arm

- Non-handed



**9140-3077L**  
Long push arm

- 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

**How-to-order 9140 Series closers**

**Specify Finish**

- Standard Anodized Finish \_\_\_\_\_  
Aluminum or Dark Bronze

**Operator options**

**Cover**

- 36" Full Cover

**Arm**

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

**Operator will be shipped with:**

- Standard motor gearbox
- Standard control box
- Mounting bracket
- 27" metal cover
- Standard arm (3077)
- Standard track w/track roller
- Wood and machine screw pack  
unless options listed below are selected

**Table of sizes**



→ Indicates recommended range of door width for operator.

*NOTE: For All Benchmark Series.  
30" minimum door width for 27" pull operator.  
36" door width only for full length pull operator.*



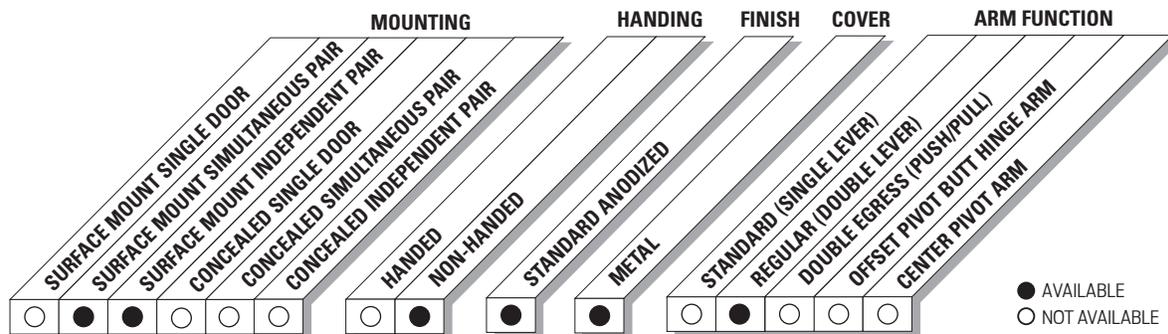
The 9150 BENCHMARK by LCN is an electrically powered low-energy operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for automatic opening applications that occasionally require manual opening. The BENCHMARK is a cost-effective solution for retrofitting an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

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

<b>Cover</b>	Metal, standard
<b>Fasteners</b>	Wood and machine screws
<b>Mounting</b>	Pair of doors, surface mount, offset pivot / butt hinges (Push Side)
<b>Arms</b>	Regular arms
<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Anodized aluminum, standard</li> <li>■ Dark bronze, optional</li> </ul>

**Special  
Templates**

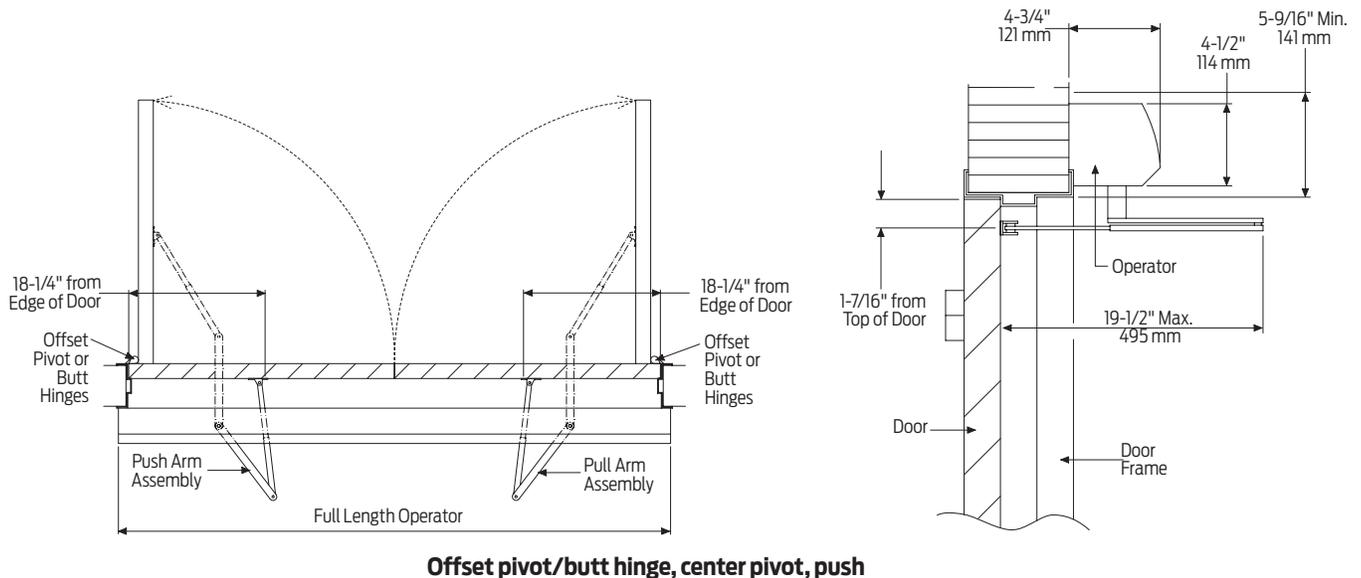
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



# 9150 Series Benchmark

## Mounting details

Top jamb, Independent/  
Simultaneous Pair  
Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Reveal</b>	Push installations should not exceed 6" (152 mm) for REGULAR ARM and 9-3/4" (248 mm) for LONG ARM
<b>Head Frame</b>	Minimum 2" (51 mm)
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>■ Minimum 2" (51 mm)</li> <li>■ Flush ceiling installation requires 5-1/4" (133 mm) minimum</li> </ul>
<b>Opening and Closing Time</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 32 seconds</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section pages 54 for typical system wiring and page 55 for electrical data
<b>Maximum Opening</b>	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

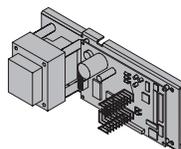
## Motor Gearbox



**9150-3454S**  
Motor Gearbox Assembly

- Driving mechanism for operator (switch included)

## Control Box



**9150-3462**  
Control Box (120v)

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

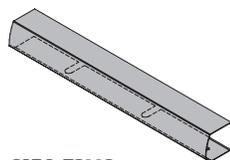
## Brackets



**9150-3018**  
Mounting Bracket

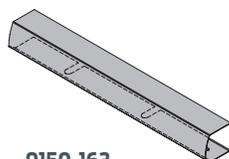
- Standard

## Covers



**9150-72MC**  
Metal Cover

- 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

## Arms



**9150-3077**  
Regular arm

- Non-handed



**9150-3077L**  
Long arm

- 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

# 9150 Series Benchmark

Ordering Information

## How-to-order 9150 Series closers

### Specify Finish

- Standard Anodized Finish \_\_\_\_\_  
Aluminum or Dark Bronze

### Operator options

#### Arm

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

### Operator will be shipped with:

- Standard motor gearbox (2 ea)
  - Standard control box (2 ea)
  - Mounting bracket (2 ea)
  - 72" metal cover
  - Standard arm (2 ea)
  - Wood and machine screw pack
- unless options listed below are selected

## Table of sizes

Notes:

- For 9150 Benchmark Series
- 72" door width only for full length push double door operator.

### Digital Control Suite

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

### Dual Independent Program Memories

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

### On-Board Diagnostics

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

### On-Board Power Supply

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

### Plug and Play Sensors

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

### Electronic Circuit Protection

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

### Visual Function Indicators

LED Display allows direct observation of these inputs while in visual function indicator mode:

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

### Programming Mode

Allows tailoring the following functions to meet specific site conditions

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

### Push 'N Go

Allows pedestrians to walk up to the door and push it open as if it were a manual door. After the door is manually opened approximately 5 degrees, the Push 'N Go feature takes over and continues to open the door – slowly and automatically to the full open position. With Push 'N Go, the door will stay fully open from one to 30 seconds, depending on the time delay chosen.

### Auto Reverse

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

### Safety Slow/Stops Function

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

### Power Boost

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

### Microprocessor

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

### Electric Lock Delay

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

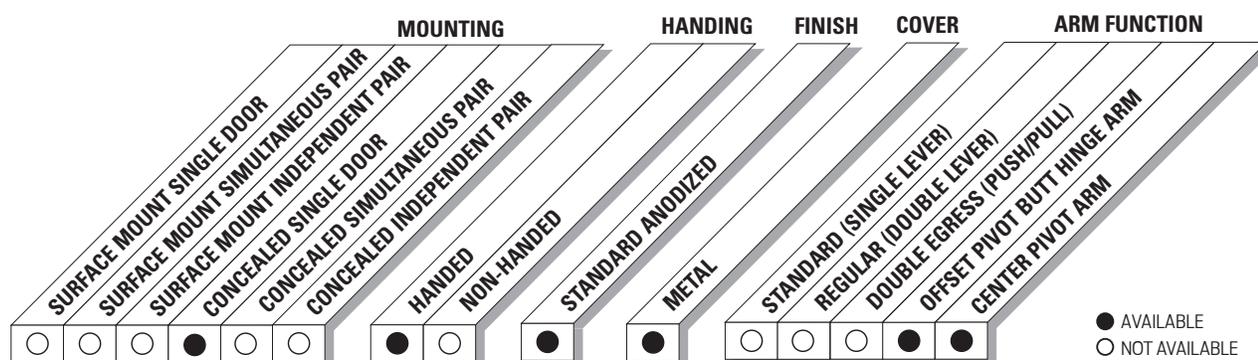


The 2810 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operator when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

<b>Certifications</b>	Grade 1 - ANSI A156.19, UL325, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Wood and machine screws
<b>Handing</b>	Handed	<b>Mounting</b>	Single door, overhead concealed, center pivot, offset pivot, butt hinge
<b>Door Width</b>	Minimum door width 33" - 48" 49" with finger guard. <i>Note: Single door width per leaf 33" minimum, 48" maximum</i>	<b>Arms</b>	Center Pivot Arm or Offset Pivot Arm
<b>Warranty</b>	2 years	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Anodized Aluminum</li> <li>■ Anodized Dark Bronze</li> </ul>

**Special  
Templates**

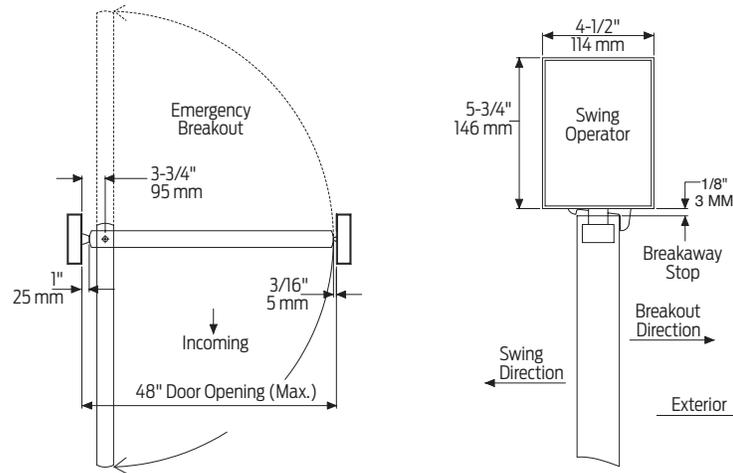
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



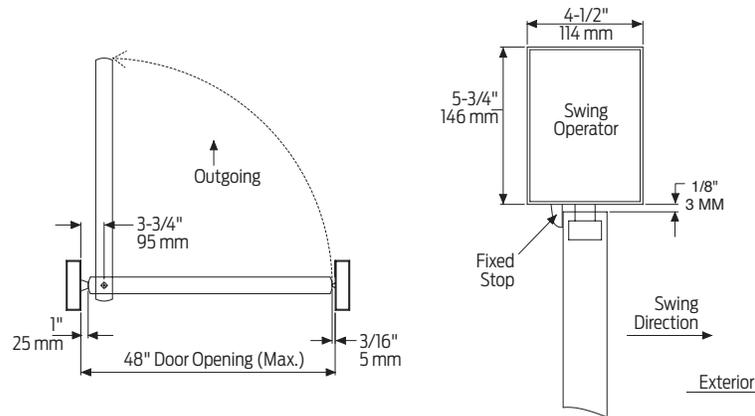
# 2810 Series Senior Swing

## Mounting details

### Concealed Single Door Mounting



**Center pivot, emergency breakaway, pull**  
Shown w/ 3-3/4" pivot and finger guard

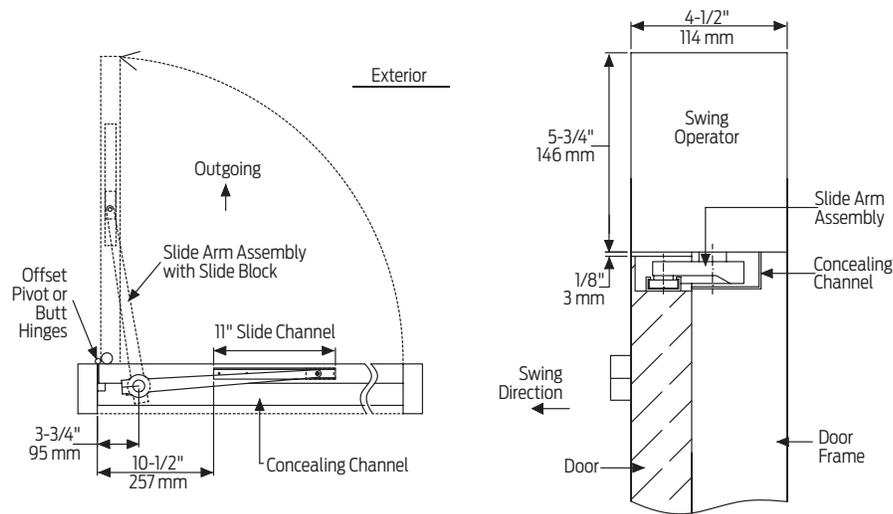


**Center pivot, fixed stop, push**  
Shown w/ 3-3/4" pivot and finger guard

<b>Head Frame</b>	Minimum 36" (L) x 5-3/4" (H) x 4-1/2" (W) (914 mm x 146 mm x 114 mm)
<b>Top Rail</b>	Minimum 2" (51 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>Variable by adjustments to the electronic control box</li> <li>Maximum hold open time adjustable up to approximately 32 seconds</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening
	<ul style="list-style-type: none"> <li>Minimum header length 33" with applied stop by others and 36" with LCN fixed or breakaway stop</li> </ul>

**Notes:**

- Push N' Go permits non-switch activation
- Power boost provides additional latch forcing for electromechanical unit with microprocessor control
- Double door header available up to 98", specify length 49" to 98" maximum (Consult factory regarding this option)
- Fixed (positive) or breakaway stop available with center pivot arm
- Adjustable hold open time of 1-32 seconds



**Offset pivot or butt hinge, slide arm, push**  
Shown w/ 3-3/4" pivot

<b>Head Frame</b>	Minimum 33" (L) x 5-3/4" (H) x 4-1/2" (W) (838 mm x 146 mm x 114 mm)
<b>Top Rail</b>	Minimum 2" (51 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>■ Variable by adjustments to the electronic control box</li> <li>■ Maximum hold open time adjustable up to approximately 32 seconds</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening
	<ul style="list-style-type: none"> <li>■ Minimum header length 33"</li> <li>■ Installations require bottom pivot and two intermediate pivots</li> </ul>

**Notes:**

- Push N' Go permits non-switch activation
- Power boost provides additional latch forcing for electromechanical unit with microprocessor control
- Double door header available up to 98", specify length 49" to 98" maximum (Consult factory regarding this option)
- Fixed (positive) or breakaway stop available with center pivot arm
- Adjustable hold open time of 1-32 seconds

**Motor Gearbox**



**2810-3454**  
Motor Gearbox

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

**Mount Brackets**



**2810-375**  
Mounting Bracket

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



**2810-275**  
Mounting Bracket

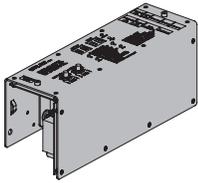
- Motor gearbox mounting bracket for 2-3/4" center pivot installations
- Front bracket



**2810-3018**  
Rear Mounting Bracket

- Motor gearbox mounting bracket
- Rear bracket

**Control Box**



**2810-3462**  
Control Box

- Senior swing
- Electronic controlling device for Senior Swing

**Headers**



**2810-3572HL**  
Header

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



**2810-3572DD**  
Header

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

**End Cap**



**2810-334**  
Header End Caps

- With openings for wiring

**Arms**



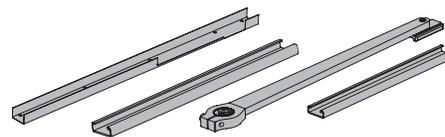
**2810-3077CP**  
Center Pivot Arm

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



**2810-3077OP**  
Offset Pivot Arm

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



**2810-3077 OPCM**  
Offset Pivot Arm Assembly

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

### Channels



**2810-3072**  
Concealing Channel

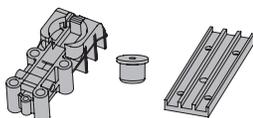
- Used to conceal arm in overhead concealed applications
- For offset pivot installations only
- If ordering separately specify length and hand



**2810-168**  
Slide channel

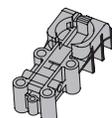
- Offset pivot or butt hinge installations only
- Mounts in top rail of door
- Allows arm to slide

### Pivots



**2810-3107**  
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



**2810-107**  
Bottom Pivot Body

- For center pivoted installations



**2810-110**  
Pivot Post

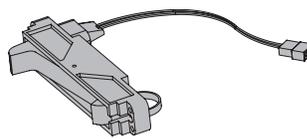
- Connects pivot body to bottom pivot plate for center pivoted installations



**2810-117**  
Bottom Pivot Plate

- Applied to floor for center pivoted installations

### Installation Accessories



**2810-384B**  
Door Stop Breakaway

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



**2810-384F**  
Door Stop Fixed

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



**2810-12**  
Filler Plate Blank

- Completes length of header box



**2810-11A**  
Spindle Plate

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



**2810-11B**  
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

# 2810 Series Senior Swing

## Ordering Information

### How-to-order 2810 Series

#### Select installation type

- 2811

#### Specify arm

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

#### Specify hand

- RH
- LH

#### Specify header/length

- HL\_ (Specify length 33" to 49" offset pivot)
- HL\_ (Specify length 36" to 49" center pivot)
- DD\_ (Specify length 49" to 98")

#### Specify finish

- Standard Anodized Finish \_\_\_\_\_  
Aluminum or Dark Bronze

#### Operator will be shipped with:

- Motor gearbox,
- Control box,
- Header (at specified length, 36" standard),
- Wood and machine screw pack unless options listed below are selected.

### Operator options

#### Stops

- Positive Mechanical Stop (POS)
- Panic Breakaway Stop (BKY)  
*\*Available with Center Pivoted installations only*

### Table of sizes



→ Indicates recommended range of door width for operator.

*NOTE: For all Senior Swing Series  
Single Door - Width per leaf 33" minimum, 48" maximum*

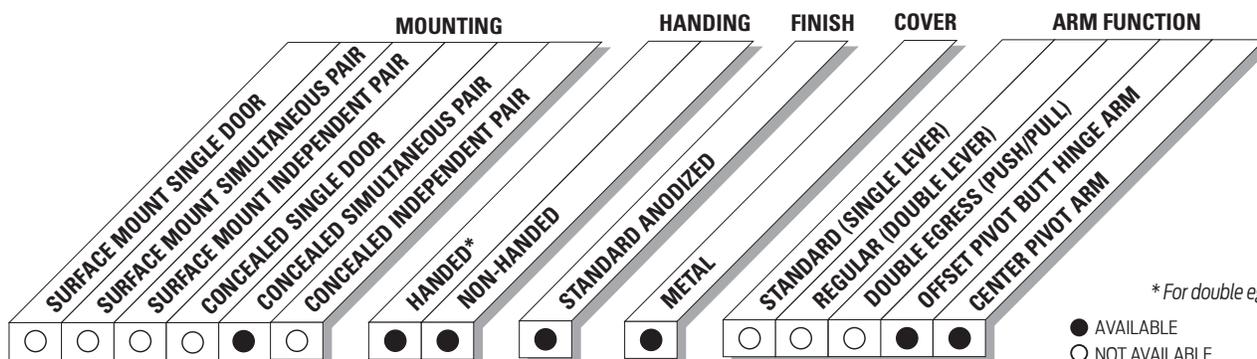


The 2850 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operator when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

<b>Certifications</b>	Grade 1 - ANSI A156.19, UL325, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Wood and machine screw pack
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Double door, overhead concealed, center pivot, offset pivot, butt hinge
<b>Handing</b>	Handed	<b>Arms</b>	Offset Pivot Arm or Center Pivot Arm
<b>Door Width</b>	<ul style="list-style-type: none"> <li>■ Combined width min 52" - 96"</li> <li>■ Simultaneous pair - width per leaf 26" minimum to 48" maximum</li> </ul>	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Anodized Aluminum</li> <li>■ Anodized Dark Bronze</li> </ul>
<b>Warranty</b>	2 years		

### Special Templates

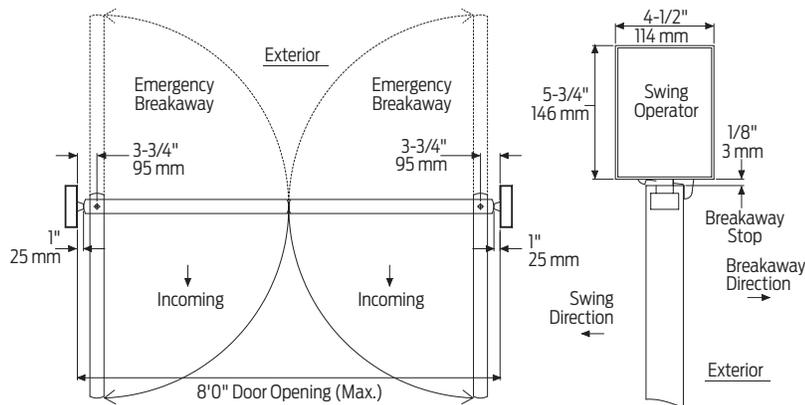
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



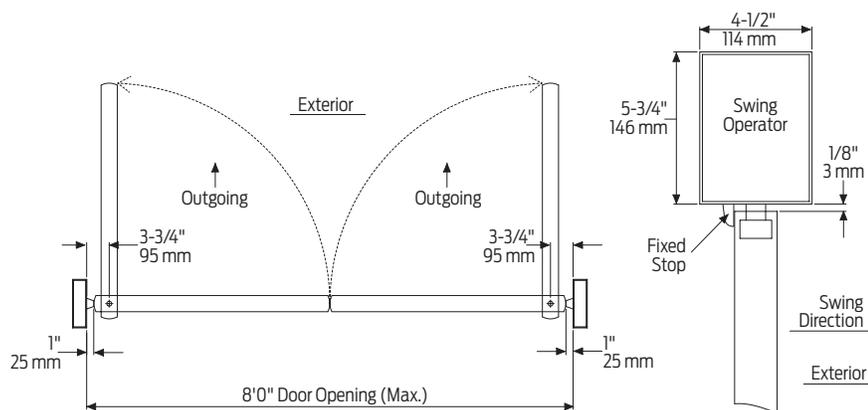
# 2850 Series Senior Swing

## Mounting details

Concealed Simultaneous Pair



**Center pivot, emergency breakaway, pull**  
Shown w/ 3-3/4" pivot

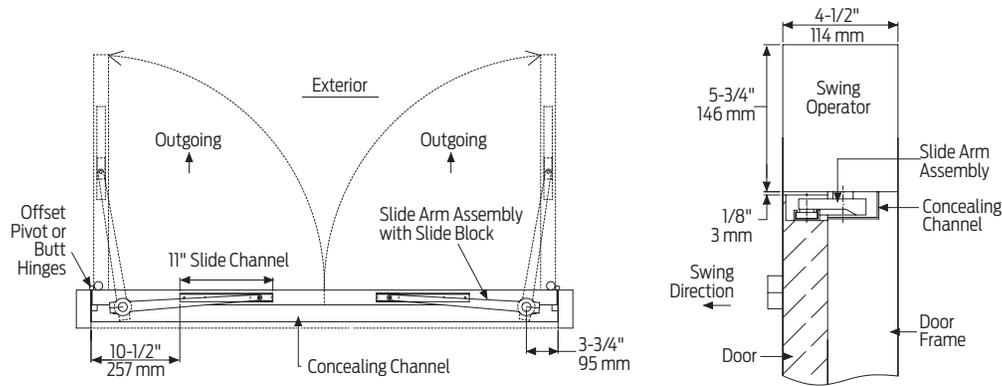


**Center pivot, fixed stop, push**  
Shown w/ 3-3/4" pivot

<b>Head Frame</b>	Minimum 52" (L) x 5-3/4" (H) x 4-1/2" (W) (1524 mm x 146 mm x 114 mm)
<b>Top Rail</b>	Minimum 2" (51 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>■ Variable by adjustments to the electronic control box</li> <li>■ Maximum hold open time adjustable up to approximately 32 seconds.</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

**Notes:**

- Push N' Go permits non-switch activation with power boost providing additional latching force
- Electromechanical unit with microprocessor control
- 36" header length is standard, specify length 33" - 49" max
- Double header available 98", specify length 49" - 98" max
- Fixed (positive) or breakaway stop available with center pivot arm
- Adjustable hold open time of 1-32 seconds
- Actuators available separately, see pages 115-131



**Offset pivot or butt hinge, slide arm, push**  
Shown w/ 3-3/4" pivot

<b>Head Frame</b>	Minimum 52" (L) x 5-3/4" (H) x 4-1/2" (W) (1524 mm x 146 mm x 114 mm)
<b>Top Rail</b>	Minimum 2" (51 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>■ Variable by adjustments to the electronic control box</li> <li>■ Maximum hold open time adjustable up to approximately 32 seconds</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

**Notes:**

- Push N' Go permits non-switch activation with power boost providing additional latching force
- Electromechanical unit with microprocessor control
- 36" header length is standard, specify length 33" - 49" max
- Double header available 98", specify length 49" - 98" max
- Fixed (positive) or breakaway stop available with center pivot arm
- Adjustable hold open time of 1-32 seconds
- Actuators available separately, see pages 115-131

**Motor Gearbox**



**2850-3454**  
Motor Gearbox

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

**Mount Brackets**



**2850-375**  
Mounting Bracket

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



**2850-275**  
Mounting Bracket

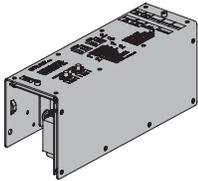
- Motor gearbox mounting bracket for 2-3/4" center pivot installations
- Front bracket



**2850-3018**  
Rear Mounting Bracket

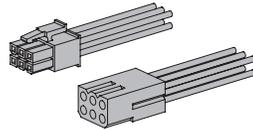
- Motor gearbox mounting bracket
- Rear bracket

**Control Box**



**2850-3462**  
Control box

- Senior swing
- Electronic controlling device for Senior Swing



**2850-982**  
Companion Cable

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

**Header**



**2850-3572HL**  
Header

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

**End Cap**



**2850-334**  
Header End Caps

- End cap with openings for wiring

**Arms**



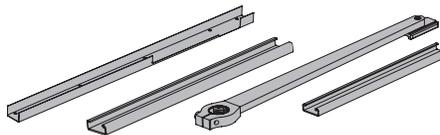
**2850-3077CP**  
Center pivot arm

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



**2850-3077OP**  
Offset pivot arm

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



**2850-3077OPCM**  
Offset Pivot Arm Assembly

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

## Channels



**2850-3072**  
Concealing Channel

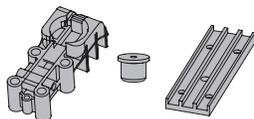
- Used to conceal arm in overhead concealed applications
- For offset pivot installations only
- If ordering separately specify length and hand



**2850-168**  
Slide Channel

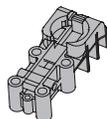
- Offset pivot or butt hinge installations only
- Mounts in top rail of door
- Allows arm to slide

## Pivots



**2850-3107**  
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



**2810-107**  
Bottom Pivot Body

- Pivot body for center pivoted installations



**2850-110**  
Pivot Post

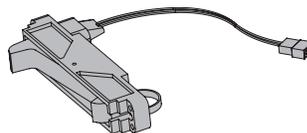
- Connects pivot body to bottom pivot plate for center pivoted installations



**2850-117**  
Bottom Pivot Plate

- Applied to floor for center pivoted installations

## Installation Accessories



**2850-384B**  
Door Stop Breakaway

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



**2850-384F**  
Door Stop Fixed

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



**2850-12**  
Filler Plate Blank

- Completes length of header box



**2850-11A**  
Spindle Plate

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



**2850-11B**  
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

# 2850 Series Senior Swing

## Ordering Information

### How-to-order 2850 Series

#### Select installation type

- 2853

#### Specify arm

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

#### Specify hand

- RH
- LH

#### Specify header/length

- HL\_ (Specify length 52" to 98")

#### Specify finish

- Standard Anodized Finish \_\_\_\_\_  
Aluminum or Dark Bronze

#### Operator will be shipped with:

- Standard motor gearbox (1 LH & 1 RH)
- Standard control box
- Companion cable
- Header (at specified length - 72" standard)
- 2-3/4" pivot point
- Wood and machine screw pack  
unless options listed below are selected.

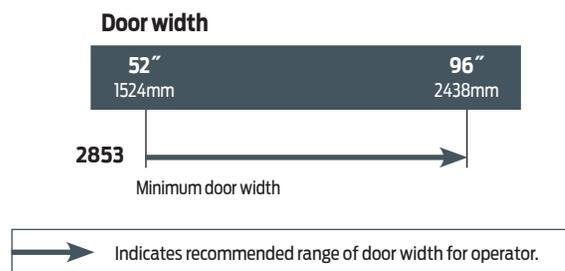
### Operator options

#### Stops\*

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

\*Available with Center Pivoted installations only

### Table of sizes



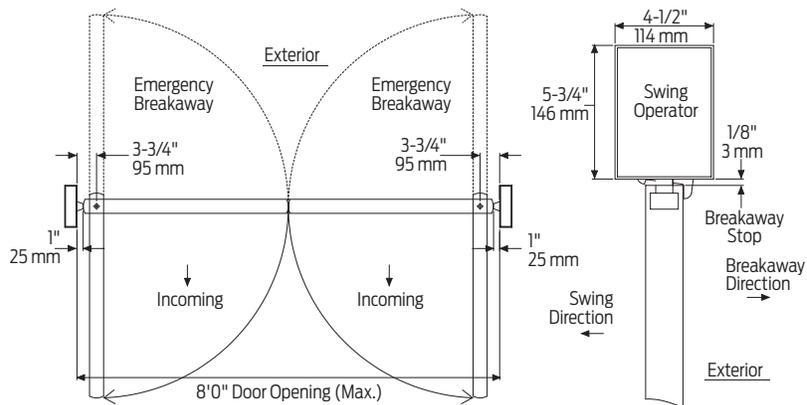
NOTE: For all Senior Swing Series  
Simultaneous Pair – Width per leaf 26" minimum to 48" maximum.



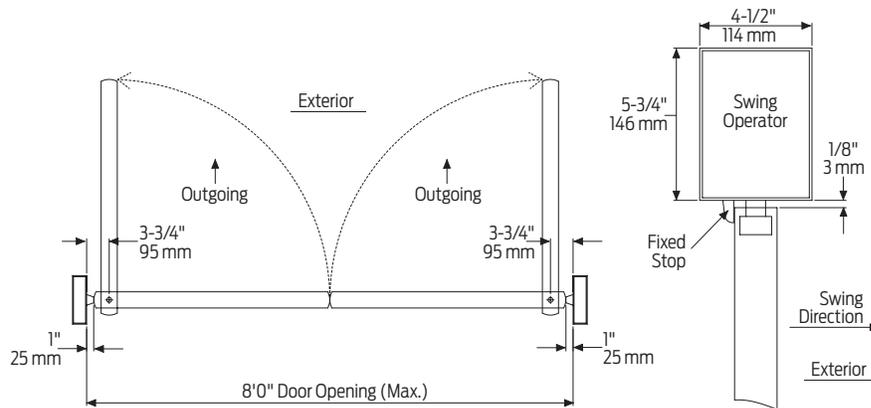
# 2860 Series Senior Swing

## Mounting details

Concealed Independent Pair



**Center pivot, emergency breakaway, pull**  
Shown w/ 3-3/4" pivot

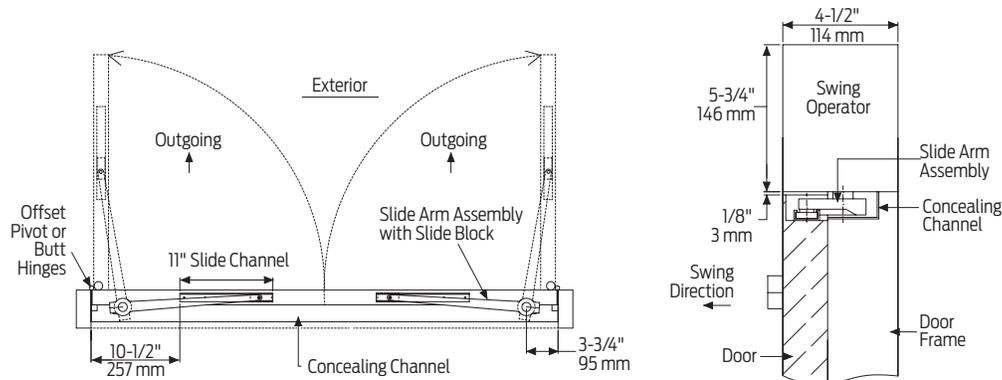


**Center pivot, fixed stop, push**  
Shown w/ 3-3/4" pivot

<b>Head Frame</b>	Minimum 65" (L) x 5 3/4" (H) x 4 1/2" (W) (1651 mm x 146 mm x 114 mm)
<b>Top Rail</b>	Minimum 2" (51 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>Variable by adjustments to the electronic control box</li> <li>Maximum hold open time adjustable up to approximately 32 seconds.</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

*Note:*

- Push N' Go permits non-switch activation with power boosts providing additional latching force
- Electromechanical unit with microprocessor control
- Digital keypad for easy setup
- 72" header length is standard. Specify other length 65" - 98" max. Consult factory with this option
- Adjustable hold time of 1-32 seconds
- Actuators available separately, see pages 115-131



**Offset pivot/butt hinge, push**

<b>Head Frame</b>	Minimum 65" (L) x 5-3/4" (H) x 4-1/2" (W) (1651 mm x 146 mm x 114 mm)
<b>Top Rail</b>	Minimum 2" (51 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>■ Variable by adjustments to the electronic control box</li> <li>■ Maximum hold open time adjustable up to approximately 32 seconds</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

*Notes:*

- Offset pivot installations require a bottom pivot and two intermediate pivots
- Push N' Go permits non-switch activation with power boosts providing additional latching force
- Electromechanical unit with microprocessor control
- Digital keypad for easy setup
- 72" header length is standard. Specify other length 65" - 98" max. Consult factory with this option
- Optional fixed (POS) or breakaway stop (BKY) available (center pivot arm)
- Header lengths 70" - 98" max with either POS or BKY
- Adjustable hold time of 1-32 seconds
- Actuators available separately, see pages 115-131

**Motor Gearbox**



**2860-3454**  
Motor gearbox

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

**Mount Brackets**



**2860-375**  
Mounting Bracket

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



**2860-275**  
Mounting Bracket

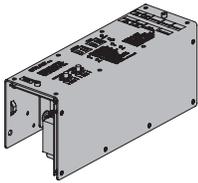
- Motor gearbox mounting bracket for 2-3/4" center pivot installations
- Front bracket



**2860-3018**  
Rear Mounting Bracket

- Motor gearbox mounting bracket
- Rear bracket

**Control Box**



**2860-3462**  
Control box

- Electronic controlling device for Senior Swing

**Header**



**2860-3572HL**  
Mounting Header

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

**End Cap**



**2860-334**  
Header End Caps

- With openings for wiring

**Arms**



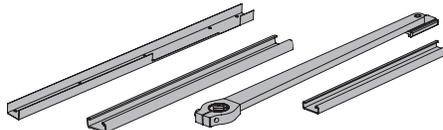
**2860-3077CP**  
Center Pivot Arm

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



**2860-3077OP**  
Offset Pivot Arm

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



**2860-3077OPCM**  
Offset Pivot Arm Assembly

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

## Channels



**2860-3072**  
Concealing Channel

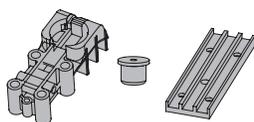
- Used to conceal arm in overhead concealed applications
- For offset pivot installations only
- If ordering separately specify length and hand



**2860-168**  
Slide Channel

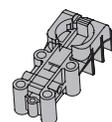
- Offset pivot or butt hinge installations only
- Mounts in top rail of door
- Allows arm to slide

## Pivots



**2860-3107**  
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



**2860-107**  
Bottom Pivot Body

- Pivot body for center pivoted installations



**2860-110**  
Pivot Post

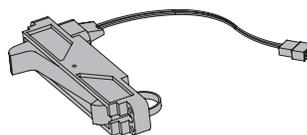
- Connects pivot body to bottom pivot plate for center pivoted installations



**2860-117**  
Bottom Pivot Plate

- Applied to floor for center pivoted installations

## Installation Accessories



**2860-384B**  
Door Stop Breakaway

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



**2860-384F**  
Door Stop Fixed

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



**2860-12**  
Filler Plate Blank

- Completes length of header box



**2860-11A**  
Spindle Plate

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



**2860-11B**  
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

# 2860 Series Senior Swing

## Ordering Information

### How-to-order 2860 Series

#### Select installation type

- 2863

#### Specify arm

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

#### Specify hand

- RH
- LH

#### Specify header/length

- HL\_ (Specify length 65" to 98")

#### Specify finish

- Standard Anodized Finish \_\_\_\_\_  
Aluminum or Dark Bronze

#### Operator will be shipped with:

- Standard motor gearbox (1 LH & 1 RH)
- Standard control box (2 ea)
- Header (at specified length - 72" standard)
- 2-3/4" pivot point
- Wood and machine screw pack  
unless options listed below are selected.

### Operator options

#### Stops\*

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

\*Available with Center Pivoted installations only

### Table of sizes



 Indicates recommended range of door width for operator.

NOTE: For all Senior Swing Series  
Independent Pair – Width per leaf 32-1/2" minimum to 48" maximum

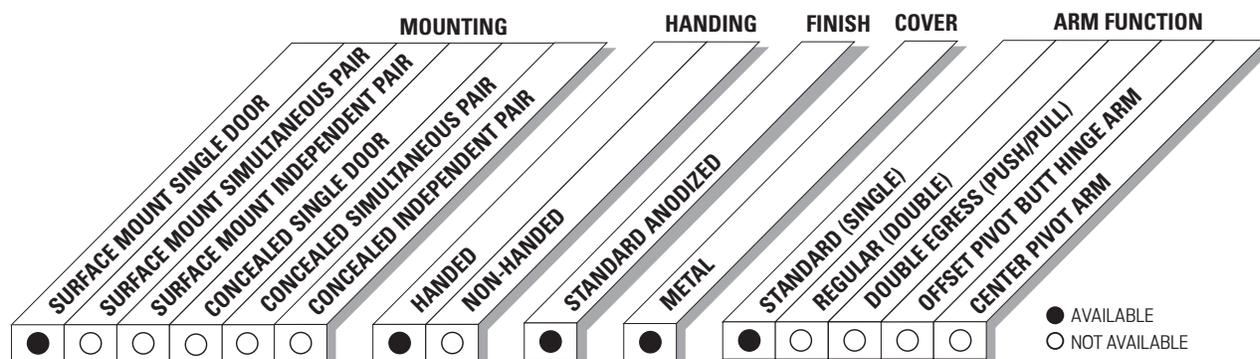


The 9530 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

<b>Certifications</b>	Grade 1 - ANSI A156.19, UL325/228, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Machine screw pack
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Single door, surface mount, offset pivot. butt hinge, pull side
<b>Handing</b>	Handed	<b>Arms</b>	Standard arm (3077T)
<b>Door Width</b>	<ul style="list-style-type: none"> <li>■ Minimum 33" - 48"</li> <li>■ Single door - width per leaf 33" minimum, 48" maximum</li> </ul>	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Anodized Aluminum</li> <li>■ Anodized Dark Bronze</li> </ul>
<b>Warranty</b>	2 years		

**Special  
Templates**

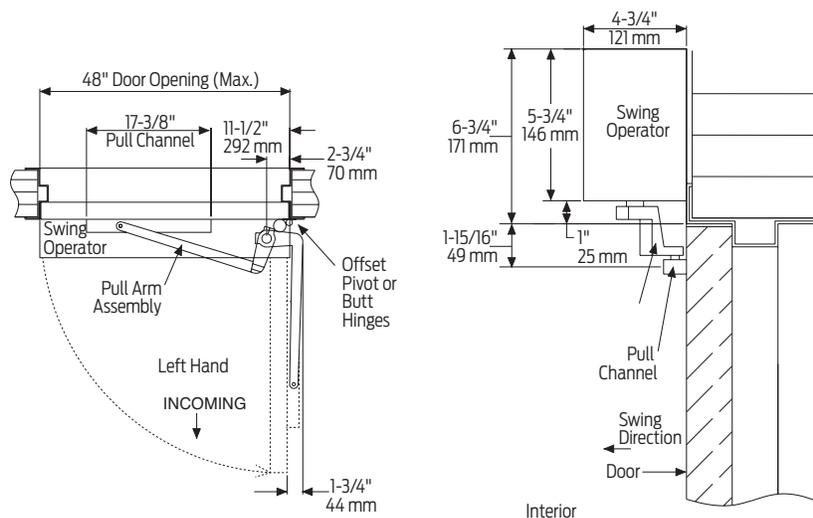
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



# 9530 Series Senior Swing

## Mounting details

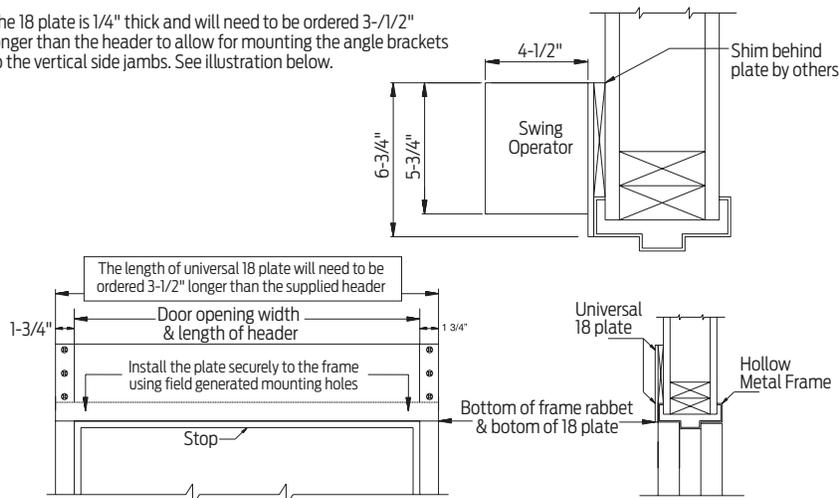
### Top Jamb Single Door Mounting



### Offset pivot/butt hinge, center pivot, pull

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

The 18 plate is 1/4" thick and will need to be ordered 3-1/2" longer than the header to allow for mounting the angle brackets to the vertical side jambs. See illustration below.



### Hollow metal frame Suggested Installation.

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Reveal</b>	Should not exceed 4" (102 mm)
<b>Head Frame</b>	Minimum 1-3/4" (44 mm). Face frame 6-3/4" (171 mm) total operator clearance
<b>Top Rail</b>	Minimum 2-3/4" (70 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>Variable by adjustments to the electronic control box</li> <li>Maximum hold open time adjustable up to approximately 32 seconds</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

#### Notes:

- Push N' Go permits non-switch activation with a power boost providing additional latching force
- Electromechanical unit with microprocessor control
- Digital keypad for easy setup
- 36" header length is standard. Specify 33" - 48" max
- Double door header available up to 98", specify other length 49" - 98" max
- Consult factory regarding this option
- Adjustable hold open period of 2 - 32 seconds in automatic or manual mode
- Actuators available separately, see pages 115-131

**Motor Gearbox**



**9530-3454  
Motor Gearbox**

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

**Mount Brackets**



**9530-275  
Mounting Bracket**

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



**9530-3018  
Rear Mounting Bracket**

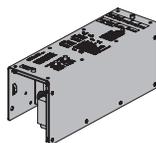
- Motor gearbox mounting bracket
- Rear bracket



**9530-334-1  
Angled Bracket**

- Mounting bracket for surface applications (includes 2 mounting brackets)

**Control Box**



**9530-3462  
Control Box**

- Electronic controlling device for Senior Swing

**Headers**



**9530-3572HL  
Header**

- Standard
- Single door, single operator
- Specify length 33" to 48" maximum



**9530-3572DD  
Header**

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

**End Caps**



**9530-334  
Header End Caps**

- With openings for wiring



**9530-334-2  
End Dress Plate**

- Metal finish end cap

## Arms



**9530-3077PLCM**  
Standard Arm Assembly

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



**9530-3077T**  
Standard Arm

- Handed
- Track roller not included

## Tracks



**9530-3038**  
Track

- Non-handed
- Includes 3034 & 73



**9530-73**  
Track End Cap

- Black plastic end caps



**9530-3034**  
Roller

- Quiet low friction roller assembly

## Installation Assembly



**9530-11A**  
Spindle Plate

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



**9530-12**  
Filler

- Plate blank
- Completes length of header box (specify Length)



**9530-18**  
Mounting Plate

- Optional mounting plate for standard hollow metal door frames
- Specify length 36-1/2" to 101-1/2" maximum, when angle brackets
- Specify length 33" to 98" maximum when using end dress plates

*NOTE: The length of a universal 18 plate will need to be ordered 3-1/2" longer than the supplied header when using angle brackets*

**How-to-order 9530 Series closers**

**Specify hand**

- RH
- LH

**Specify header/length**

- HL\_\_ (Specify length 33" to 48")
- DD\_\_ (Specify length 49" to 98")

**Specify finish**

- Standard Anodized Finish \_\_\_\_\_  
Aluminum or Dark Bronze

**Operator will be shipped with:**

- Standard motor gearbox
  - Standard control box
  - Header (at specified length, 36" standard)
  - Standard arm (3077T)
  - 2-3/4" pivot point
  - Standard track w/track roller
  - Machine screw pack
- unless options listed below are selected

**Operator options**

**Mounting plate**

- Plate, \_\_\_ (Specify Length 33" to 101-1/2")

**Table of sizes**



Indicates recommended range of door width for operator.

*NOTE: For all Senior Swing Series.*

*Single Door - Width per leaf 33" minimum, 48" maximum.*

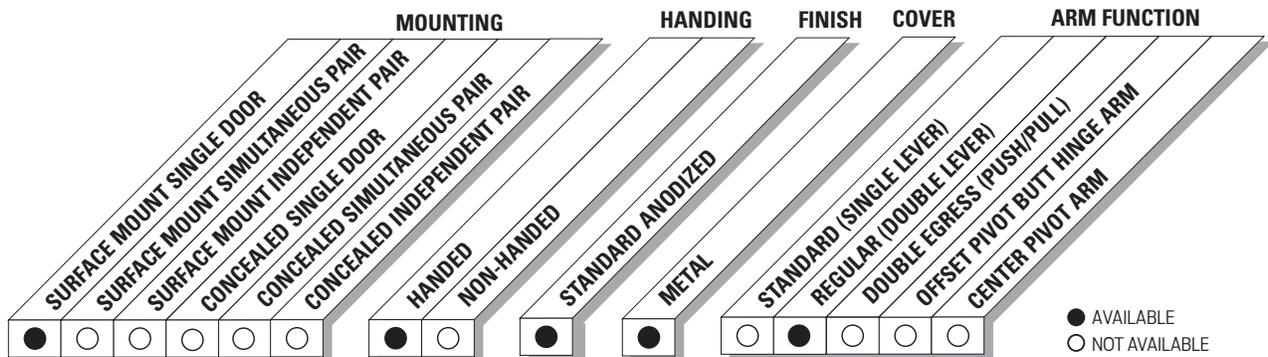


The 9540 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

<b>Certifications</b>	Grade 1 - ANSI A156.19, UL325/228, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Machine screw pack
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Single door, surface mount, offset pivot, butt hinge (Push Side)
<b>Handing</b>	Handed	<b>Arms</b>	Regular Arm (3077)
<b>Door Width</b>	<ul style="list-style-type: none"> <li>■ Minimum door width 33" - 48"</li> <li>■ Single door - width per leaf 33" minimum, 48" maximum</li> </ul>	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Anodized Aluminum</li> <li>■ Anodized Dark Bronze</li> </ul>
<b>Warranty</b>	2 years		

**Special  
Templates**

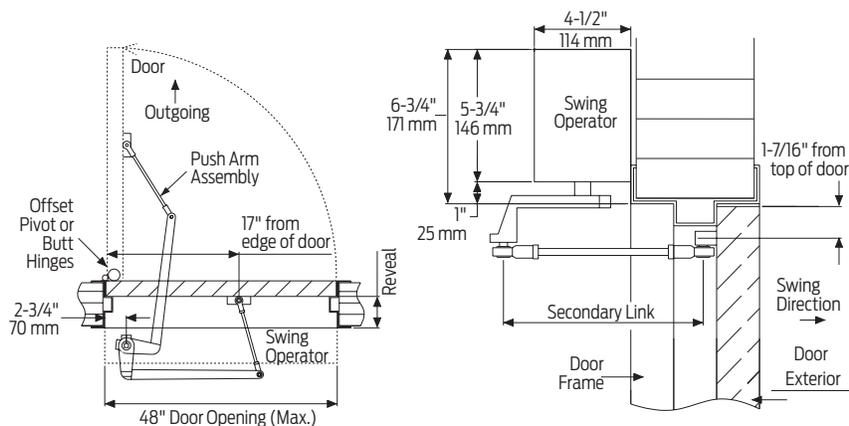
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



# 9540 Series Senior Swing

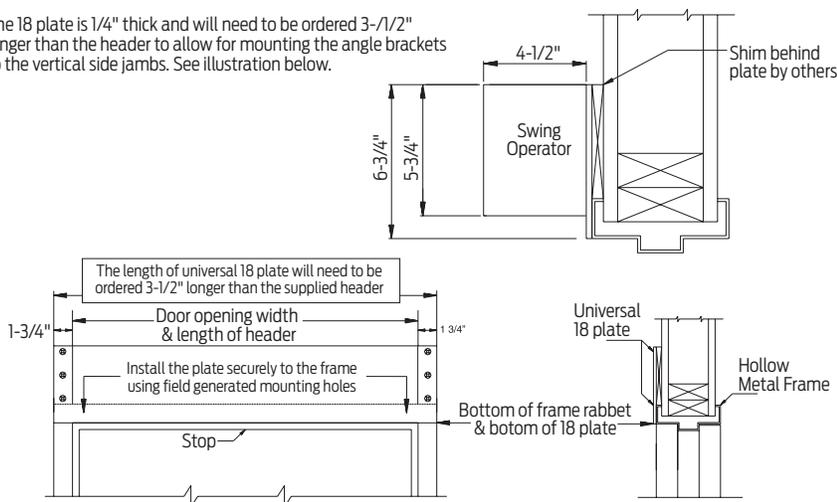
## Mounting details

### Top Jamb Single Door Mounting



**Offset pivot/butt hinge, center pivot, push**  
 Consult factory for all balance door installations.

The 18 plate is 1/4" thick and will need to be ordered 3-1/2" longer than the header to allow for mounting the angle brackets to the vertical side jambs. See illustration below.



**Hollow metal frame**  
 Suggested Installation.

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Reveal</b>	push installations should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM
<b>Head Frame</b>	Minimum 1-3/4" (44 mm). Face frame 6-3/4" (171 mm) total operator clearance
<b>Top Rail</b>	Minimum 2-3/4" (70 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>Variable by adjustments to the electronic control box</li> <li>Maximum hold open time adjustable up to approximately 32 seconds</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

**Notes:**

- Push N' Go permits non-switch activation with a power boost providing additional latching force
- Electromechanical unit with microprocessor control
- Digital keypad for easy setup
- 36" header length is standard. Specify 33" - 48" max
- Double door header available up to 98", specify other length 49" - 98" max
- Adjustable hold open period of 2 - 32 seconds in automatic or manual mode
- Actuators available separately, see pages 115-131

**Motor Gearbox**



**9540-3454  
Motor Gearbox**

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

**Mount Brackets**



**9540-275  
Mounting Bracket**

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



**9540-3018  
Rear Mounting Bracket**

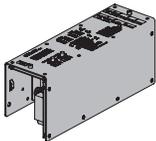
- Motor gearbox mounting bracket
- Rear bracket



**9540-334-1  
Angled Bracket**

- Mounting bracket for surface applications (includes 2 mounting brackets)

**Control Box**



**9540-3462  
Control Box**

- Electronic controlling device for Senior Swing

**Headers**



**9540-3572HL  
Header**

- Single door, single operator
- Specify length 33" to 48" maximum
- Standard



**9540-3572DD  
Header**

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

**End Caps**



**9540-334  
Header End Caps**

- With openings for wiring



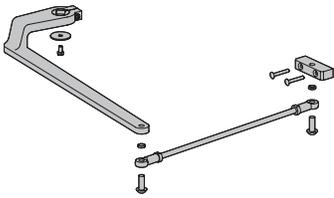
**9540-334-2  
End Dress Plate**

- Metal finish end cap

# 9540 Series Senior Swing

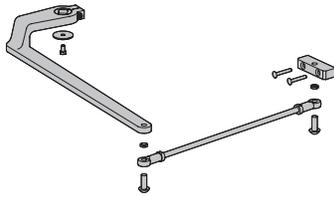
## Accessories

### Arms



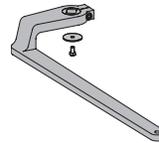
#### 9540-3077 Regular Arm Assembly

- Handed
- Includes 77 main arm assembly and 79 linkage assembly



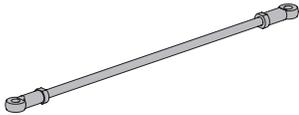
#### 9540-3077L Regular Long Arm Assembly

- Handed
- Includes 77 main arm assembly and 79LR linkage assembly



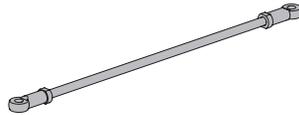
#### 9540-77 Main Arm

- Handed
- Attaches to motor gearbox



#### 9540-79 Linkage Assembly - 15"

- Threaded rod attaches to door
- Extends from main arm



#### 9540-79LR Linkage Assembly - 32"

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

### Installation Accessories



#### 9540-11A Spindle Plate

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



#### 9540-12 Filler Plate Blank

- Completes length of header box (specify length)



#### 9540-18 Mounting Plate

- For standard hollow metal door frames
- Specify length 55-1/2" to 101-1/2" maximum when using angle brackets
- Specify length 52" to 98" maximum when using dress plates
- Optional

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

**How-to-order 9540 Series closers**

**Specify hand**

- RH
- LH

**Specify header/length**

- HL\_\_ (Specify length 33" to 48")
- DD\_\_ (Specify length 49" to 98")

**Specify finish**

- Standard Anodized Finish \_\_\_\_\_  
Aluminum or Dark Bronze

**Operator will be shipped with:**

- Standard motor gearbox
- Standard control box
- Header (at specified length, 36" standard)
- Regular arm (3077)
- 2-3/4" pivot point
- Machine screw pack  
unless options listed below are selected.

**Operator options**

**Mounting plate**

- Plate, \_\_\_ (Specify Length 33" to 101-1/2")

**Arm**

- Long Arm (3077L)

**Table of sizes**



→ Indicates recommended range of door width for operator.

*NOTE: For all Senior Swing Series.  
Single Door - Width per leaf 33" minimum, 48" maximum.*

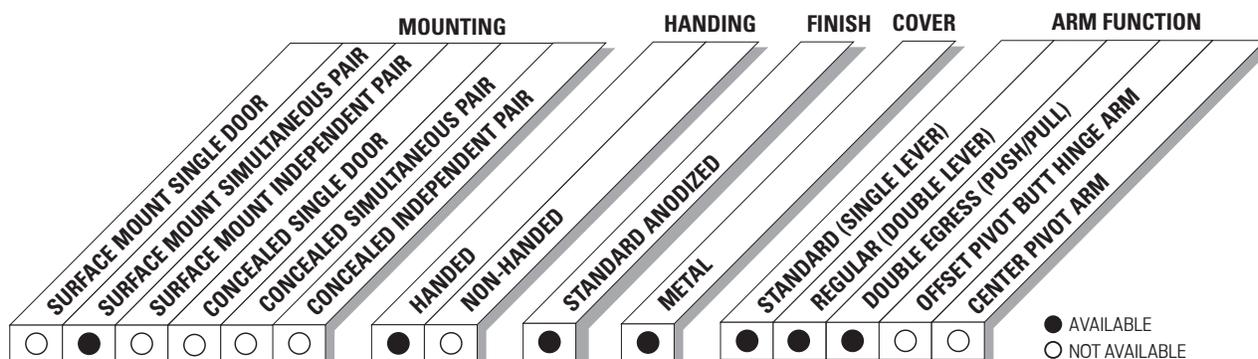


The 9550 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

<b>Certifications</b>	Grade 1 - ANSI A156.19, UL325/228, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Machine screw pack
<b>Handing</b>	Handed	<b>Mounting</b>	Simultaneous pair, surface mount, pull side, push side, double egress
<b>Door Width</b>	<ul style="list-style-type: none"> <li>■ Minimum combined door width 52" - 98" (push)</li> <li>■ Minimum combined door width 60" - 98" (pull; double egress)</li> <li>■ Simultaneous pair - width per leaf 30" minimum - 48" maximum</li> </ul>	<b>Arms</b>	<ul style="list-style-type: none"> <li>■ 2 Regular Arms (push)</li> <li>■ 2 Standard Arms (pull)</li> <li>■ 1 Regular and 1 Standard (double egress)</li> </ul>
<b>Warranty</b>	2 years	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Anodized Aluminum</li> <li>■ Anodized Dark Bronze</li> </ul>

**Special  
Templates**

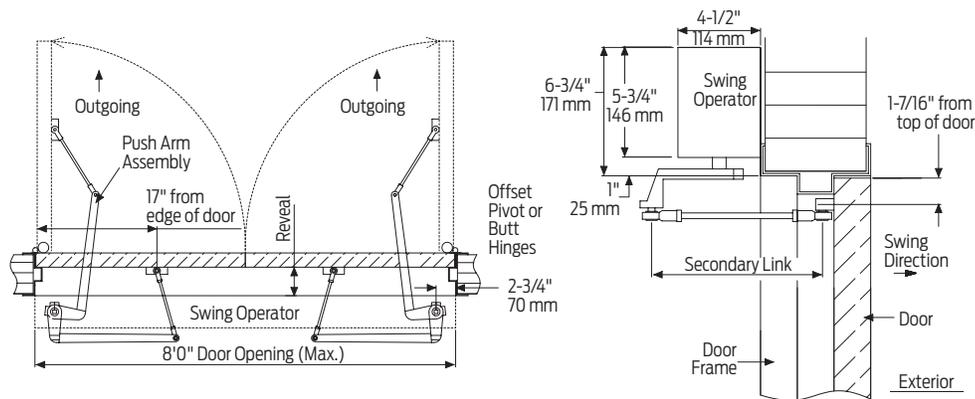
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



# 9550 Series Senior Swing

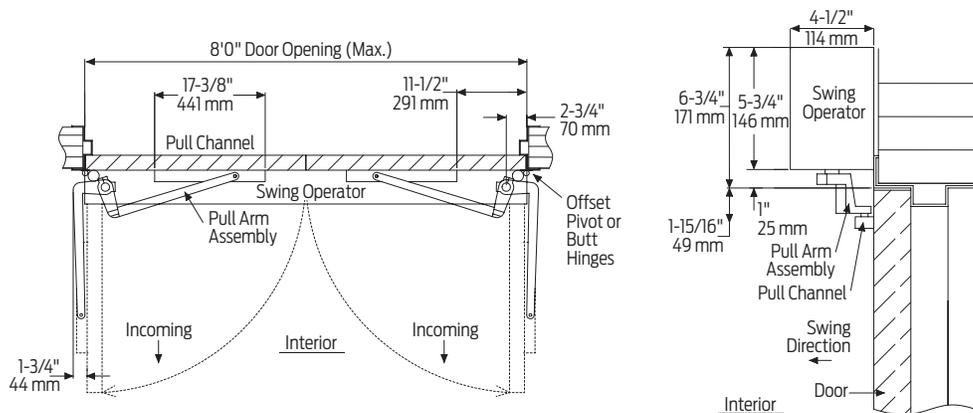
## Mounting details

Top Jamb Simultaneous Pair Mounting



### Offset pivot/butt hinge, center pivot, push

Consult factory for all balanced door installations.



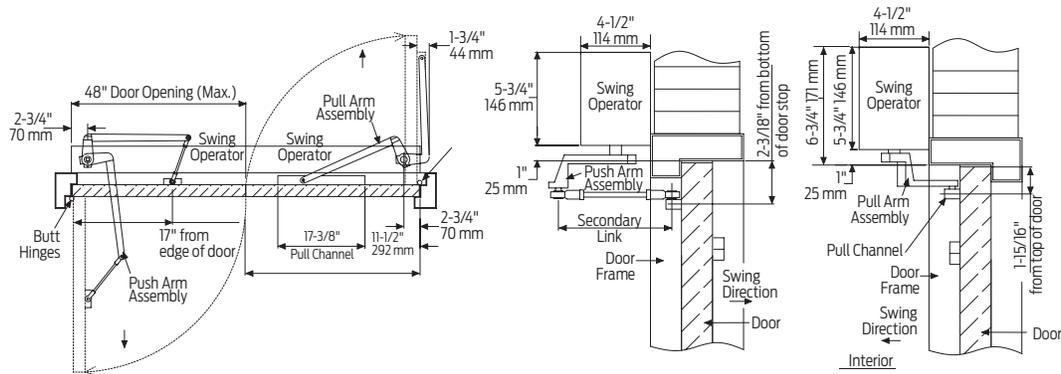
### Offset pivot/ butt hinge, center pivot, pull

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

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Reveal for push</b>	Should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM
<b>Reveal for pull</b>	Should not exceed 4" (102 mm)
<b>Reveal</b>	Double egress installations should not exceed 4" (102 mm)
<b>Head Frame</b>	<ul style="list-style-type: none"> <li>Minimum 1-3/4" (44 mm)</li> <li>Face frame 6-3/4" (171 mm) total operator clearance</li> </ul>
<b>Top Rail</b>	Minimum 2-3/4" (70 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>Variable by adjustments to the electronic control box</li> <li>Maximum hold open time adjustable up to approximately 32 seconds.</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

**Notes:**

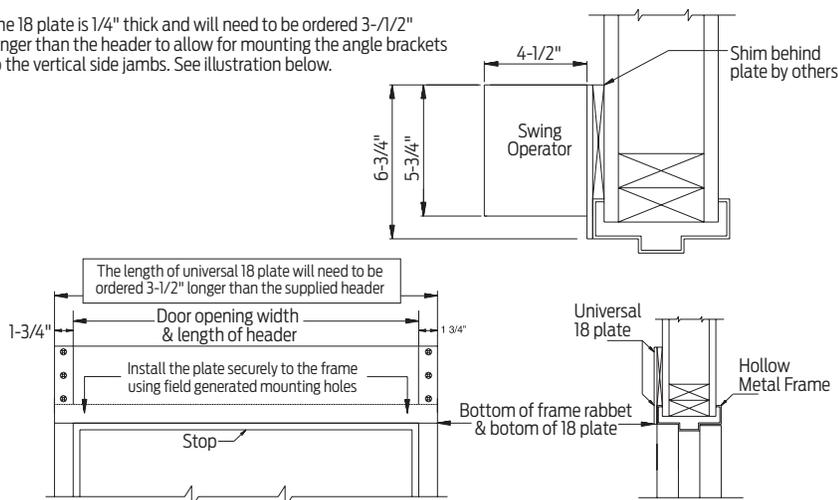
- Push N' Go permits non-switch activation with a power boost providing additional latching force
- Electromechanical unit with microprocessor control
- Digital keypad for easy setup
- 72" header length is standard. Specify other length 52" - 98" (push), specify other length 60" - 98" (pull; double egress). Consult factory regarding this option
- Adjustable hold open period of 2 - 32 seconds in automatic or manual mode
- Actuators available separately, see pages 115-131



**RH double egress**

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

The 18 plate is 1/4" thick and will need to be ordered 3-1/2" longer than the header to allow for mounting the angle brackets to the vertical side jambs. See illustration below.



**Hollow metal frame**  
 Suggested Installation.

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Reveal for push</b>	Should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM
<b>Reveal for pull</b>	Should not exceed 4" (102 mm)
<b>Reveal</b>	Double egress installations should not exceed 4" (102 mm)
<b>Head Frame</b>	<ul style="list-style-type: none"> <li>Minimum 1-3/4" (44 mm)</li> <li>Face frame 6-3/4" (171 mm) total operator clearance</li> </ul>
<b>Top Rail</b>	Minimum 2-3/4" (70 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>Variable by adjustments to the electronic control box</li> <li>Maximum hold open time adjustable up to approximately 32 seconds.</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

Notes:

- Push N' Go permits non-switch activation with a power boost providing additional latching force
- Electromechanical unit with microprocessor control
- Digital keypad for easy setup
- 72" header length is standard. Specify other length 52" - 98" (push), specify other length 60" - 98" (pull; double egress). Consult factory regarding this option
- Adjustable hold open period of 2 - 32 seconds in automatic or manual mode
- Actuators available separately, see pages 115-131

# 9550 Series Senior Swing

## Accessories

### Motor Gearbox



**9550-3454**  
Motor Gearbox

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

### Mount Brackets



**9550-275**  
Mounting Bracket

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



**9550-3018**  
Rear Mounting Bracket

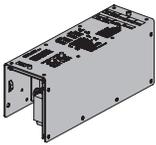
- Motor gearbox mounting bracket



**9550-334-1**  
Angled Bracket

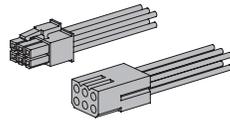
- Mounting bracket for surface applications (includes 2 mounting brackets)

### Control Box



**9550-3462**  
Control Box

- Electronic controlling device for Senior Swing



**9550-982**  
Companion Cable

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

### Header



**9550-3572HL**  
Header

- Pair door, two operators
- Specify other length 52" to 98" (Push)
- Specify other length 60" to 98" (Pull; Double Egress)
- Standard

### End Caps



**9550-334**  
Header End Caps

- With openings for wiring



**9550-334-2**  
End Dress Plate

- Metal finish end cap

### Tracks



**9550-3038**  
Track

- Non-handed
- Standard



**9550-73**  
Track End Cap

- Black plastic end caps



**9550-3034**  
Roller

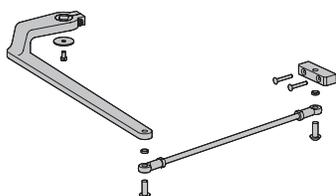
- Quiet low friction roller assembly

### Arms



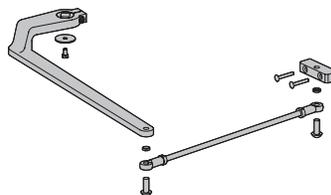
**9550-3077Plcm**  
Standard Arm Assembly

- Handed
- Includes 3077 regular arm assembly, 3038 track, and 3034 track roller



**9550-3077**  
Regular Arm Assembly

- Handed
- Includes 77 main arm assembly and 79 linkage assembly



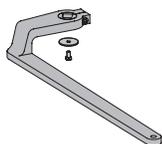
**9550-3077L**  
Regular Long Arm Assembly

- Handed
- Includes 77 main arm assembly and 79LR linkage assembly



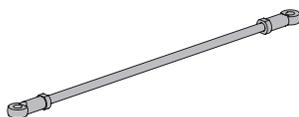
**9550-3077T**  
Standard Arm

- Handed
- Track roller not included



**9550-77**  
Main Arm

- Handed
- Attaches to motor gearbox



**9550-79**  
Linkage Assembly

- 15"
- Threaded rod attaches to door
- Extends from main arm



**9550-79LR**  
Linkage Assembly

- 32"
- Threaded long rod attaches to door
- Extends from main arm
- Used for reveal 10" to 20"

### Installation Assembly



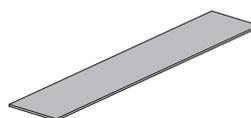
**9550-11A**  
Spindle Plate

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



**9550-12**  
Filler Plate

- Blank
- Completes length of header box
- Specify length



**9550-18**  
Mounting Plate

- Optional mounting plate for standard hollow metal door frames
- Specify length 68-1/2" to 101-1/2" maximum when using angle brackets
- Specify length 65" to 98" maximum when using dress plates.

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

**How-to-order 9550 Series closers**

**Specify hand**

- RH
- LH

**Specify header/length**

- HL\_ (Specify length 52" to 98") regular or long arm
- HL\_ (Specify length 60" to 98") for standard or DE arm

**Specify finish**

- Standard Anodized Finish \_\_\_\_\_  
Aluminum or Dark Bronze

**Operator will be shipped with:**

- Standard motor gearbox (SF) (2 ea)
- Standard control box (SC)
- Metal cover (at specified length 72" standard)
- Regular arm (2 ea)
- 2-3/4" pivot point
- Machine screw pack  
unless options listed below are selected

**Operator options**

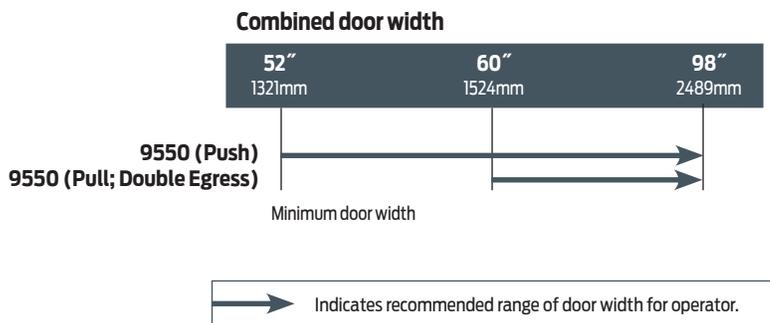
**Mounting plate**

- Plate, \_\_\_ (Specify Length 52" to 101-1/2")

**Arm**

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

**Table of sizes**



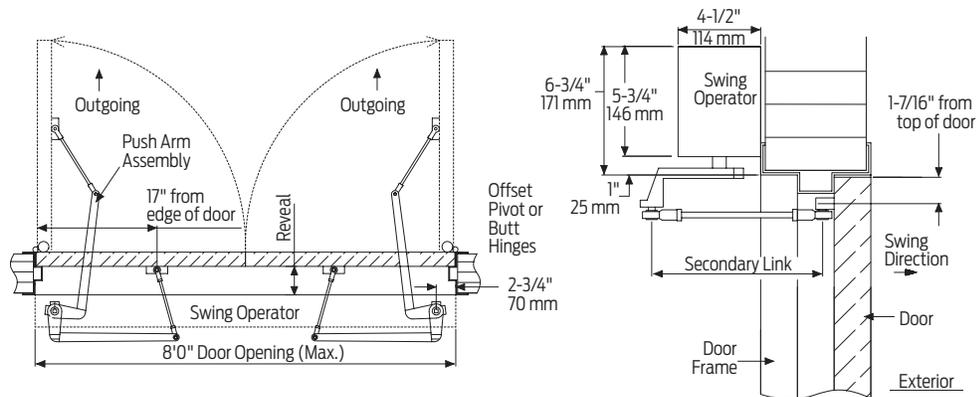
*NOTE: For all Senior Swing Series.  
Simultaneous Pair – Width per leaf 26" minimum (push) 30" minimum (pull) to 48" maximum.*



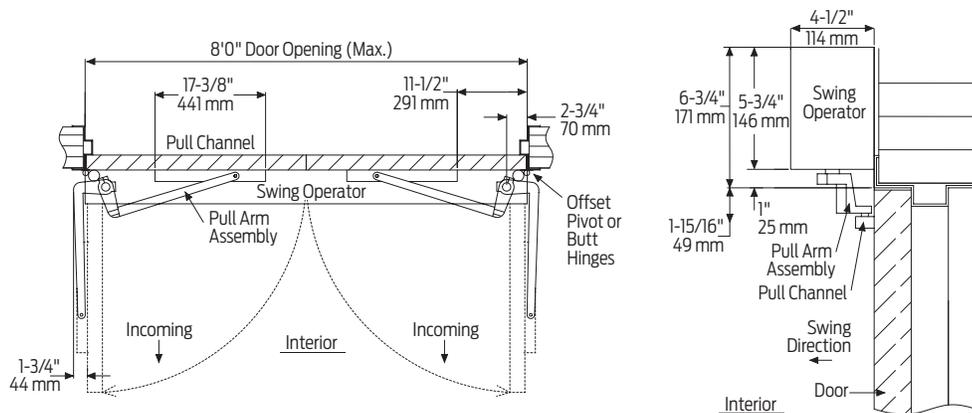
# 9560 Series Senior Swing

## Mounting details

Top Jamb Independent Pair Mounting



**Offset pivot/butt hinge, center pivot, push**  
Consult factory for all balanced door installations.



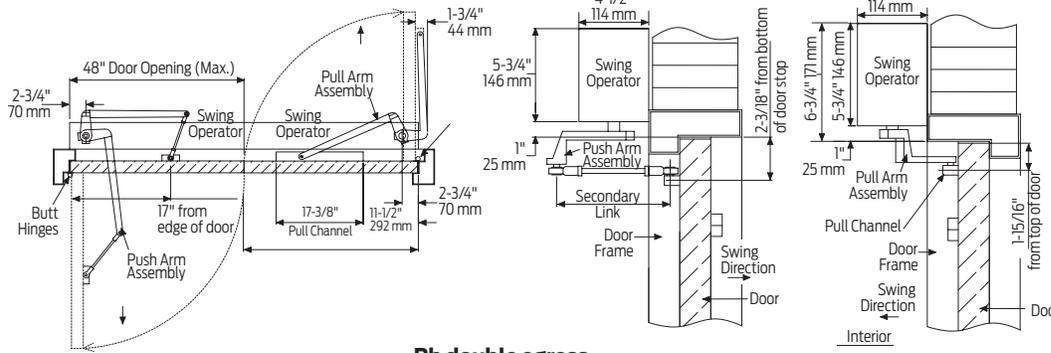
**Offset pivot/butt hinge, center pivot, pull**

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

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Reveal for push</b>	Should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM
<b>Reveal for pull</b>	Should not exceed 4" (102 mm)
<b>Reveal</b>	Double egress installations should not exceed 4" (102 mm)
<b>Head Frame</b>	<ul style="list-style-type: none"> <li>Minimum 1-3/4" (44 mm)</li> <li>Face frame 6-3/4" (171 mm) total operator clearance</li> </ul>
<b>Top Rail</b>	Minimum 2-3/4" (70 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>Variable by adjustments to the electronic control box</li> <li>Maximum hold open time adjustable up to approximately 32 seconds.</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

**Notes:**

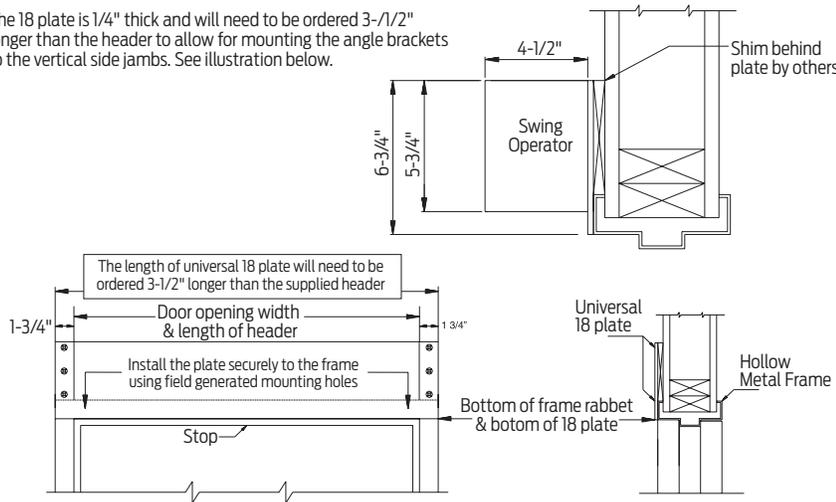
- Push N' Go permits non-switch activation with a power boost providing additional latching force
- Electromechanical unit with microprocessor control
- Digital keypad for easy setup
- 72" header length is standard. Specify 65" - 98" max
- Pull, push, or double egress applications available
- Adjustable hold open period of 2 - 32 seconds in automatic or manual mode
- Actuators available separately, see pages 115-131



**Rh double egress**

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

The 18 plate is 1/4" thick and will need to be ordered 3-1/2" longer than the header to allow for mounting the angle brackets to the vertical side jambs. See illustration below.



**Hollow metal frame**  
*Suggested Installation.*

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Reveal for push</b>	Should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM
<b>Reveal for pull</b>	Should not exceed 4" (102 mm)
<b>Reveal</b>	Double egress installations should not exceed 4" (102 mm)
<b>Head Frame</b>	<ul style="list-style-type: none"> <li>Minimum 1-3/4" (44 mm)</li> <li>Face frame 6-3/4" (171 mm) total operator clearance</li> </ul>
<b>Top Rail</b>	Minimum 2-3/4" (70 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>Variable by adjustments to the electronic control box</li> <li>Maximum hold open time adjustable up to approximately 32 seconds.</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

*Notes:*

- Push N' Go permits non-switch activation with a power boost providing additional latching force
- Electromechanical unit with microprocessor control
- Digital keypad for easy setup
- 72" header length is standard. Specify 65" - 98" max
- Pull, push, or double egress applications available
- Adjustable hold open period of 2 - 32 seconds in automatic or manual mode
- Actuators available separately, see pages 115-131

# 9560 Series Senior Swing

## Accessories

### Motor Gearbox



**9560-3454**  
Motor Gearbox

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

### Mounting Brackets



**9560-275**  
Mounting Bracket

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



**9560-3018**  
Rear Mounting Bracket

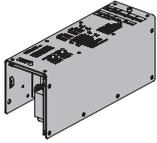
- Motor gearbox mounting bracket



**9560-334-1**  
Angled Bracket

- Mounting bracket for surface applications
- Includes 2 mounting brackets

### Control Box



**9560-3462**  
Control Box

- Electronic controlling device for Senior Swing

### Header



**9560-3572HL**  
Header

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

### End Caps



**9560-334**  
Header End Caps

- With openings for wiring



**9560-334-2**  
End Dress Plate

- Metal finish end cap

**Tracks**



**9560-3038  
Track**

- Non-handed
- Standard



**9560-73  
Track End Cap**

- Black plastic end caps



**9560-3034  
Roller**

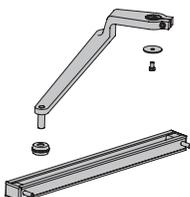
- Quiet low friction roller assembly

**Arms**



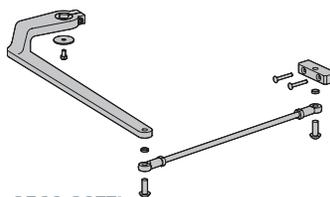
**9560-3077T  
Standard Arm**

- Handed
- Track roller not included



**9560-3077  
Regular Arm Assembly**

- Handed
- Includes 77 main arm assembly and 79 linkage assembly



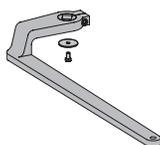
**9560-3077L  
Regular Long Arm Assembly**

- Handed
- Includes 77 main arm assembly and 79LR linkage assembly



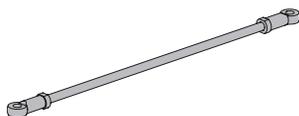
**9560-3077PLCM  
Standard Arm Assembly**

- Handed
- Includes 3077 regular arm assembly, 3038 track, and 3034 track roller



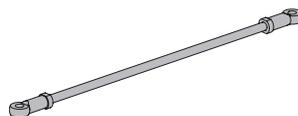
**9560-77  
Main Arm**

- Handed
- Attaches to motor gearbox



**9560-79  
Linkage Assembly**

- 15"
- Threaded rod attaches to door
- Extends from main arm
- Used for reveal 1" to 10"



**9560-79LR  
Linkage Assembly**

- 32"
- Threaded long rod attaches to door
- Extends from main arm.
- Used for reveal 10" to 20"

**Installation Accessories**



**9560-11A  
Spindle Plate**

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



**9560-12  
Filler Plate**

- Blank
- Completes length of header box
- Specify length



**9560-18  
Mounting Plate**

- Optional mounting plate for standard hollow metal door frames
- Specify length 68-1/2" to 101-1/2" maximum when using angle brackets
- Specify length 65" to 98" maximum when using dress plates.

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

# 9560 Series Senior Swing

## Ordering Information

### How-to-order 9560 Series

#### Specify hand

- RH
- LH

#### Specify header/length

- HL\_\_ (Specify length 65" to 98") regular or long arm

#### Specify finish

- Standard Anodized Finish \_\_\_\_\_  
Aluminum or Dark Bronze

#### Operator will be shipped with:

- Standard motor gearbox (SF) (2 ea)
  - Standard control box (SC)
  - Metal cover (at specified length 72" standard)
  - Regular arm (2 ea)
  - 2-3/4" pivot point
  - Machine screw pack
- unless options listed below are selected.

## Operator options

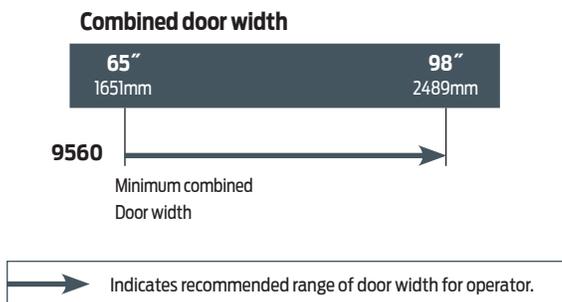
#### Mounting plate

- Plate, \_\_ (Specify Length 65" to 101-1/2")

#### Arm

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

## Table of sizes



NOTE: For all Senior Swing Series  
Independent Pair – Width per leaf 30" minimum to 48" maximum.

**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 twoway 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.

### Automatic Operator Actuators & Accessories



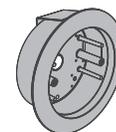
**8310-856**  
Wall Mounted Actuator

- 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



**8310-856T**  
Wall Mounted Actuator

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



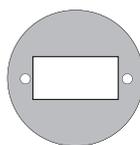
**8310-868F**  
Flush Mount Box

- 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



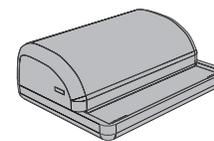
**8310-800**  
Weather/Trim Ring

- Weather/Trim Ring, 4-1/2" Round
- Optional accessory - must be used w/any 4-1/2" round plastic mounting box



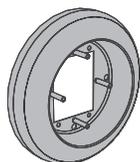
**8310-844**  
Transmitter

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



**8310-865**  
Receiver

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



**8310-874**  
Escutcheon

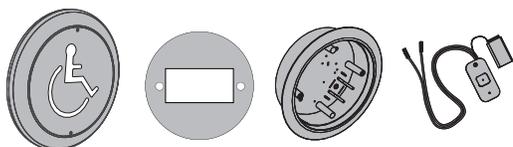
- Tapered stainless steel escutcheon covers the gap between the wall and the back of the wall plate actuators when mounted in electrical boxes (by others) to minimize cart damage or vandalism
- Optional accessory - can be used w/any 4-1/2" round actuator
- Not to be used with wireless function

# 8310 Series

Auto Operator  
Actuators &  
Accessories

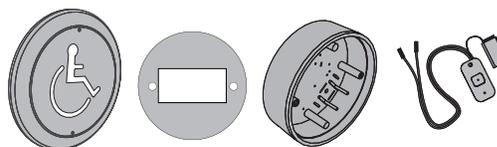
4-1/2" Surface and Flush  
Mounts

## Automatic Operator Actuators & Accessories



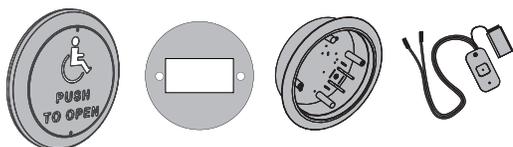
**8310-3856WF**  
Flush Mount Kit

- 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)



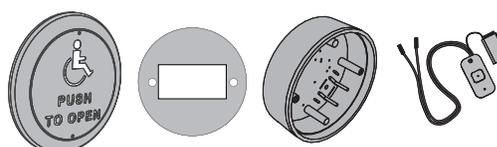
**8310-3856WS**  
Surface Mount Kit

- 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**  
Flush Mount Kit

- 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**  
Surface Mount Kit

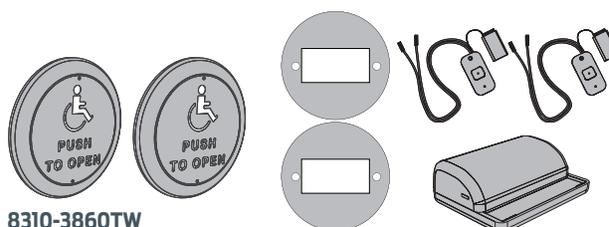
- Actuator, 4-1/2" Round, Logo, Text, Wireless,
- Includes 8310-856T Actuator, 8310-844 Transmitter, 8310-868S Surface Box, 8310-800 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



**8310-3860T**  
Surface Mount Kit

- 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**  
Surface Mount Kit

- Actuator Package, 4-1/2" Round, Wireless
- 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

### Automatic Operator Actuators & Accessories



**8310-852**  
Wall Mounted Actuator

- 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.



**8310-852T**  
Wall Mounted Actuator

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



**8310-852WP**  
Wall Mounted Actuator

- 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



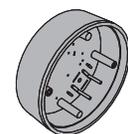
**8310-852TWP**  
Wall Mounted Actuator

- 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



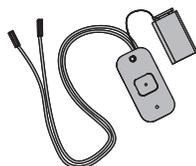
**8310-869S**  
Surface Mount Box

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



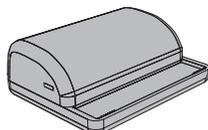
**8310-802**  
Weather/Trim Ring

- Plastic Weather/Trim Ring, 6" Round
- Optional accessory - can be used w/ any 6" round plastic mounting box.



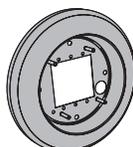
**8310-8/444**  
Transmitter

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



**8310-865**  
Receiver

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



**8310-876**  
Escutcheon

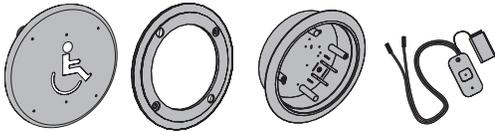
- Tapered stainless steel escutcheon covers the gap between the wall and the back of the wall plate actuators when mounted in electrical boxes (by others) to minimize cart damage or vandalism
- Optional accessory - Can be used w/ any 6" round actuator
- Not to be used with wireless function

# 8310 Series

Auto Operator Actuators & Accessories

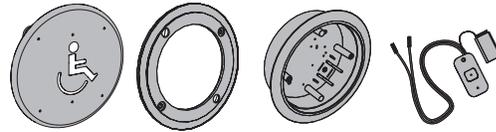
6" Surface and Flush Mounts

## Automatic Operator Actuators & Accessories



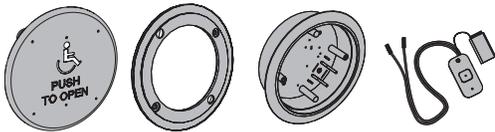
### 8310-3852WF Flush Mount Kit

- 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)



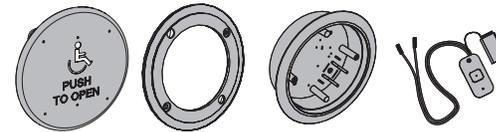
### 8310-3852WS Surface Mount Kit

- 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 Flush Mount Kit

- 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 Surface Mount Kit

- 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)

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

### Automatic Operator Actuators & Accessories



**8310-818**  
Jamb Mounted Actuator

- 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



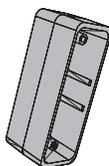
**8310-818T**  
Jamb Mounted Actuator

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



**8310-819F**  
Flush Mount Box

- 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**  
Surface Mount Box

- 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 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**  
Receiver

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

# 8310 Series

Auto Operator Actuators & Accessories

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

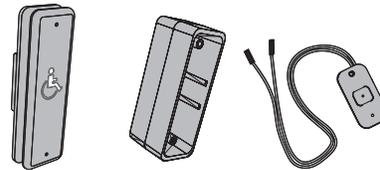
NOTE: LCN recommends for all jamb mount actuators be used on an interior installation only.

## Automatic Operator Actuators & Accessories



### 8310-3818WF Flush Mount Kit

- 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)



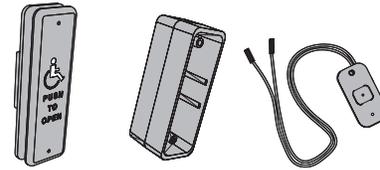
### 8310-3818WS Surface Mount Kit

- 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)



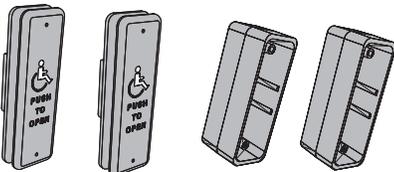
### 8310-3818TWF Flush Mount Kit

- 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)



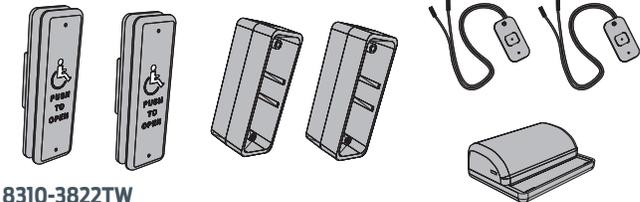
### 8310-3818TWS Surface Mount Kit

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



### 8310-3822T Surface Mount Kit

- 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 Surface Mount Kit

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

### Automatic Operator Actuators & Accessories



**8310-853**  
Wall Mounted Actuator

- 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



**8310-853T**  
Wall Mounted Actuator

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



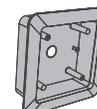
**8310-853WP**  
Surface Mounted Actuator

- 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



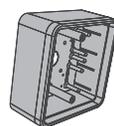
**8310-853TWP**  
Surface Mounted Actuator

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



**8310-867F**  
Flush Mount Box

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



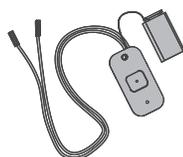
**8310-867S**  
Surface Mount Box

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



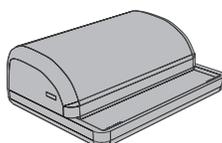
**8310-801**  
Weather/Trim Ring

- 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, 9v battery included
- Use to convert standard wall mount actuator to wireless
- Requires 8310-865 Receiver



**8310-865**  
Receiver

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



**8310-813**  
Touchless Wall Mounted Actuator

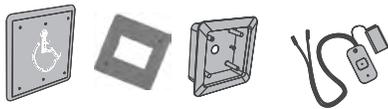
- Hardwired low voltage actuator with plastic plate in 4-3/4" (121mm) square
- Optional mounting in single gang electrical box (by others) or double gang box (4" x 4" by others)

# 8310 Series

Auto Operator Actuators & Accessories

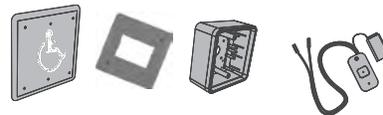
4-3/4" Square Surface and Flush Mounts

## Automatic Operator Actuators & Accessories



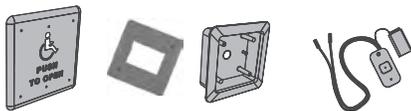
### 8310-3853WF Flush Mount Kit

- 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)



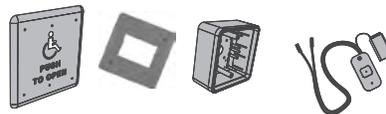
### 8310-3853WS Surface Mount Kit

- 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 Flush Mount Kit

- 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 Surface Mount Kit

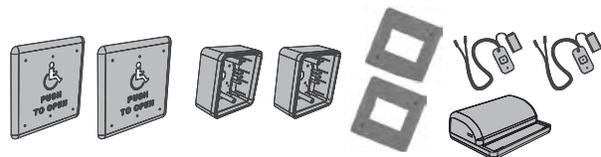
- Actuator, 4-3/4" Square, Logo, Text, Wireless
- Includes 8310-853T, 8310-844 Transmitter, 8310-867S Surface Box, 8310-801 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



### 8310-3857T Surface Mount Kit

- 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 Surface Mount Kit

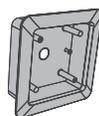
- Actuator Package, 4-3/4" Square
- Includes 8310-853T (2) Wall Mount Actuator, 8310-867S (2) Surface Mount Box, 8310-801 (2) Weather/Trim Ring, 8310-844 (2) Transmitter, 8310-865 Receiver

### Automatic Operator Actuators & Accessories



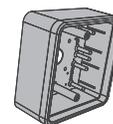
#### 8310-855 Dual Wall Mounted Actuator

- 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



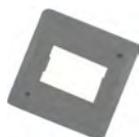
#### 8310-867F Flush Mounted Actuator

- 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



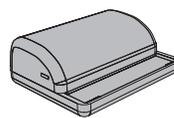
#### 8310-801 Weather/Trim Ring

- Plastic Weather Ring, 4-3/4" Square
- Optional accessory - can be used w/ any 4-3/4" square plastic mounting box



#### 8310-844 Transmitter

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



#### 8310-865 Receiver

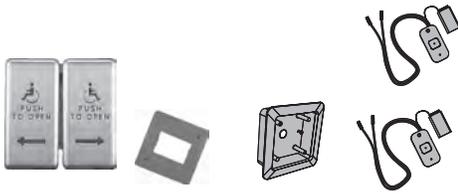
- Receiver, Wireless, 1 Channel, w/ Sequencing Feature
- Used in conjunction w/ Wireless Actuators & Transmitter(s)

# 8310 Series

Auto Operator Actuators & Accessories

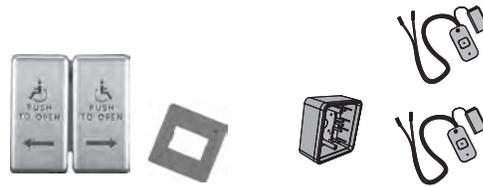
4-3/4" Dual Square Surface and Flush Mounts

## Automatic Operator Actuators & Accessories



### 8310-3855WF Flush Mount Kit

- 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)



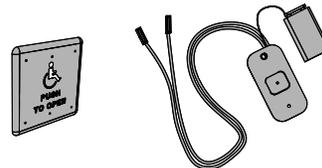
### 8310-3855WS Surface Mount Kit

- 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 Actuator, Bollard Mount Kit

- 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)



### 8310-3853TWB Actuator, Bollard Mount Kit

- 4-3/4" Square w/ Logo, Text, Wireless actuator
- Use w/8310-866 Bollard (not included) - Includes 8310-853T actuator, 8310-844 Transmitter
- Requires 8310-865 Receiver (not part of kit)

#### Automatic Operator Actuators & Accessories



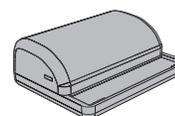
**8310-836T**  
Full Length Actuator (FLA)

- 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



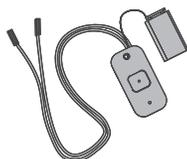
**8310-836TW**  
Flush Length Actuator (FLA)

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



**8310-865**  
Receiver

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



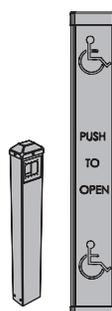
**8310-844**  
Transmitter

- Wireless, 1 Channel, 9v Battery included.
- Used to convert standard actuators to wireless
- Requires 8310-865 Receiver
- Recommended for exterior application with 8310-836T
- Used with the 866FLA bollard post



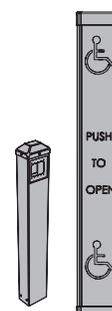
**8310-866FLA**  
FLA Bollard Post

- A powder coated steel 42" x 4" x 6": Bollard Post, mounting base pre prepped for the 8310-836T
- Includes 8310-866 CAP, 2 mounting screws & spacer for installation



**8310-3836T**  
FLA Bollard Mount Kit

- 36" x 6" Actuator with 8310-866FLA Bollard for wired applications



**8310-3836TW**  
FLA Bollard Mount Kit

- 36" x 6" Actuator with 8310-866FLA Bollard and 8310-844 wireless Transmitter
- Transmitter requires 8310-865 Receiver (not included)



# 8310 Series

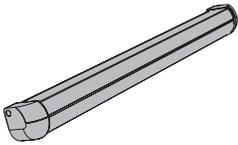
Auto Operator Actuators & Accessories

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.**

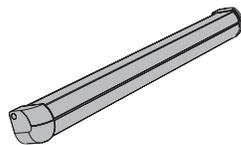
The desired function, traffic patterns and physical design of the opening will determine the type of sensors used.

## Automatic Operator Sensors & Accessories



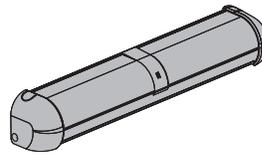
**8310-804-1**  
Door Mount Safety Sensor

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



**8310-804-2**  
Door Mount Safety Sensor

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



**8310-877**  
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
- 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**  
Monitored Safety Sensor Kit  
(For single door applications)

- 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**  
Monitored Safety Sensor Kit  
(For all double door applications)

- 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

**Automatic Operator Sensors & Accessories**

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

**8310-3881****Safety Sensor Package**

- 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)

**8310-3883****Safety Sensor Package**

- 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 Series

Auto Operator  
Actuators &  
Accessories

Packages

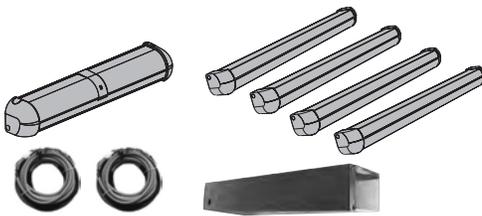
## Automatic Operator Sensors & Accessories



Alert: After November 2017, this package must be purchased for unknowing-act activation requirements in A156.10 for double doors.

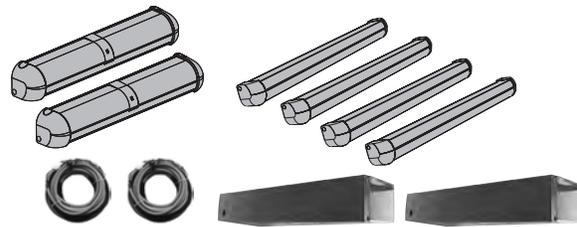
### 8310-3882 Safety Sensor Package

- Activation/Safety Sensor Package, Double Door
- Includes 8310-854 (2) Header Mount Sensor, 8310-879 Monitored Safety Sensor kit (Used with Senior Swing only)



### 8310-3891 Safety Sensor Package

- 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 Safety Sensor Package

- 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*

## Automatic Operator Sensors & Accessories



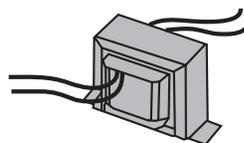
**8310-805**  
Door Position Switch

- 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



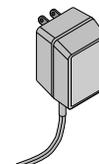
**8310-805C**  
Door Position Switch

- 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



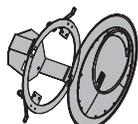
**8310-824**  
Transformer, 24v,

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



**8310-824P**  
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**  
Wireless Conversion Kit

- 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**  
Wireless Conversion Kit

- 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

- 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**  
Harness

- Safety module, service part
- Safety Module Harness for pneumatic control box

# 8310 Series

Auto Operator  
Actuators &  
Accessories

## Automatic Operator Sensors & Accessories



**8310-861**  
Transmitter

- Wireless
- 1 Channel, Handheld, 3v.  
Requires 8310-865 Receiver



**8310-862**  
Transmitter

- Wireless
- 2 Channel, Handheld, 3v.  
Requires 8310-865 Receiver



**8310-863**  
Transmitter

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



**8310-864**  
Transmitter

- Wireless
- 4 Channel, Handheld, 3v.  
Requires 8310-865 Receiver.



**8310-866**  
Bollard Post

- 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

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

## Automatic Operator Actuators & Accessories



**8310-806K**  
Key Switch

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

**8310-806R**  
Rocker Switch

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

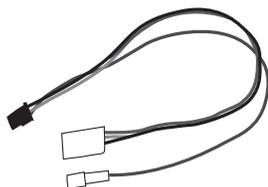
**8310-807**  
Line Filter

- 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



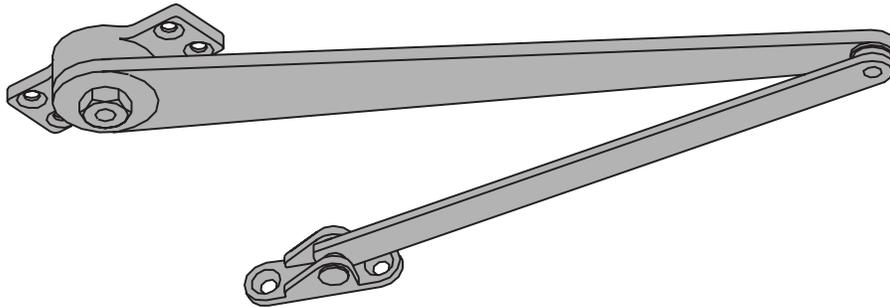
**8310-887**  
Retrofit Cable

- Allows newer style Senior Swing digital control to be activated by existing switches when replacing older control purchased prior to September, 2006



**8310-3134**  
Retrofit Cable Kit

- Allows newer style Senior Swing Digital Control to be activated by existing switches when replacing older control purchased prior to September, 2006.
- Also includes cables to allow Safety Sensors to activate
- Includes 8310-887 plus Safety Sensor Cables



The PAH 60 is recommended for use on the inactive leaf of a pair of doors where the active leaf has a door closer installed.

<b>Handing</b>	Handed	<b>Fasteners</b>	Wood and machine screw pack
<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width	<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>Auxiliary Stop</b>	Recommended at hold-open point		
<b>Top Rail</b>	Minimum 2" (51 mm)		
<b>Rabbit Depth</b>	Minimum 1-1/4" (32 mm)		
<b>Maximum opening</b>	<ul style="list-style-type: none"> <li>■ Hold-open points up to 180°</li> <li>■ Hold-open point adjustable at the soffit shoe</li> </ul>		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>

### How-to-order PAH 60 Holder

#### 1. Specify hand

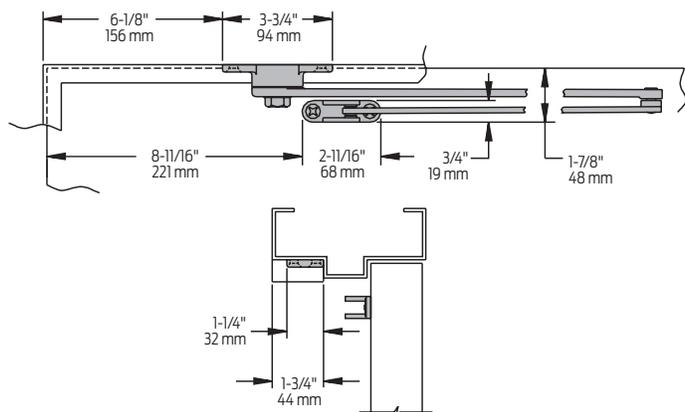
- RH
- LH

#### 2. Select finish

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

#### 3. Optional arm finish

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



## About Allegion

Allegion (NYSE: ALLE) creates peace of mind by pioneering safety and security. As a \$2 billion provider of security solutions for homes and businesses, Allegion employs more than 7,800 people and sells products in more than 120 countries across the world. Allegion comprises 23 global brands, including strategic brands CISA®, Interflex®, LCN®, Schlage® and Von Duprin®.

For more, visit [www.allegion.com](http://www.allegion.com)

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