Door controls
New catalog sections
Click on links below to view:

General Information
1000 Series surface mounted closers

4000 Series surface mounted closers
High security closers

Catalog sections under construction
Click on links below to view:

Automatic operators
Product selection guide
Pneumatic powered systems
2610 Series
4810 Series
4820 Series
4840 Series
7900 Series
Electrohydraulic powered systems
4630/4640 Electrohydraulic Series
4630 Series
4640 Series
Electromechanical powered systems
Benchmark unique features
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Senior Swing unique features
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Concealed closers
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2010 Series
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Product selection guide
SEM Series
3130SE Series
4040SE Series
2310ME Series
4310ME Series
4410ME Series
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.

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

### Concealed closer series

#### Exterior Door
- **Concealed in Frame**
  - **Double Lever Arm**
    - 5010
  - **Single Lever Arm**
    - 2010 2210**

#### Interior Door
- **Concealed in Frame**
  - **Double Lever Arm**
    - 5010
  - **Single Lever Arm**
    - 2010 2210**

**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.***

### Table

<table>
<thead>
<tr>
<th>CLOSER SERIES</th>
<th>IN FRAME IN 1-3/4˝ TUBE IN DOOR</th>
<th>POWDER COAT PLATED</th>
<th>HANDLED</th>
<th>SIZED</th>
<th>ACCESSIBILITY</th>
<th>DELAYED ACTION</th>
<th>CONCEALED</th>
<th>EXPOSED</th>
<th>STANDARD (SINGLE)</th>
<th>REGULAR (DOUBLE)</th>
<th>HOLD-OPEN</th>
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<tbody>
<tr>
<td>2010</td>
<td>●</td>
<td>○</td>
<td>●●</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<td>110°</td>
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<td>●●</td>
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<td>110°</td>
<td>110°</td>
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<tr>
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<td>●●</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>140°</td>
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<td>100°</td>
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<td>5010</td>
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<td>○</td>
<td>●●</td>
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<td>180°</td>
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<td>○</td>
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<td>○</td>
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<td>180°</td>
<td>100°</td>
<td>100°</td>
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<tr>
<td>6030</td>
<td>○</td>
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<td>●●</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>180°</td>
<td>95°</td>
<td>95°</td>
</tr>
</tbody>
</table>

- **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.*
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: 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.

**Certifications**
- Grade 1 - ANSI A156.4, UL 10 C, ADA, 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

**Fluid**
- All Weather Fluid

**Handing**
- Handed

**Size**
- Sized 1-6

**Warranty**
- 15 years

**Fasteners**
- Wood and Machine Screw Pack

**Mounting**
- Concealed (in frame); aluminum frame requires minimum 4” x 4” (102 mm) tube

**Arms**
- Standard arm and track

**Finishes/Colors/Powder Coat**
- Aluminum (689)
- Statuary Bronze (690)
- Light Bronze (691)
- Black (693)
- Dark Bronze (695)
- Brass (696)
- Custom colors optional
- Optional SRI primer - powder coat only
- Optional plated finishes

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

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.
2010 Series

Mounting details

Concealed Mounting

**Butt Hinges**
- Should not exceed 5” (127 mm) in width

**Auxiliary Stop**
- Recommended where a door cannot swing 180°
- Optional track bumper assembly assists backcheck in cushioning the opening swing of the door (not intended to replace an auxiliary stop).

**Top Rail**
- 1-3/8” (35 mm) mortise required
- With Fire Shield, 1-13/32” (36 mm) mortise required
- 5/16” (8 mm) cutout required at top of the door, stop face only

**Door Thickness**
- 1-3/4” (44 mm) minimum

**Hollow Metal Frame**
- Consult factory for installation instructions

**Maximum opening**
- Butt hinge template allows 180°, trim permitting
- Limited to 110° when optional bumper is installed
- Adjustable hold-open points from 85° to 110°, with hold-open track
- Offset pivot template allows 110°, trim permitting
- Limited to 95° when optional bumper is installed
- Adjustable hold-open points from 75° to 95°, with hold-open track
- Center pivot template allows 120°, trim permitting
- Limited to 95° when optional bumper is installed
- Adjustable hold-open points from 75° to 95°, with hold-open track

**Notes:**
- For interior or exterior doors
- Single acting cylinder in head frame
- Concealed arm and track in door top rail
### Cylinder

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>2011(3)(4)(5)(6)-3071</td>
<td>Cast Iron Cylinder Assembly</td>
</tr>
<tr>
<td></td>
<td>- Handed</td>
</tr>
<tr>
<td></td>
<td>- With mounting plate</td>
</tr>
<tr>
<td></td>
<td>- Standard</td>
</tr>
</tbody>
</table>

### Arm

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-3077T</td>
<td>Standard Arm</td>
</tr>
<tr>
<td></td>
<td>- Handed</td>
</tr>
<tr>
<td></td>
<td>- Track roller not included with arm</td>
</tr>
</tbody>
</table>

### Installation Accessories

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>2010-420</td>
<td>Fire Shield</td>
</tr>
<tr>
<td></td>
<td>- 22 gauge steel liner mounts in the track mortise of the door's top rail</td>
</tr>
<tr>
<td></td>
<td>- for 20 minute labeled wood doors</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-169</td>
<td>Track Bumper</td>
</tr>
<tr>
<td></td>
<td>- Mounts in track to assist backcheck</td>
</tr>
<tr>
<td></td>
<td>- Limits maximum opening</td>
</tr>
<tr>
<td></td>
<td>- Consists of bumper, bumper post, and mounting screw</td>
</tr>
</tbody>
</table>

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

### Tracks

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-3038</td>
<td>Standard Track</td>
</tr>
<tr>
<td></td>
<td>- Non-handed</td>
</tr>
<tr>
<td></td>
<td>- Non hold-open</td>
</tr>
<tr>
<td></td>
<td>- Will accept hold-open clip and/or bumper assembly</td>
</tr>
<tr>
<td></td>
<td>- Standard</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>2010-3038B</td>
<td>Standard Track with Bumper</td>
</tr>
<tr>
<td></td>
<td>- Non-handed</td>
</tr>
<tr>
<td></td>
<td>- Non hold-open</td>
</tr>
<tr>
<td></td>
<td>- Will accept hold-open clip</td>
</tr>
<tr>
<td></td>
<td>- Optional</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-3054</td>
<td>Hold-Open Clip</td>
</tr>
<tr>
<td></td>
<td>- Mounts in track to provide hold-open function</td>
</tr>
<tr>
<td></td>
<td>- Hold-open point controlled by clip location</td>
</tr>
<tr>
<td></td>
<td>- Requires 2010-3034H</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>2010-3034</td>
<td>Track Roller</td>
</tr>
<tr>
<td></td>
<td>- Quiet, low friction roller assembly</td>
</tr>
<tr>
<td></td>
<td>- Shoulder dimension “X” = 1/16” (2mm)</td>
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</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>2010-3034H</td>
<td>Hold-Open Track Roller</td>
</tr>
<tr>
<td></td>
<td>- Quiet, low friction roller assembly</td>
</tr>
<tr>
<td></td>
<td>- Shoulder dimension “X” = 1/16” (2mm)</td>
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<table>
<thead>
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<th>Model</th>
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</thead>
<tbody>
<tr>
<td>2010-3038H</td>
<td>Hold-Open Track</td>
</tr>
<tr>
<td></td>
<td>- Non-handed</td>
</tr>
<tr>
<td></td>
<td>- Will accept bumper assembly</td>
</tr>
<tr>
<td></td>
<td>- Optional</td>
</tr>
</tbody>
</table>

<table>
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<tr>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-3038HB</td>
<td>Hold-Open Track with Bumper</td>
</tr>
<tr>
<td></td>
<td>- Non-handed</td>
</tr>
<tr>
<td></td>
<td>- Optional</td>
</tr>
</tbody>
</table>
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 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)

Screw pack
☐ TORX Machine Screw (TORX)

Installation accessories
☐ Fire Shield, 2010-420

Special template
☐ ST-_____

Exterior (and Vestibule) door width

<table>
<thead>
<tr>
<th>Size</th>
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<th>2014</th>
<th>2015</th>
<th>2016</th>
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<td>28&quot;</td>
<td>size 3</td>
<td>size 4</td>
<td>size 5</td>
<td>size 6</td>
</tr>
<tr>
<td>30&quot;</td>
<td>size 3</td>
<td>size 4</td>
<td>size 5</td>
<td>size 6</td>
</tr>
<tr>
<td>36&quot;</td>
<td>size 3</td>
<td>size 4</td>
<td>size 5</td>
<td>size 6</td>
</tr>
<tr>
<td>42&quot;</td>
<td>size 3</td>
<td>size 4</td>
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<td>size 6</td>
</tr>
<tr>
<td>48&quot;</td>
<td>size 3</td>
<td>size 4</td>
<td>size 5</td>
<td>size 6</td>
</tr>
</tbody>
</table>

Interior door width

<table>
<thead>
<tr>
<th>Size</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
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<td>size 4</td>
<td>size 5</td>
<td>size 6</td>
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<tr>
<td>30&quot;</td>
<td>size 3</td>
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<td>size 5</td>
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<td>54&quot;</td>
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<td>size 6</td>
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<tr>
<td>60&quot;</td>
<td>size 3</td>
<td>size 4</td>
<td>size 5</td>
<td>size 6</td>
</tr>
</tbody>
</table>

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.
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.

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

**Body Construction**
- Cast Iron Body
- Full Complement Bearing
- 11/8” Diameter Piston
- 11/16” Diameter Double Heat Treated Pinion Journal

**Fasteners**
Concealed (in tube); aluminum frame requires minimum 1-3/4” (44 mm) x 4” (102) mm tube

**Mounting**
Standard arm and track

**Arms**
Standard arm and track

**Finishes/Colors/Powder Coat**
- Aluminum (689)
- Statuary Bronze (690)
- Light Bronze (691)
- Black (693)
- Dark Bronze (695)
- Brass (696)
- Custom colors optional
- Optional SRI primer - powder coat only
- Optional plated finishes

**Fluid**
All Weather Fluid

**Handing**
Handed

**Size**
Sized 1-5

**Warranty**
15 years

---

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

---

**Features**

- 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.

---

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LCN Door Control Catalog
# 2030 Series

## Mounting details

### Concealed Mounting

### But Hinges

- Should not exceed 5" (127 mm) in width

### Auxiliary Stop

- Recommended where a door cannot swing 180°
- Optional track bumper assembly assists backcheck in cushioning the opening swing of the door (not intended to replace an auxiliary stop).

### Top Rail

- 1-3/8" (35 mm) mortise required
- With Fire Shield, 1-13/32" (36 mm) mortise required
- 5/16" (8 mm) cutout required at top of the door, stop face only

### Door Thickness

- 1-3/4" (44 mm) minimum

### Hollow Metal Frame

- Consult factory for installation instructions

### Wood Frame

- 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.

### Maximum opening

- Butt hinge template allows 180°, trim permitting
- Limited to 110° when optional bumper is installed
- Adjustable hold-open points from 85° to 110°, with hold-open track
- Consult factory if door will be held open at 180°
- Offset pivot template allows 115°, trim permitting. Limited to 95° when optional bumper is installed
- Hold-open point from 85°, with hold-open track
- Center pivot template allows 120°, trim permitting
- Limited to 100° when optional bumper is installed
- Adjustable hold-open points from 85° to 100°, with hold-open track

### 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

*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

**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)

**2030-3034**

**2030-417**

**2030-420**

**2030-416**

**2030-169**
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

<table>
<thead>
<tr>
<th>Door Width</th>
<th>28”</th>
<th>30”</th>
<th>36”</th>
<th>42”</th>
</tr>
</thead>
<tbody>
<tr>
<td>2033</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2034</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2035</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Minimum door width

Indicates recommended range of door width for closer size.

Reduction 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.

<table>
<thead>
<tr>
<th>Door Width</th>
<th>36”</th>
<th>42”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.5 lbs.</td>
<td>2033</td>
<td>2033</td>
<td>2034</td>
</tr>
<tr>
<td>5.0 lbs.</td>
<td>2031</td>
<td>2032</td>
<td>2032</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Certifications</th>
<th>Grade 1 - ANSI A156.4, UL 10 C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Construction</td>
<td>■ Cast Iron Body</td>
</tr>
<tr>
<td></td>
<td>■ Full Complement Bearing</td>
</tr>
<tr>
<td></td>
<td>■ 1-1/8” Diameter Piston</td>
</tr>
<tr>
<td></td>
<td>■ 1/2” Diameter Double Heat Treated Pinion Journal</td>
</tr>
<tr>
<td>Fluid</td>
<td>All Weather Fluid</td>
</tr>
<tr>
<td>Handing</td>
<td>Handed</td>
</tr>
<tr>
<td>Size</td>
<td>Sized 1-4</td>
</tr>
<tr>
<td>Warranty</td>
<td>15 years</td>
</tr>
<tr>
<td>Fasteners</td>
<td>Wood Screws and Torx Security Screws (optional)</td>
</tr>
<tr>
<td>Mounting</td>
<td>Concealed (in door); consult factory for installations with pivots</td>
</tr>
<tr>
<td>Arms</td>
<td>Regular arm</td>
</tr>
<tr>
<td>Finishes/Colors/Powder Coat</td>
<td>■ Aluminum (689)</td>
</tr>
<tr>
<td></td>
<td>■ Statuary Bronze (690)</td>
</tr>
<tr>
<td></td>
<td>■ Light Bronze (691)</td>
</tr>
<tr>
<td></td>
<td>■ Black (693)</td>
</tr>
<tr>
<td></td>
<td>■ Dark Bronze (695)</td>
</tr>
<tr>
<td></td>
<td>■ Brass (696)</td>
</tr>
<tr>
<td></td>
<td>■ Custom colors optional</td>
</tr>
<tr>
<td></td>
<td>■ Optional SRI primer - powder coat only</td>
</tr>
<tr>
<td></td>
<td>■ Optional plated finishes</td>
</tr>
</tbody>
</table>

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

Features

CONCEALED MOUNTING
- In Frame
- In 1-3/4” Tube
- In Door

FINISH
- Powder Coat
- Plated

CYLINDER
- Handled
- Accessible
- Delayed Action
- Concealed
- Exposed

ARM
- Standard (Single)
- Regular (Double)
- Hold Open

*ARM FUNCTION
- 180°
- 140°

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.
### 3030 Series

#### Mounting details

##### Concealed Mounting

**Butt Hinges**
- Should not exceed 5” (127 mm) in width

**Auxiliary Stop**
- Recommended at hold-open point or where a door cannot swing 180°

**Top Rail**
- Minimum 4” (102 mm) required

**Door Thickness**
- 1-3/4” (44 mm) minimum
- 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

**Maximum opening**
- Can be templated for
  - 100°: A = 3-5/8” (92 mm)  
    B = 10-1/4” (260 mm)  
  - 130°: A = 2-5/8” (67 mm)  
    B = 9-1/4” (235 mm)  
  - 180°: A = 1-5/8” (41 mm)  
    B = B-1/4” (210 mm)
- Hold-open points up to maximum opening or 140°, whichever is less, with hold-open arm.
- Arm clearance above door
  - C = 1-1/4” (32 mm) minimum

**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

### Arrows

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

## Close options

<table>
<thead>
<tr>
<th>Arm</th>
<th>Screw pack</th>
<th>Special template</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hold-open (H)</td>
<td>TORX Machine Screw (TORX)</td>
<td>ST-</td>
</tr>
</tbody>
</table>

## 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%

### Interior door width

<table>
<thead>
<tr>
<th>Door Width</th>
<th>24&quot;</th>
<th>34&quot;</th>
<th>38&quot;</th>
<th>48&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>3030 Series</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3032</td>
<td>size 2</td>
<td>size 3</td>
<td>size 4</td>
<td></td>
</tr>
<tr>
<td>3033</td>
<td>size 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3034</td>
<td>size 4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Minimum door width

> 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.

<table>
<thead>
<tr>
<th>DOOR WIDTH</th>
<th>36&quot;</th>
<th>42&quot;</th>
<th>48&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.5* lbs.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>5.0* lbs.</td>
<td>3031</td>
<td>3031</td>
<td>3032</td>
</tr>
</tbody>
</table>

* Maximum opening force.
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.

<table>
<thead>
<tr>
<th>Certifications</th>
<th>Grade 1 - ANSI A156.4, UL 10 C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Construction</td>
<td>■ Cast Iron Body</td>
</tr>
<tr>
<td></td>
<td>■ Full Complement Bearing</td>
</tr>
<tr>
<td></td>
<td>■ 1-1/8” Diameter Piston</td>
</tr>
<tr>
<td></td>
<td>■ 1/2” Diameter Double Heat Treated Pinion Journal</td>
</tr>
<tr>
<td>Fluid</td>
<td>All Weather Fluid</td>
</tr>
<tr>
<td>Handing</td>
<td>Handed</td>
</tr>
<tr>
<td>Size</td>
<td>Sized 1-3</td>
</tr>
<tr>
<td>Warranty</td>
<td>15 years</td>
</tr>
<tr>
<td>Fasteners</td>
<td>Wood Screws and Torx Security Screws (optional)</td>
</tr>
<tr>
<td>Mounting</td>
<td>Concealed (in door); consult factory for installation with pivots</td>
</tr>
<tr>
<td>Arms</td>
<td>Standard arm and track</td>
</tr>
</tbody>
</table>
| Finishes/Colors/Powder Coat | ■ Aluminum (689)  
                                | ■ Statuary Bronze (690)                                                               |
|                         | ■ Light Bronze (691)                                                                   |
|                         | ■ Black (693)                                                                          |
|                         | ■ Dark Bronze (695)                                                                    |
|                         | ■ Brass (696)                                                                          |
|                         | ■ Custom colors optional                                                                |
|                         | ■ Optional SRI primer - powder coat only                                               |
|                         | ■ Optional plated finishes                                                             |

Special Templates

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

CONCEALED MOUNTING

- IN FRAME
- IN 1-3/4” TUBE
- IN DOOR
- POWDER COAT
- PLATED

FINISH

- HANDED
- SIZE

CYLINDER

- ACCESSIBILITY
- DELAYED ACTION
- CONCEALED
- EXPOSED

ARM

- STANDARD ANGLE
- REGULAR HINGED
- HOLD-OPEN

*ARM FUNCTION

- 140°
- 100°

Available

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.
3130 Series

Mounting details

Concealed Mounting

<table>
<thead>
<tr>
<th>Butt Hinges</th>
<th>Should not exceed 5˝ (127 mm) in width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auxiliary Stop</td>
<td><img src="auxiliary-stop.png" alt="Auxiliary Stop Image" /></td>
</tr>
<tr>
<td>- Recommended at hold-open point or where a door cannot swing 140°</td>
<td></td>
</tr>
<tr>
<td>- Optional track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop</td>
<td></td>
</tr>
<tr>
<td>Top Rail</td>
<td>Minimum 4˝ (102 mm) required</td>
</tr>
<tr>
<td>Door Thickness</td>
<td><img src="door-thickness.png" alt="Door Thickness Image" /></td>
</tr>
<tr>
<td>- 1-3/4˝ (44 mm) minimum.</td>
<td></td>
</tr>
<tr>
<td>- 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</td>
<td></td>
</tr>
<tr>
<td>Door Width</td>
<td>2´2˝ (660 mm) minimum</td>
</tr>
<tr>
<td>Maximum opening</td>
<td><img src="maximum-opening.png" alt="Maximum Opening Image" /></td>
</tr>
<tr>
<td>- Templating allows 140°, trim permitting, 100° with optional bumper installed</td>
<td></td>
</tr>
<tr>
<td>- Adjustable hold-open points from 85° to 100°, with hold-open track</td>
<td></td>
</tr>
</tbody>
</table>

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 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

Table: Interior door width

<table>
<thead>
<tr>
<th>Door Width</th>
<th>26”</th>
<th>34”</th>
<th>38”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size 2</td>
<td>660mm</td>
<td>864mm</td>
<td>965mm</td>
</tr>
<tr>
<td>Size 3</td>
<td>3132</td>
<td>3133</td>
<td>3133</td>
</tr>
</tbody>
</table>

Minimum door width

Indicates recommended range of door width for closer size.

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.
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.

<table>
<thead>
<tr>
<th>Certifications</th>
<th>Grade I - ANSI A156.4, UL 10 C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act</th>
</tr>
</thead>
</table>
| Body Construction    | - Cast Iron Body  
                        - Full Complement Bearing  
                        - 1-1/8” Diameter Piston  
                        - 11/16” Diameter Double Heat Treated Pinion Journal |
| Fluid                | All Weather Fluid |
| Handing              | Handed |
| Size                 | Sized 1-6 |
| Warranty             | 15 years |

<table>
<thead>
<tr>
<th>Fasteners</th>
<th>Wood Screws and Torx Security Screws (optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mounting</td>
<td>Concealed (in frame); aluminum frame requires 4” (102 mm) x 4” tube</td>
</tr>
<tr>
<td>Arms</td>
<td>Regular Arm</td>
</tr>
</tbody>
</table>
| Finishes/Colors/Powder Coat | - Aluminum (689)  
                             - Statuary Bronze (690)  
                             - Light Bronze (691)  
                             - Black (693)  
                             - Dark Bronze (695)  
                             - Brass (696)  
                             - Custom colors optional  
                             - Optional SRI primer - powder coat only  
                             - Optional plated finishes |

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

<table>
<thead>
<tr>
<th>CONCEALED MOUNTING</th>
<th>FINISH</th>
<th>CYLINDER</th>
<th>ARM</th>
<th>*ARM FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN FRAME</td>
<td>IN 1-3/4” TUBE</td>
<td>POWDER COAT PLATED</td>
<td>HANDED SIZE ACCESSIBILITY DELAYED ACTION CONCEALED EXPOSED</td>
<td>STANDARD (SINGLE)</td>
</tr>
</tbody>
</table>

- 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.
### Butt Hinges
Should not exceed 6’’ (152 mm) in width

### Auxiliary Stop
Recommended at hold-open point or where a door cannot swing 180°

### Top Rail
Minimum 2-1/8’’ (54 mm) required

### Delay Action
- Add suffix “DEL” to selected cylinder (eg. 5014 DEL) (not available with 5016 cylinder)
- Delays closing from maximum opening to approximately 70°
- Delay time adjustable up to approximately 1 minute

### Maximum opening
Butt hung doors can be templated for

- **100°:**
  - A = 10-3/16’’ (259 mm)
  - B = 12’’ (305 mm)

- **180°:**
  - A = 5-1/2’’ (140 mm)
  - B = 7-5/16’’ (186 mm) trim permitting

- Hold-open points up to 100° only with hold-open arm
- Center pivot mounting restricts opening to 140°
- Offset pivot mounting allows up to 180°, trim permitting

### 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)

Specify finish
- Standard Powder Coat
- Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass

Select hand
- RH
- LH

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

Table of sizes:

Exterior (and Vestibule) door width

<table>
<thead>
<tr>
<th>24”</th>
<th>30”</th>
<th>36”</th>
<th>42”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td>610mm</td>
<td>762mm</td>
<td>914mm</td>
<td>1067mm</td>
<td>1219mm</td>
</tr>
<tr>
<td>5013</td>
<td>5014</td>
<td>5015</td>
<td>5016</td>
<td></td>
</tr>
</tbody>
</table>

Minimum door width

Indicates recommended range of door width for closer size.

Interior door width

<table>
<thead>
<tr>
<th>24”</th>
<th>34”</th>
<th>38”</th>
<th>48”</th>
<th>54”</th>
<th>60”</th>
</tr>
</thead>
<tbody>
<tr>
<td>610mm</td>
<td>864mm</td>
<td>965mm</td>
<td>1067mm</td>
<td>1172mm</td>
<td>1219mm</td>
</tr>
<tr>
<td>5012</td>
<td>5013</td>
<td>5014</td>
<td>5015</td>
<td>5016</td>
<td></td>
</tr>
</tbody>
</table>

Minimum door width

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.

<table>
<thead>
<tr>
<th>DOOR WIDTH</th>
<th>36”</th>
<th>42”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.5* lbs.</td>
<td>5012</td>
<td>5013</td>
<td>5013</td>
</tr>
<tr>
<td>5.0* lbs.</td>
<td>5011</td>
<td>5011</td>
<td>5012</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Certifications</th>
<th>Fasteners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1 - ANSI A156.4, UL 10 C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act</td>
<td>Wood Screws and Torx Security Screws (optional)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Body Construction</th>
<th>Mounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cast Iron Body</td>
<td>Concealed (in tube); aluminum frame requires minimum 1-3/4” (44 mm) x 4-1/2” (114 mm) tube</td>
</tr>
<tr>
<td>Full Complement Bearing</td>
<td></td>
</tr>
<tr>
<td>1-1/8” Diameter Piston</td>
<td></td>
</tr>
<tr>
<td>11/16” Diameter Double Heat Treated Pinion Journal</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fluid</th>
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</tr>
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<tbody>
<tr>
<td>All Weather Fluid</td>
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</table>

<table>
<thead>
<tr>
<th>Handing</th>
<th>Fasteners</th>
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</thead>
<tbody>
<tr>
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</tr>
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</table>

<table>
<thead>
<tr>
<th>Size</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Sized 1; 3-6</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Warranty</th>
<th>Fasteners</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 years</td>
<td></td>
</tr>
</tbody>
</table>

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

- **CONCEALED MOUNTING**: Available
- **FINISH**: Available
- **CYLINDER**: Available
- **ARM**: Available
- **ARM FUNCTION**: Available

- **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**

**Concealed Mounting**

---

**Mounting details**

<table>
<thead>
<tr>
<th>Butt Hinges</th>
<th>Should not exceed 6” (152 mm) in width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auxiliary Stop</td>
<td>Recommended at hold-open point or where the door cannot swing 180°</td>
</tr>
<tr>
<td>Wood Frame</td>
<td>Installation simplified by WOOD MOUNTING CLIP SET 5030-416 for center pivoted or 5030-417 for offset pivoted and butt hung installations</td>
</tr>
<tr>
<td></td>
<td>Consult factory for preparation details</td>
</tr>
<tr>
<td>Top Rail</td>
<td>Minimum 2-1/8” (54 mm) required</td>
</tr>
<tr>
<td>Door Thickness</td>
<td>Maximum 1-3/4” (44 mm), for doors thicker than 1-3/4” consult factory</td>
</tr>
<tr>
<td>Maximum opening</td>
<td>Butt hung doors can be templated for 100°: A = 5-13/16” (148 mm)  B = 11-13/16” (300 mm)</td>
</tr>
<tr>
<td></td>
<td>180°: A = 2-1/16” (52 mm)  B = 8-1/16” (205 mm)  trim permitting</td>
</tr>
<tr>
<td></td>
<td>Hold-open points up to 100° only with hold-open arm</td>
</tr>
<tr>
<td></td>
<td>Center pivot mounting restricts opening to 120°. Hold-open up to 120° with hold-open arm</td>
</tr>
<tr>
<td></td>
<td>Offset pivot mounting allows up to 115°, trim permitting. Hold-open up to 115° with hold-open arm</td>
</tr>
</tbody>
</table>

**Notes:**
- For interior or exterior doors
- Single acting cylinder in head frame
- Exposed arm on push side of door
5030 Series

Accessories

**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 (RAL)
- Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass

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)

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

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

How-to-order 5030 Series closers

Specify finish
- Standard Powder Coat (RAL)
- 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.

Table of sizes

Exterior (and Vestibule) door width

<table>
<thead>
<tr>
<th>Size</th>
<th>28”</th>
<th>30”</th>
<th>36”</th>
<th>42”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td>5033</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5034</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5035</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5036</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Minimum door width

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.

Table of sizes

Interior door width

<table>
<thead>
<tr>
<th>Size</th>
<th>28”</th>
<th>30”</th>
<th>36”</th>
<th>42”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td>5033</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5034</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5035</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5036</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Minimum door width

<table>
<thead>
<tr>
<th>DOOR WIDTH</th>
<th>36”</th>
<th>42”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.5 lbs.</td>
<td>5033</td>
<td>5033</td>
<td>5033</td>
</tr>
<tr>
<td>5.0 lbs.</td>
<td>5031</td>
<td>5031</td>
<td>5033</td>
</tr>
</tbody>
</table>
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).

<table>
<thead>
<tr>
<th>Certifications</th>
<th>Grade 1 - ANSI A156.4, UL 10 C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Construction</td>
<td>Cast Iron Body</td>
</tr>
<tr>
<td></td>
<td>Full Complement Bearing</td>
</tr>
<tr>
<td></td>
<td>1-1/8” Diameter Piston</td>
</tr>
<tr>
<td></td>
<td>11/16” Diameter Double Heat Treated Pinion Journal</td>
</tr>
<tr>
<td>Fluid</td>
<td>All Weather Fluid</td>
</tr>
<tr>
<td>Handing</td>
<td>Non-Handed</td>
</tr>
<tr>
<td>Size</td>
<td>Sized 1-5</td>
</tr>
<tr>
<td>Warranty</td>
<td>15 years</td>
</tr>
</tbody>
</table>

| Fasteners               | Wood Screws and Torx Security Screws (optional)                                     |
| Mounting                | Concealed (in tube); double acting                                                  |
| Arms                    | Standard arm with track                                                             |
| Finishes/Colors/Powder Coat |  
|                         | Aluminum (689)                                                                       |
|                         | Statuary Bronze (690)                                                               |
|                         | Light Bronze (691)                                                                  |
|                         | Black (693)                                                                          |
|                         | Dark Bronze (695)                                                                   |
|                         | Brass (696)                                                                         |
|                         | Custom colors optional                                                               |
|                         | Optional SRI primer - powder coat only                                              |
|                         | Optional plated finishes                                                             |

**Special Templates**

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

---

* 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.
**Auxiliary Stop**  Recommended where a door cannot swing 95°

**Center Pivot Set**  Must be used but ordered separately

**Door Width**  30” (762 mm) minimum with 1-3/4˝ (44 mm) pivot centers

**Top Rail**  
- 1-7/16˝ (36 mm) mortise required
- 3/8˝ (10 mm) cutout required at top of the door, both sides.

**Door Thickness**  1-3/4˝ (44 mm) minimum

**Centering Adjustment**  Centering is provided by rotating the track roller to center the door in the opening.

**Wood Frame**  
- Installation simplified by WOOD MOUNTING CLIP SET, 6030-416
- Consult product support for special template

**Maximum opening**  
- Center pivot template allows 95°
- Adjustable hold-open points from 85° to 95°, with hold-open track

**Notes:**
- For interior or exterior doors
- Double acting cylinder in cased frame
- Concealed arm and track in door top rail
- Center pivots only
### Cylinder
- **6030(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

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

- **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

- **6030-3034H**
  - Hold-Open Track Roller
  - Hold-open roller
  - Quiet, low friction roller assembly

---

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

Special template
- ST-

Screw pack
- TORX Machine Screw (TORX)

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

Table of sizes

<table>
<thead>
<tr>
<th>Exterior (and Vestibule) door width</th>
<th>30&quot;</th>
<th>34&quot;</th>
<th>36&quot;</th>
<th>42&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>762mm</td>
<td>864mm</td>
<td>914mm</td>
<td>1067mm</td>
<td></td>
</tr>
<tr>
<td>6033</td>
<td>size 3</td>
<td>size 4</td>
<td>size 5</td>
<td></td>
</tr>
<tr>
<td>6034</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6035</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Minimum door width

<table>
<thead>
<tr>
<th>Interior door width</th>
<th>30&quot;</th>
<th>34&quot;</th>
<th>38&quot;</th>
<th>48&quot;</th>
<th>54&quot;</th>
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<tr>
<td>762mm</td>
<td>864mm</td>
<td>965mm</td>
<td>1209mm</td>
<td>1372mm</td>
<td></td>
</tr>
<tr>
<td>6032</td>
<td>size 2</td>
<td>size 3</td>
<td>size 4</td>
<td>size 5</td>
<td></td>
</tr>
<tr>
<td>6033</td>
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<td></td>
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<td></td>
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<tr>
<td>6034</td>
<td></td>
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<td></td>
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<tr>
<td>6035</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Minimum 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.

<table>
<thead>
<tr>
<th>DOOR WIDTH</th>
<th>36&quot;</th>
<th>42&quot;</th>
<th>48&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.5* lbs.</td>
<td>6033</td>
<td>6034</td>
<td>6035</td>
</tr>
<tr>
<td>5.0* lbs.</td>
<td>6031</td>
<td>6032</td>
<td>6032</td>
</tr>
</tbody>
</table>
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.

Product comparison

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

** See SEH section (cylinder not included).
*** SEM 7800 Series are die cast.

** 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 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” 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).

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.

SE WIRING DIAGRAM

ME (2310) WIRING DIAGRAM

ME (4310, 4410) WIRING DIAGRAM (24V only)
HSA WIRING
HSA “On/Off” switch assembly includes trim pot to adjust hold-open time and fuse to protect solenoid.

HSA WIRING DIAGRAM

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.

<table>
<thead>
<tr>
<th>Certifications</th>
<th>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</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>Tri-voltage design with 35 lbs. of holding force</td>
</tr>
<tr>
<td>Housing</td>
<td>Die cast</td>
</tr>
<tr>
<td>Fasteners</td>
<td>Wood and machine screw pack</td>
</tr>
<tr>
<td>Finishes/Colors/Powder Coat</td>
<td>Available in Aluminum and Dark Bronze only</td>
</tr>
<tr>
<td>Options</td>
<td>Now available with armature extensions (see page 11)</td>
</tr>
</tbody>
</table>
### SEM7800 Series

#### Magnets

**Features and mounting details**

---

**7820**

- **Mounting**: Floor mounted
- **Total Projection**: 6-3/4" (171 mm)

---

**7830**

- **Mounting**: Surface wall mounted
- **Total Projection**: 4-1/8" (105 mm)
  - Suitable for use in pocket door installations

---

**7840**

- **Mounting**: Low profile recessed wall mount
  - 2" (51 mm) x 4" (102 mm) x 1-1/2" (38 mm)
- **Total Projection**: 2-5/8" (67 mm)
  - Suitable for use in pocket door installations

*Note: Outlet box not included.*

---

**7850**

- **Mounting**: Standard profile recessed wall mount
  - 2" (51 mm) x 4" (102 mm) x 1-1/2" (38 mm)
- **Total Projection**: 3-5/8" (92 mm)
  - Suitable for use in pocket door installations

*Note: Outlet box not included.*
### Electrical data

#### 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.

### Electrical schematic

**Fig. 1 24V AC/DC Wiring**
Polarity is important

**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

### Voltage input

#### Holding Force
- 35 lbs. @ nominal input voltage

#### Maximum Current Draw
- .020A @ 24VAC/DC, 120VAC
- .030A @ 12VDC
SEM7800 Series

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

Accessories
## 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

**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

<table>
<thead>
<tr>
<th>Select magnet series</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ SEM7820</td>
</tr>
<tr>
<td>□ SEM7830</td>
</tr>
<tr>
<td>□ SEM7840</td>
</tr>
<tr>
<td>□ SEM7850</td>
</tr>
</tbody>
</table>

#### Specify finish

| Standard Powder Coat | Aluminum, Dark Bronze |

#### How-to-order SEM 7810 extensions

<table>
<thead>
<tr>
<th>Select magnet series</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ SEM7810-514 (qty.)</td>
</tr>
<tr>
<td>□ SEM7810-E050 (qty.)</td>
</tr>
<tr>
<td>□ SEM7810-E075 (qty.)</td>
</tr>
<tr>
<td>□ SEM7810-E100 (qty.)</td>
</tr>
<tr>
<td>□ SEM7810-E200 (qty.)</td>
</tr>
<tr>
<td>□ SEM7810-E400 (qty.)</td>
</tr>
<tr>
<td>□ SEM7810-517 (qty.)</td>
</tr>
</tbody>
</table>

**Magnets will be shipped with:**
- Die cast housing
- Cover
- Armatures
- WMS screw pack
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.

**Certifications**
- 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

**Body Construction**
- Cast Iron Body
- Full Complement Bearing
- 1-1/8˝ Diameter Piston
- 9/16˝ Diameter Double Heat Treated Pinion Journal

**Fluid**
- All Weather Fluid

**Handing**
- Handed

**Size**
- Size 3 or 4, non-adjustable

**Warranty**
- 2 years

**Fasteners**
- Wood and machine screw pack

**Mounting**
- Concealed (in door) for interior smoke barrier and labeled doors

**Arms**
- Standard, handed arm and non-handed track

**Finishes/Colors/ Powder Coat**
- Aluminum (689)
- Statuary Bronze (690)
- Light Bronze (691)
- Black (693)
- Dark Bronze (695)
- Brass (696)
- Custom colors optional
- Optional SRI primer - powder coat only
- Optional plated finishes

---

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

---

**Features**
- PLASTICMETAL HINGE (PULL) SIDETOP JAMB (PUSH) STOP FACE (PUSH) SWING FREE DOUBLE EGRESS CONCEALED (FRAME) CONCEALED (DOOR) MOUNTING COVER CYLINDER

**Non-Sized Handed Sized**
- SINGLE POINT HOLD-OPEN MULTI-POINT HOLD-OPEN BYPASS 80/140

**Finishes**
- PLASTIC METAL

**Custom Colors**
- AVAILABLE
- NOT AVAILABLE

* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.
**Butt Hinges**
- Should not exceed 5” (127 mm) in width
- Consult factory for pivot hung installations

**Auxiliary Stop**
- Recommended at hold-open point

**Top Rail**
- Minimum 4” (102 mm)

**Door Thickness**
- 1-3/4” (44 mm) minimum
- 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

**Door Width**
- 2’4” (711 mm) minimum for single door with SE
- 2’8” (813 mm) minimum for door with SEL

**Maximum Opening**
- Templating allows 110°
- Hold-open points between 85° and 110° in approximately 3° increments
- SEL arm and track locate hold-open at 110°, 120° and 130°

**SE, SEL Electrical Options**
- These track assemblies require a single power circuit for the holding solenoid
- SE or SEL holding solenoid is either 24V or 120V input, please specify
- An optional 4040SE-3210 or B310-B24 TRANSFORMER reduces 120V AC line voltage to 24V AC
- Circuitry accepts either AC or DC input

**Options**
- Long (SEL) track and arm
- 24V or 120V input, please specify

**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
3130SE-3071
SE Cylinder Assembly
- Handed
- Cast iron
- For various applications see “Table of Sizes” on 3130SE Series page 16
- Standard

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

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

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

3130SE-3436
Test Switch

3130SE-81
Conduit Quick-Connector
- Two piece connector for use with 1/2” conduit
- See page 21 for illustration

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)
## 3130SE Series

### Ordering Information

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

#### Closer options

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

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

**Installation accessories**
- Transformer, 4040SE-3210
- 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

<table>
<thead>
<tr>
<th>28”</th>
<th>34”</th>
<th>38”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td>71mm</td>
<td>864mm</td>
<td>965mm</td>
<td>1219mm</td>
</tr>
</tbody>
</table>

**Minimum door width**

- 3133SE
- 3134SE

- Indicates recommended range of door width for closer size.

**NOTE:** For SE, minimum door width 28” (71mm)
For SEL, minimum door width 32” (813mm)
The 4040SE SENTRONIC® 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.

### Certifications
Grade 1 - ANSI A156.15, UL 10C, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101

### Body Construction
- Cast Iron Body
- Full Complement Bearing
- 1-1/2” Diameter Piston
- 3/4” Diameter Double Heat Treated Pinion Journal

### Fluid
All Weather Fluid

### Handing
Non-Handed

### Size
Adjustable Spring Size, up to 4

### Warranty
2 years

### Cover
- Clip-on plastic, standard
- Metal, optional

### Fasteners
Wood and machine screw pack

### Mounting
Hinge (Pull Side), Stop Face (Push Side)

### Arms
Standard arm and SE track, standard Double egress arm and SEL track, optional

### Finishes/Colors/ Powder Coat
- Aluminum (689)
- Statuary Bronze (690)
- Light Bronze (691)
- Black (693)
- Dark Bronze (695)
- Brass (696)
- Custom colors optional
- Optional SRI primer - powder coat only
- Optional plated finishes

### Wiring
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.
### 4040SE Series

#### Mounting details

**Hinge (Pull) Side Mounting**

---

#### Butt Hinges
- Should not exceed 5” (127 mm) in width

#### Swing Clear Hinges
- Consult factory

#### Auxiliary Stop
- Recommended at hold-open point

#### Reveal
- Should not exceed 1/8” (3 mm) for standard arm
- Should not exceed 2-11/16” (68 mm) for double egress arm

#### Top Rail
- Minimum 3-1/2” (89 mm)
- Installation with PLATE, 4040SE-18 requires SPECIAL TEMPLATE and 1-3/4” (44 mm) minimum top rail

#### Head Frame
- Requires 2” (51 mm) minimum

#### Flush Ceiling
- 2” (51 mm) head frame does not require special templating

#### Door Width
- 2’ 4” (711 mm) minimum for single door with SE
- 4’ 8” (1422 mm) minimum for paired doors with SE

#### Flush Ceiling
- 2-3/8” (60 mm) behind door required for 90° installation

#### Maximum Opening
- Templating allows 110°
- Hold-open points between 85° and 110° in approximately 3° increments
- Pull side mounting on a double egress frame requires a handed double egress arm
- Maximum hold-open to 95°
- 2-11/16” (67 mm) maximum reveal on pull side
- SEL track provides hold-open points between 90° and 120°, in approximately 3° increments

#### SE, SEL Electrical Options
- These track assemblies require a single power circuit for the holding solenoid
- SE or SEL holding solenoid is either 24V or 120V input, please specify
- An optional 4040SE-3210 or B310-824 TRANSFORMER reduces 120V AC line voltage to 24V AC.
- Circuitry accepts either AC or DC input

#### Options
- Long (SEL) track
- Handed double egress arm for reveal under 2-11/16” (67 mm)

#### SE Wiring Diagram
- 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

---

**LCN Door Control Catalog**

### Mounting details

#### Stop Face (Push Side) Mounting

**Butt Hinges**
- Should not exceed 5” (127 mm) in width

**Auxiliary Stop**
- Recommended at hold-open point

**Top Rail**
- Minimum 5-3/4” (146 mm)
- Installation with PLATE, 4040SE-18PA requires SPECIAL TEMPLATE and 2” (51 mm) minimum top rail

**Stop Width**
- 1-1/4” (32 mm) minimum

**Door Width**
- 2’-4” (711 mm) minimum for single door with SE
- 4’-8” (1422 mm) minimum for paired doors with SE

**Maximum Opening**
- Templating allows 110°
- Hold-open points between 85° and 110° in approximately 3° increments
- SEL track provides hold-open points between 90° and 120°, in approximately 3° increments

**SE, SEL Electrical Options**
- These track assemblies require a single power circuit for the holding solenoid
- SE or SEL holding solenoid is either 24V or 120V input, please specify
- An optional 4040SE-3210 or 8310-824 TRANSFORMER reduces 120V AC line voltage to 24V AC
- Circuitry accepts either AC or DC input

**Options**
- Long (SEL) track

**SE Wiring Diagram**

```
To either terminal
INPUT WIRES
To either terminal
Green ground Terminal
```

### 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

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Finish Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>4040SE-3071</td>
<td>Cylinder Assembly</td>
<td>Non-handed, Cast iron, Standard</td>
</tr>
</tbody>
</table>

### Covers

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Finish Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>4040SE-72</td>
<td>Plastic Cover</td>
<td>Non-handed, Clip-on, Standard</td>
</tr>
<tr>
<td>4040SE-72MC</td>
<td>Metal Cover</td>
<td>Handed, Required for plated finishes and custom powder coat finishes, Optional</td>
</tr>
</tbody>
</table>

### Arms

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Finish Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>4040SE-3077T</td>
<td>Standard Arm</td>
<td>Non-handed, Adjustable to select hold-open point</td>
</tr>
</tbody>
</table>

### Tracks

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Finish Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>4040SE-3077DE</td>
<td>Double Egress Arm</td>
<td>Handed, For pull side installations on double egress doors and frames, Not required for push side mounting on double egress frames, Optional</td>
</tr>
<tr>
<td>4040SE-3038</td>
<td>SE Track</td>
<td>Non-handed, For SE closer, 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, Optional</td>
</tr>
<tr>
<td>4040SEL-3038</td>
<td>SEL Long Track</td>
<td>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</td>
</tr>
</tbody>
</table>
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 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
☐ ST- __________

Special template

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

### Interior door width

<table>
<thead>
<tr>
<th>Interior door width</th>
<th>28” (711mm)</th>
<th>34” (864mm)</th>
<th>38” (965mm)</th>
<th>48” (1219mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4040SE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum door width</td>
<td>size 3</td>
<td></td>
<td></td>
<td>size 4</td>
</tr>
</tbody>
</table>

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.

**Certifications**
- Grade 1 - ANSI A156.15, UL 10C, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101

**Body Construction**
- Cast iron Body
- Full Complement Bearing
- 1-1/2˝ Diameter Piston
- 11/16˝ Diameter Double Heat Treated Pinion Journal

**Fluid**
- All Weather Fluid

**Handing**
- Handed

**Size**
- Sized, 4 only

**Warranty**
- 2 years

**Fasteners**
- Wood and machine screw pack

**Mounting**
- Concealed (in frame)

**Arms**
- Standard handed arm and non-handed track (two piece metal finish plate)

**Finishes/Colors/Powder Coat**
- Aluminum (689)
- Statuary Bronze (690)
- Light Bronze (691)
- Black (693)
- Dark Bronze (695)
- Brass (696)
- Custom colors optional
- Optional SRI primer - powder coat only
- Optional plated finishes

**Wiring**
- Concealed or exposed
- Built in on/off switch controls hold-open function
- Interfaces with fire alarm system

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

---

**Features**

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

**Concealed Mounting**

### 2310ME Series

<table>
<thead>
<tr>
<th>Butt Hinges</th>
<th>Should not exceed 5” (127 mm) in width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Rail</td>
<td>- 1-3/8” (35 mm) mortise required</td>
</tr>
<tr>
<td></td>
<td>- 5/16” (8 mm) cutout required at top of door, stop face only</td>
</tr>
<tr>
<td>Door Thickness</td>
<td>1-3/4” (44 mm) minimum</td>
</tr>
<tr>
<td>Door Width</td>
<td>2’ 4” (711 mm) minimum</td>
</tr>
<tr>
<td>Hollow Metal Frame</td>
<td>- Requires minimum 4” (102 mm) x 4” frame</td>
</tr>
<tr>
<td></td>
<td>- Consult factory or template for preparation details</td>
</tr>
<tr>
<td>Bypass</td>
<td>- (suffix “B80” or “B140”) eliminates hold-open function up to a specified point of door swing</td>
</tr>
<tr>
<td></td>
<td>- B80 cylinder from 0° to 80°</td>
</tr>
<tr>
<td></td>
<td>- B140 cylinder from 0° to 140°</td>
</tr>
<tr>
<td>Maximum Opening</td>
<td>Templatting allows 180° with hold-open points up to 160°</td>
</tr>
<tr>
<td>Options</td>
<td>- Hold-open bypass</td>
</tr>
<tr>
<td></td>
<td>- 24V or 120 volt input, please specify</td>
</tr>
</tbody>
</table>

### Me (2310) Wiring Diagram

**WIRING DIAGRAM**

Input voltage 24V AC/DC or 120V AC/DC (usually from alarm panel or detector)

- Chassis Ground

### 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

**Arm**

- **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

**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.
- Plated Finish, US

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

<table>
<thead>
<tr>
<th>28”</th>
<th>34”</th>
<th>38”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td>711mm</td>
<td>864mm</td>
<td>965mm</td>
<td>1219mm</td>
</tr>
</tbody>
</table>

2314

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 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.

**Certifications**
- Grade 1 - ANSI A156.15, UL 10C, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101

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

**Fluid**
- All Weather Fluid

**Handing**
- Handed

**Size**
- Sized, 4 only

**Warranty**
- 2 years

**Wiring**
- Concealed or exposed electrical connectors
- Built in “On/Off” switch controls hold-open function
- Interfaces with fire alarm systems

**Cover**
- Metal, Standard

**Fasteners**
- Wood and machine screw pack

**Mounting**
- Hinge (Pull Side)

**Arms**
- Swing free arm, standard
- Double egress, optional

**Finishes/Colors/ Powder Coat**
- Aluminum (689)
- Statuary Bronze (690)
- Light Bronze (691)
- Black (693)
- Dark Bronze (695)
- Brass (696)
- Custom colors optional
- Optional SRI primer - powder coat only
- Optional plated finishes

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

### Features

- **Templates**
  - Metal, Standard
  - Wood and machine screw pack
  - Hinge (Pull Side)
  - Swing free arm, standard
  - Double egress, optional
  - Aluminum (689)
  - Statuary Bronze (690)
  - Light Bronze (691)
  - Black (693)
  - Dark Bronze (695)
  - Brass (696)
  - Custom colors optional
  - Optional SRI primer - powder coat only
  - Optional plated finishes

- **Wiring**
  - Concealed or exposed electrical connectors
  - Built in “On/Off” switch controls hold-open function
  - 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.

- **Certifications**
  - Grade 1 - ANSI A156.15, UL 10C, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101

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

- **Fluid**
  - All Weather Fluid

- **Handing**
  - Handed

- **Size**
  - Sized, 4 only

- **Warranty**
  - 2 years

- **Wiring**
  - Concealed or exposed electrical connectors
  - Built in “On/Off” switch controls hold-open function
  - Interfaces with fire alarm systems
### 4310ME Series

#### Mounting details

**Hinge (Pull) Side Mounting**

**4310ME Series**

**Hinge (Pull) Side Mounting**

- **Series:** 4310ME
- **Hinge (Pull) Side Mounting:**
  - **Mounting details:**
    - **22-3/4” (578 mm)**
    - **1” (25 mm)**
    - **1-1/16” (27 mm)**
    - **3-7/8” (98 mm)**
    - **19” (483 mm)**
    - **1/2” (13 mm)**
    - **1-1/4” (32 mm)**
    - **3-1/2” (89 mm)**
    - **2-9/16” (65 mm)**
    - **1-1/4” (32 mm)**

**Butt Hinges**
- Should not exceed 4-1/2” (114 mm) in width

**Top Rail**
- 1-1/16” (27 mm) minimum

**Reveal**
- Should not exceed 1/8” (3 mm) for Swing-Free arm
- Should not exceed 2-11/16” (68 mm) for double egress arm

**Head Frame**
- Requires 2” (51 mm) minimum

**Clearance**
- 1-1/4” (32 mm) behind door required for installation

**Bypass**
- (suffix “B80 or B140”) eliminates hold-open function up to a specified point of the doors swing
- B80 cylinder from 0° to 80°
- B140 cylinder from 0° to 140°

**Maximum Opening**
- Templating allows 180° with hold-open points up to 160°
- Optional double egress arm limited to 95°
- Please note that many track style door closers are capable of allowing 180° of door swing.
- Be aware that the majority of track style closers are at their weakest closing force in the 180° – 130° range
- Consult factory for applications where exterior or large/heavy door must swing 180°

**ME Electrical Options**
- These assemblies have a single electrical circuit with a choice of voltages
- A separate TRANSFORMER, 4040SE-3210, can be used to reduce line voltage to 24V AC
- Circuitry accepts either AC or DC input
- Please specify 24V or 120V

**Options**
- Hold-open bypass
- 24V or 120 volt input, please specify

**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

**Input Wires**
- 18 Gauge Black

**Wire Harness Connector**

**Rectifier (24V Only)**

**Capacitor (24V Only)**

**Solenoid Power Plug**

**On/Off Switch**

**Solenoid Holding Force Adjustment Potentiometer (24V Only)**

**Earth Ground (Green)**

**Table of Contents**

**LCN Door Control Catalog**
- phone: 877-671-7011
- fax: 800-248-1460
- www.allegion.com/us
- 009426 rev. 07/17
### Cylinder

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>4310ME-3971</td>
<td>ME Cylinder Assembly</td>
<td>Handed, Cast iron, Specify 24V or 120V, Standard</td>
</tr>
<tr>
<td>4310ME-3071</td>
<td>ME Cylinder/Plate Assembly</td>
<td>Handed, “On/Off” switch assembly controls hold-open function, Circuitry accepts either AC or DC input, 24V or 120V, please specify, Standard</td>
</tr>
</tbody>
</table>

### Arms

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>4310ME-3077SF</td>
<td>Swing-Free Arm</td>
<td>Handed, After door is placed in hold-open, secondary pivot point allows up to 160° swing without door closer resistance</td>
</tr>
<tr>
<td>4310ME-3077DE</td>
<td>Double Egress Arm</td>
<td>Handed, For double egress doors and frames, 2-11/16˝ (68 mm) maximum reveal, Optional</td>
</tr>
</tbody>
</table>

### Cover

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>4310ME-72MC</td>
<td>Metal Cover</td>
<td>Handed, Standard</td>
</tr>
</tbody>
</table>

### Track

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>4310ME-3038</td>
<td>Track</td>
<td>Non-handed, Standard</td>
</tr>
</tbody>
</table>
Switch

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” x 4” x 2-1/8” (102mm x 102mm x 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
- Custom Powder Coat (RAL)
- Plated Finish, US

Cylinder function
- Bypass 80° (B80)
- Bypass 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)

Installation accessories
- Transformer, 4310ME-3210

Special template
- SF

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

<table>
<thead>
<tr>
<th>Interior door width</th>
<th>26” 660mm</th>
<th>34” 864mm</th>
<th>38” 965mm</th>
<th>48” 1219mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>4314ME</td>
<td>size 4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Minimum door width

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.

### Certifications
- Grade 1 - ANSI A156.15, UL 10C, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101

### Body Construction
- Cast iron Body
- Full Complement Bearing
- 1-1/2˝ Diameter Piston
- 11/16˝ Diameter Double Heat Treated Pinion Journal

### Fluid
- All Weather Fluid

### Handing
- Handed

### Size
- Sized, 4 only

### Warranty
- 2 years

### Cover
- Metal, Standard

### Fasteners
- Wood and machine screw pack

### Mounting
- Top jamb (Push Side)

### Arms
- Regular arm

### Finishes/Colors/
Powder Coat
- Aluminum (689)
- Statuary Bronze (690)
- Light Bronze (691)
- Black (693)
- Dark Bronze (695)
- Brass (696)
- Custom colors optional
- Optional SRI primer - powder coat only
- Optional plated finishes

### Wiring
- 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.

### Table of Contents
<table>
<thead>
<tr>
<th>MOUNTING</th>
<th>FINISH</th>
<th>COVER</th>
<th>CYLINDER</th>
<th>*ARM FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOP JAMB (PULL)</td>
<td>PLASTIC-PLATED</td>
<td>HANDED</td>
<td>STANDARD DIAMETER</td>
<td>150°</td>
</tr>
</tbody>
</table>
| STOP JAMB (PUSH) | METAL | NO LAUGHERS | REGULAR DIAMETER | *
| CONCEALED FRAME (DOOR) | PLATED | SIZED | DOUBLE EXPOSED | |
| CONCEALED FRAME (FRAME) | PLATED | BYPASS | SINGLE POINT HOLD-OPEN | |
| POWER/CORE | METAL | BYPASS | MULTI-POINT HOLD-OPEN | |
| HINGE (PULL) | METAL | BYPASS | POWDER COAT | |
| SWING FREE | METAL | BYPASS | PLATED | |

- 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

| Butt Hinges | Should not exceed 4-1/2” (114 mm) in width |
| Top Rail | 1-3/4” (44 mm) minimum |
| | 3-3/4” (95 mm) minimum with flush ceiling |
| Reveal | 3-7/8” (98 mm) maximum regular or long arm |
| | For reveals greater than 3-7/8” consult factory |
| Head Frame | Requires 1-1/2” (38 mm) minimum |
| | 2” (51 mm) minimum with flush ceiling |
| Flush Ceiling | Requires PLATE, 4410ME-18G substituted for standard mounting plate |
| Bypass | (Suffix “B80” or “B140”) eliminates hold-open function up to a specified point of door swing |
| | B80 cylinder from 0° to 80° |
| | B140 cylinder from 0° to 140° |
| Maximum Opening | Templating allows 160°, with hold-open points up to 150° |
| | Optional long arm allows 180°, hold-open points up to 170° |
| ME Electrical Options | These assemblies have a single electrical circuit with a choice of voltages |
| | A separate TRANSFORMER, 4040SE-3210, can be used to reduce line voltage to 24V AC. Circuitry accepts either AC or DC input |
| | Please specify 24V or 120V |
| Options | Hold-open bypass |
| | Optional long arm allows 180° with hold-open points up to 170° |
| | Optional –18G plate accommodates flush ceiling conditions |
| | 24V or 120V volt input, please specify |

ME (4310, 4410) Wiring Diagram

| Input Wires (18 Gauge Black) | Wire Harness Connector |
| Earth Ground (Green) | Rectifier | Capacitor (24V Only) |
| Solenoid Power Plug | On/Off Switch | Solenoid Holding Force Adjustment Potentiometer (24V Only) |
# Cylinders

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4410ME-3971</td>
<td>ME Cylinder Assembly</td>
<td>Handed, Cast Iron, Specify 24V or 120V, Standard</td>
</tr>
</tbody>
</table>

# Cover

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4410ME-72MC</td>
<td>Metal Cover</td>
<td>Handed</td>
</tr>
</tbody>
</table>

# Arms

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4410ME-3077</td>
<td>Regular Arm</td>
<td>Non-handed, 3-7/8” (98 mm) maximum reveal</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4410ME-3077L</td>
<td>Long Arm</td>
<td>For increasing opening to 180°, 3-7/8” (98 mm) maximum reveal, Optional</td>
</tr>
</tbody>
</table>
### Switch

#### 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

#### 4410ME-3351
- 24V shown
- 120V shown
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 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%

<table>
<thead>
<tr>
<th>Interior door width</th>
<th>24” 610mm</th>
<th>34” 864mm</th>
<th>38” 965mm</th>
<th>48” 1219mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>4414ME</td>
<td>Minimum door width</td>
<td>size 4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

### Certifications
- Grade 1 - ANSI A156.4, ANSI 156.15, 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

### Fluid
- All Weather Fluid

### Handing
- Handed

### Size
- Field adjustable, shipped at size 3

### Warranty
- 2 years

### Fasteners
- Wood and machine screw pack

### Mounting
- Hinge (Pull Side) interior doors

### Cover
- Metal, Standard

### Arms
- Standard arm (with track)
- Double egress arm, optional

### Finishes/Colors/Powder Coat
- Aluminum (689)
- Statuary Bronze (690)
- Light Bronze (691)
- Black (693)
- Dark Bronze (695)
- Brass (696)
- Custom colors optional

### Wiring
- Optional SRI primer - powder coat only
- Optional plated finishes

- Concealed or surface wiring
- 24V AC/DC input only
- 120V requires 4310HSA-3210 transformer
- HSA features a scanner activated hold-open function, fixed 15 seconds or 30 seconds

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

### Table of Contents
- Phone: 877-671-7011
- Fax: 800-248-1460
- www.allegion.com/us
- 009426 rev. 07/17
4310 HSA Series

Mounting details

Hinge (Pull) Side Mounting

**Butt Hinges**  
Should not exceed 4-1/2” (114 mm) in width

**Top Rail**  
1-1/16” (27 mm) minimum

**Reveal**  
- Should not exceed 1/8” (3 mm) for standard arm
- Should not exceed 2-11/16” (68 mm) for double egress arm

**Head Frame**  
Requires 2” (51 mm) minimum

**Clearance**  
1-1/4” (32 mm) minimum.

**Maximum Opening**  
- Templating allows 180°
- Optional double egress arm limited to 95°
- Infinite hold-open points from 80° up to 160°

**Options**  
- 120 volt input requires 4310HSA-3210 transformer to change 120V AC to 24V AC

**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)
4310 HSA Series

Ordering Information

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 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

Interior door width

<table>
<thead>
<tr>
<th>26”</th>
<th>30”</th>
<th>34”</th>
<th>38”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td>660mm</td>
<td>864mm</td>
<td>965mm</td>
<td>1219mm</td>
<td></td>
</tr>
</tbody>
</table>

4311HSA

Minimum door width

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

Fluid
- All Weather Fluid

Handing
- Handed

Size
- Field adjustable, shipped at size 3

Warranty
- 2 years

Fasteners
- Wood and machine screw pack

Mounting
- Top Jamb (Push Side)

Cover
- 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.
4410 HSA Series

Mounting details

Top Jamb (Push) Side Mounting

**Butt Hinges**  Should not exceed 4-1/2” (114 mm) in width

**Top Rail**
- 1-3/4” (44 mm) minimum
- 3-3/4” (95 mm) minimum with flush ceiling

**Head Frame**
- Requires 1-1/2” (38 mm) minimum
- 2” (51 mm) minimum with flush ceiling

**Reveal**
- 3-7/8” (98 mm) maximum for regular or long arm
- For reveals greater than 3-7/8” consult factory

**Maximum Opening**
- Templating allows 160°
- Infinite hold-open points from 80° up to 150°
- Optional long arm allows 180°, hold-open points up to 170°

**Options**
- Optional long arm allows 180° with hold-open points up to 170°
- Optional –18G plate accommodates flush ceiling conditions
- 120 volt input requires 4410HSA–3210 transformer to change 120V AC to 24V AC

**HSA Wiring Diagram**

Connect Green Wire to Earth Ground

Connect Black Wires to Input Voltage Leads (polarity not important)
### Cylinders

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4412HSA-3971</td>
<td>Handed&lt;br&gt;Cast iron&lt;br&gt;24V AC/DC input only for holding solenoid&lt;br&gt;Standard</td>
</tr>
<tr>
<td>4412HSA-3071</td>
<td>HSA Cylinder / Plate Assembly&lt;br&gt;Handed&lt;br&gt;Includes scanner module and system timer module&lt;br&gt;“On/Off” switch assembly provides continuous hold-open function&lt;br&gt;24V AC/DC input only for holding solenoid and electronics modules&lt;br&gt;Standard</td>
</tr>
</tbody>
</table>

### Arms

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4410HSA-3077</td>
<td>Non-handed&lt;br&gt;3-7/8” (98 mm) maximum reveal</td>
</tr>
<tr>
<td>4410HSA-3077L</td>
<td>Long Arm&lt;br&gt;For increased opening&lt;br&gt;3-7/8” (98 mm) maximum reveal&lt;br&gt;Optional</td>
</tr>
</tbody>
</table>

### Switch

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4410HSA-3448</td>
<td>Switch Assembly&lt;br&gt;Provides continuous hold-open function&lt;br&gt;Available in 24V only</td>
</tr>
</tbody>
</table>

### Scanner

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4410HSA-3428</td>
<td>Scanner Module</td>
</tr>
</tbody>
</table>

### Installation Accessories

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4410HSA-18</td>
<td>Mounting Plate&lt;br&gt;Standard</td>
</tr>
<tr>
<td>4410HSA-18G</td>
<td>Transformer Mounting Plate&lt;br&gt;Substituted on flush ceiling installations&lt;br&gt;Optional</td>
</tr>
<tr>
<td>4410HSA-3210</td>
<td>Transformer&lt;br&gt;Reduces line voltage from 120V to 24V AC&lt;br&gt;Mounted on plate for 4” (102 mm) x 4” x 2-1/8” (54 mm) junction box (by others)</td>
</tr>
</tbody>
</table>
How-to-order 4410 HSA Series closers

Select hand
☐ RH
☐ LH

Voltage
☐ 24V AC/DC

Specify finish
☐ Standard Powder Coat
☐ 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"

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)

Installing accessories
☐ Plate, 4410HSA-18
☐ Plate, 4410HSA-18G
☐ 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.

Interior door width

<table>
<thead>
<tr>
<th>Size</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>24&quot;</td>
<td>610mm</td>
</tr>
<tr>
<td>34&quot;</td>
<td>864mm</td>
</tr>
<tr>
<td>38&quot;</td>
<td>965mm</td>
</tr>
<tr>
<td>48&quot;</td>
<td>1219mm</td>
</tr>
</tbody>
</table>

Minimum door width

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.

### Certifications
- Grade 1 - ANSI A156.15, UL 10C, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101

### Handing
- Non-Handed

### Templating
- 22 3/4” x 1 1/4”

### Warranty
- 2 years

### Fasteners
- Wood and machine screw pack

### Mounting
- Hinge (Pull Side)

### Arms
- Standard, non-handed arm for any 4040SE Series
- Standard, non-handed track for SEH
- Specify 24V or 120V AC/DC input for holding solenoid
- Includes test switch assembly with fuse

### Finishes/Colors/Powder Coat
- Aluminum (689)
- Statuary Bronze (690)
- Light Bronze (691)
- Black (693)
- Dark Bronze (695)
- Brass (696)
- Custom colors optional
- Optional SRI primer - powder coat only
- Optional plated finishes

### Wiring
- Concealed or surface
- 24V or 120V, please specify
- Interfaces with alarm system, please consult with factory for full details

### Special Templates
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.
SEH Series

Mounting details

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Butt Hinges</strong></td>
<td>Should not exceed 5” (127 mm) in width</td>
</tr>
<tr>
<td><strong>Swing Clear Hinges</strong></td>
<td>Consult factory</td>
</tr>
<tr>
<td><strong>Auxiliary Stop</strong></td>
<td>Recommended at hold-open point</td>
</tr>
<tr>
<td><strong>Reveal</strong></td>
<td>Should not exceed 1-1/8” (3 mm) for standard arm</td>
</tr>
<tr>
<td><strong>Head Frame</strong></td>
<td>Requires 2” (51 mm) minimum</td>
</tr>
<tr>
<td><strong>Stop Width</strong></td>
<td>1-1/4” (32 mm) minimum</td>
</tr>
<tr>
<td><strong>Flush Ceiling</strong></td>
<td>2” (51 mm) head frame does not require special templating</td>
</tr>
<tr>
<td><strong>Door Width</strong></td>
<td>■ 2’ 4” (711 mm) minimum for single door with SEH</td>
</tr>
<tr>
<td></td>
<td>■ 4’ 8” (1422 mm) minimum for paired doors with SEH</td>
</tr>
<tr>
<td><strong>Maximum Opening</strong></td>
<td>■ Templating allows 100°</td>
</tr>
<tr>
<td></td>
<td>■ Hold-open points between 80° and 100° in approximately 3° increments</td>
</tr>
<tr>
<td><strong>SEH Electrical Options</strong></td>
<td>■ These track assemblies require a single power circuit for the holding solenoid</td>
</tr>
<tr>
<td></td>
<td>■ SEH holding solenoid is either 24V or 120V input, please specify</td>
</tr>
<tr>
<td></td>
<td>■ An optional 4D40SE-3210 TRANSFORMER or B310-824 reduces 120V AC line voltage to 24V AC. Circuitry accepts either AC or DC input</td>
</tr>
<tr>
<td><strong>Options</strong></td>
<td>■ 24V or 120V volt input for SEH, please specify</td>
</tr>
<tr>
<td><strong>Wiring Diagram</strong></td>
<td>See &quot;FIRE/LIFE SAFETY&quot; section page 19 for typical wiring and electrical diagram</td>
</tr>
</tbody>
</table>

**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
SEH Series Accessories

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.

**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)

Closer will be shipped with:
- Standard arm
- Standard track
- Wood & machine screw pack
  unless options listed below are selected.
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.

<table>
<thead>
<tr>
<th>SERIES</th>
<th>MOUNTING</th>
<th>FINISH</th>
<th>COVER</th>
<th>CYLINDER</th>
<th>ARM FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2610</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4630</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4630CS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4640</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4640CS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4810</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>4820</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>4840</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

- ● 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.

<table>
<thead>
<tr>
<th>SERIES</th>
<th>MOUNTING</th>
<th>HANDING</th>
<th>FINISH</th>
<th>COVER</th>
<th>ARM FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2810</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2850</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2860</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9130</td>
<td></td>
<td>HANDED**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9140</td>
<td></td>
<td>HANDED**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9150</td>
<td></td>
<td>HANDED**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9530</td>
<td></td>
<td></td>
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<tr>
<td>9540</td>
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<tr>
<td>9550</td>
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</tr>
<tr>
<td>9560</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- ● AVAILABLE
- ○ NOT AVAILABLE

*** All electromechanical operators open to 90º.
**** 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?

<table>
<thead>
<tr>
<th>DOOR TYPE</th>
<th>OPENING FORCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Rated</td>
<td>Note 1</td>
</tr>
<tr>
<td>Interior Non-Fire-Rated</td>
<td>5.0 lbs. (22.2 N)</td>
</tr>
<tr>
<td>Exterior Non-Fire-Rated</td>
<td>“Reserved”</td>
</tr>
</tbody>
</table>

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

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.

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.

INFORMATION SOURCES

LCN CLOSERS  PHONE 877-671-7011
121 W. RAILROAD AVE.  FAX 800-248-1460
P.O. BOX 100  www.securitytechnologies.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 6618, Washington, D.C. 20035-6618
(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
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.

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.

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.

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.
- 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.
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:**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4811</td>
<td>Auto Equalizer</td>
</tr>
<tr>
<td>1</td>
<td>8310-856</td>
<td>Actuator (exterior)</td>
</tr>
<tr>
<td>1</td>
<td>8310-856</td>
<td>Actuator (interior)</td>
</tr>
<tr>
<td>1</td>
<td>7901</td>
<td>Control Box</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>Compressor*</td>
</tr>
<tr>
<td></td>
<td>925</td>
<td>Tubing</td>
</tr>
</tbody>
</table>

* 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:**

<table>
<thead>
<tr>
<th>Qty</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4811</td>
<td>Auto Equalizer</td>
</tr>
<tr>
<td>2</td>
<td>8310-3856WS</td>
<td>Wireless Actuator</td>
</tr>
<tr>
<td>1</td>
<td>8310-865</td>
<td>Wireless Receiver</td>
</tr>
<tr>
<td>1</td>
<td>7981</td>
<td>Control Box</td>
</tr>
<tr>
<td></td>
<td>925</td>
<td>Tubing</td>
</tr>
</tbody>
</table>

* Contact Technical Support to verify compressor requirements.
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:**

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Part No.</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>2</td>
<td>4822</td>
<td>Auto Equalizer (exterior)</td>
</tr>
<tr>
<td>2</td>
<td>4811</td>
<td>Auto Equalizer (Interior)</td>
</tr>
<tr>
<td>1</td>
<td>79025</td>
<td>Control Box with</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sequencer Card</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>Compressor*</td>
</tr>
<tr>
<td>4</td>
<td>8310-856WS</td>
<td>Actuator (as needed) 925</td>
</tr>
</tbody>
</table>

**VESTIBULE DOOR SYSTEM (WIRELESS)**
- Slow opening automatic doors with sequential operation for single exterior and vestibule doors
- No guide rails or safety devices

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

**Bill Of Materials:**

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4822</td>
<td>Auto Equalizer (exterior)</td>
</tr>
<tr>
<td>1</td>
<td>4811</td>
<td>Auto Equalizer (Interior)</td>
</tr>
<tr>
<td>1</td>
<td>79825</td>
<td>Control Box with</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sequencer Card</td>
</tr>
<tr>
<td>4</td>
<td>8310-856WS</td>
<td>RF Actuators (as needed) 925</td>
</tr>
<tr>
<td>2</td>
<td>8310-856WS</td>
<td>RF Receiver 925</td>
</tr>
</tbody>
</table>

* 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.

**Certifications**
- Grade 1 - ANSI A117.1, A156.19 UL228, ADA, 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

**Fluid**
- All Weather Fluid

**Handing**
- Handed

**Size**
- Sized 3 and 4

**Warranty**
- 2 years

**Fasteners**
- Wood and machine screws

**Mounting**
- Concealed, in frame

**Arms**
- Single lever arm, mounting/finish plate, standard track

**Finishes/Colors/Powder Coat**
- Aluminum (689)
- Statuary Bronze (690)
- Light Bronze (691)
- Black (693)
- Dark Bronze (695)
- Brass (696)
- Custom colors optional
- Optional SRI primer - powder coat only
- Optional plated finishes

**Features**

<table>
<thead>
<tr>
<th>Templates</th>
<th>Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Special Templates</th>
<th>MOUNTING</th>
<th>FINISH</th>
<th>COVER</th>
<th>CYLINDER</th>
<th>*ARM FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
</tr>
<tr>
<td></td>
<td>AVAILABLE</td>
<td>NOT AVAILABLE</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Butt Hinges
Should not exceed 5" (127 mm) in width

Auxiliary Stop
Recommended

Head Frame
Minimum 4" (102 mm) x 4" for hollow metal or aluminum tube construction

Top Rail
- 1-3/8" (35 mm) mortise required
- 5/16" (8 mm) cutout required at top of the door, push side only

System Diagram
See "AUTOMATIC OPERATORS" section pages 8-9 for typical system wiring, and pages 28-29 for electrical and pneumatic data for control boxes

Maximum opening
- Butt hinge template allows 90° power opening and 160° manual opening
- Please note that many track style door closers are capable of allowing 180° of door swing
- Track style closers are at their weakest closing force at 180°
- Consult factory for applications where exterior or large/heavy door must swing 180°
- Consult factory for all pivot mounted installations

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

Indicates recommended range of door width for closer size.

**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.

**Certifications**
- Grade 1 - ANSI A117.1, A156.19, UL 10C 228, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act

**Body Construction**
- Cast Iron Body
- Full Complement Bearing
- 1-1/2” Diameter Piston
- 3/4” Diameter Double Heat Treated Pinion Journal

**Fluid**
- All Weather Fluid

**Handing**
- Non-Handed

**Size**
- Adjustable Spring Size 1-4

**Warranty**
- 2 years

**Cover**
- Metal, standard

**Fasteners**
- Wood and machine screws

**Mounting**
- Top jamb (Pull Side)

**Arms**
- Single lever arm with standard track

**Finishes/Colors/ Powder Coat**
- Aluminum (689)
- Statuary Bronze (690)
- Light Bronze (691)
- Black (693)
- Dark Bronze (695)
- Brass (696)
- Custom colors optional
- Optional SRI primer - powder coat only
- Optional plated finishes

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

- **MOUNTING**
  - Top jamb (Pull Side)
  - Top jamb (Push Side)
  - Parallel arm
  - Concealed

- **FINISH**
  - Powder coat
  - Plastic
  - Metal

- **COVER**
  - Non-handled
  - Non-sized
  - Accessibility*
  - Power operation
  - Hold-open
  - Dps switch

- **CYLINDER**
  - Standard (single)
  - Extra duty arm
  - Cush-in-stop
  - Spring cushion

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

- **AVAILABLE**
- **NOT AVAILABLE**
Top Jamb (Pull Side) Mounting

Mounting details

**Butt Hinges**

Should not exceed 5” (127 mm) in width

**Auxiliary Stop**

Recommended

**Reveal**

Should not exceed 1/8” (3 mm)

**Head Frame**

Minimum 2” (51 mm)

**Top Rail**

Minimum 1-1/8” (29 mm)

**System Diagram**

See “AUTOMATIC OPERATORS” section pages 7-8 for typical system wiring, and pages 28-29 for electrical and pneumatic data for control boxes

**Maximum opening**

- Templating allows 90° power opening and 170° manual opening
- Please note that many track style door closers are capable of allowing 180° of door swing
- Track style closers are at their weakest closing force at 180°
- Consult factory for applications where exterior or large/heavy door must swing 180°

**Notes:**

- 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-

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

<table>
<thead>
<tr>
<th>Size</th>
<th>28” (711mm)</th>
<th>30” (762mm)</th>
<th>36” (914mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4811</td>
<td>size 3</td>
<td>size 4</td>
<td></td>
</tr>
</tbody>
</table>

Minimum door width

Indicates recommended range of door width for closer size.

Interior door width

<table>
<thead>
<tr>
<th>Size</th>
<th>28” (711mm)</th>
<th>34” (864mm)</th>
<th>36” (914mm)</th>
<th>48” (1219mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4811</td>
<td>size 2</td>
<td>size 3</td>
<td>size 4</td>
<td></td>
</tr>
</tbody>
</table>

Minimum 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.

**Certifications**
- Grade 1 - ANSI A117.1, A156.19, UL 10C 228, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act

**Body Construction**
- Cast Iron Body
- Full Complement Bearing
- 1-1/2” Diameter Piston
- 3/4” Diameter Double Heat Treated Pinion Journal

**Fluid**
- All Weather Fluid

**Handing**
- Non-Handed

**Size**
- Adjustable Spring Size 2-5

**Warranty**
- 2 years

<table>
<thead>
<tr>
<th>Cover</th>
<th>Metal, standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fasteners</td>
<td>Wood and machine screw</td>
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<tr>
<td>Mounting</td>
<td>Top Jamb (Push Side)</td>
</tr>
<tr>
<td>Arms</td>
<td>Regular arm, standard</td>
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<td></td>
<td>Long arm, optional</td>
</tr>
<tr>
<td>Finishes/Colors/ Powder Coat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aluminum (689)</td>
</tr>
<tr>
<td></td>
<td>Statuary Bronze (690)</td>
</tr>
<tr>
<td></td>
<td>Light Bronze (691)</td>
</tr>
<tr>
<td></td>
<td>Black (693)</td>
</tr>
<tr>
<td></td>
<td>Dark Bronze (695)</td>
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<td></td>
<td>Brass (696)</td>
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<td></td>
<td>Custom colors optional</td>
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<tr>
<td></td>
<td>Optional SRI primer - powder coat only</td>
</tr>
<tr>
<td></td>
<td>Optional plated finishes</td>
</tr>
</tbody>
</table>

**Features**
- Special Templates
  - Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.

**Available**
- MOUNTING
  - Top Jamb/Pull Side
  - Top Jamb/Push Side
  - Parallel Arm
  - Concealed
- Finish
  - Powder Coat
  - Plated
  - Plastic
  - Metal
- Cover
  - Non-Handed
  - Non-Sized
  - Accessibility
  - Power Operation
  - Hold Open
  - Dps Switch
- Cylinder
  - Standard/Ungraded
  - Extra Duty
  - Cush-N-Stop
  - Spring Cush

**Not Available**
- 90°

Meets ADA requirements (power mode).

See Individual series for maximum manual opening.
4820 Series Auto Equalizer

Top Jamb (Push Side) Mounting

Butt Hinges

- Should not exceed 5” (127 mm) in width

Auxiliary Stop

- Recommended

Reveal

- 4-1/2” (114 mm) allows up to 90° power opening and 100° manual opening
- 8” (203 mm) allows up to 90° power opening and 100° manual opening with LONG ARM where standard rod and shoe is replaced with optional LONG ROD AND SHOE, 4820-79LR

Head Frame

- Minimum 1-3/4” (44 mm)
- With flush ceiling use PLATE, 4820-18G substituted for standard plate

Top Rail

- Minimum 1-3/4” (44 mm)
- Closer on 4820-18G plate requires 3” (76 mm) minimum

System Diagram

- See “AUTOMATIC OPERATORS” section pages 7-8 for typical system wiring, and pages 28-29 for electrical and pneumatic data for control boxes

Maximum opening

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

Options

- Door position switch (DPS) kit that signals when the door has reached the open position

Notes:

- 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
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-

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

<table>
<thead>
<tr>
<th>24”</th>
<th>30”</th>
<th>36”</th>
<th>42”</th>
</tr>
</thead>
<tbody>
<tr>
<td>610mm</td>
<td>762mm</td>
<td>914mm</td>
<td>1067mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size</th>
<th>Minimum door width</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>size 3</td>
</tr>
<tr>
<td>4</td>
<td>size 4</td>
</tr>
<tr>
<td>5</td>
<td>size 5</td>
</tr>
</tbody>
</table>

Interior door width

<table>
<thead>
<tr>
<th>24”</th>
<th>34”</th>
<th>38”</th>
<th>48”</th>
<th>54”</th>
</tr>
</thead>
<tbody>
<tr>
<td>610mm</td>
<td>864mm</td>
<td>965mm</td>
<td>1219mm</td>
<td>1372mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size</th>
<th>Minimum door width</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>size 2</td>
</tr>
<tr>
<td>3</td>
<td>size 3</td>
</tr>
<tr>
<td>4</td>
<td>size 4</td>
</tr>
<tr>
<td>5</td>
<td>size 5</td>
</tr>
</tbody>
</table>

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.

Certifications
- Grade 1 - ANSI A117.1, A156.19, UL 10C 228, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act

Body Construction
- Cast Iron Body
- Full Complement Bearing
- 1-1/2” Diameter Piston
- 3/4” Diameter Double Heat Treated Pinion Journal

Fluid
- All Weather Fluid

Handing
- Non-Handed

Size
- Adjustable Spring Size 1-5

Warranty
- 2 years

Cover
- Metal, standard

Fasteners
- Wood and machine screws
- Specify door thickness if over 1-3/4”

Mounting
- Parallel arm (Push Side)

Arms
- Extra heavy duty, standard
- Cush-n-stop and spring cushion, optional

Finishes/Colors/Powder Coat
- Aluminum (689)
- Statuary Bronze (690)
- Light Bronze (691)
- Black (693)
- Dark Bronze (695)
- Brass (696)
- Custom colors optional
- Optional SRI primer - powder coat only
- Optional plated finishes*

*End caps are black

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

Table of Contents
- 4840 Series Auto Equalizer

Features
- Meets ADA requirements (power mode).
- See individual series for maximum manual opening.
### Butt Hinges
Should not exceed 5” (127 mm) in width

### Auxiliary Stop
Recommended when CUSH-N-STOP or SPRING CUSH arms are not used

### Clearance
EDA or CUSH shoes is 5-1/2” (140 mm) from door face

### Top Rail
Minimum 4-1/8” (105 mm), 6” minimum top rail for screw not to show in glass

### Head Frame
(Flush) requires PA SHOE ADAPTER, 4840-419

### Stop Width
Minimum 1” (25 mm)

### Blade Stop
Clearance requires 1/2” (13 mm) BLADE STOP SPACER, 4840-61

### System Diagram
See “AUTOMATIC OPERATORS” section pages 7-8 for typical system wiring, and pages 28-29 for electrical and pneumatic data for control boxes

### Maximum Opening
- Maximum power opening is 90° with all arms
- Maximum manual opening is 105° with EDA or SPRING CUSH arms
- Maximum manual opening is 100° with CUSH-N-STOP arm

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

### 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
**Accessories**

### 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
  - 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-________

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

<table>
<thead>
<tr>
<th>24”</th>
<th>30”</th>
<th>36”</th>
<th>42”</th>
</tr>
</thead>
<tbody>
<tr>
<td>610mm</td>
<td>762mm</td>
<td>914mm</td>
<td>1067mm</td>
</tr>
<tr>
<td>4841</td>
<td>size 3</td>
<td>size 4</td>
<td>size 5</td>
</tr>
</tbody>
</table>

Minimum 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

-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

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- Regulator valve assembly for 7902 Series control box

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- 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 Relays 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 Relays 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 Relays 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

-3960 Compressor Assembly
- Internal air pump assembly for 7901, 7902, 7949, 7981, and 7982 Series control boxes
- Includes starter capacitor, -962 Isolators, and -329 air filter

-2936 Muffler
- Exhaust muffler for 7901, 7902, 7949, 7981, and 7982 Series control boxes

-3592 Compressor Service Kit
- Internal components for pressure release valve on -3960 Compressor Assembly

-962 Isolator
- Rubber Isolators for 7981/7982 compressor assembly, -3960

-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 it’s 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

Electrohydraulic
Powered
Systems
Electrohydraulic Powered Systems

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.
- 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.

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 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:**

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4631</td>
<td>Auto Equalizer</td>
</tr>
<tr>
<td>2</td>
<td>8310-3856WS</td>
<td>Wireless Actuators</td>
</tr>
<tr>
<td>1</td>
<td>8310-865</td>
<td>Wireless Receiver</td>
</tr>
</tbody>
</table>

### 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:**

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4642</td>
<td>Auto Equalizer (exterior)</td>
</tr>
<tr>
<td>1</td>
<td>4631</td>
<td>Auto Equalizer (interior)</td>
</tr>
<tr>
<td>3</td>
<td>8310-856</td>
<td>Wall Plate Actuators</td>
</tr>
</tbody>
</table>
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
FIELD CONNECTION TERMINALS

LCN LOW VOLTAGE (CLASS 2 NEC) ELECTRICAL CONNECTIONS

<table>
<thead>
<tr>
<th>Function</th>
<th>Terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actuator - Normal Input (N.O.)</td>
<td>16 &amp; 17 or 18 &amp; 19</td>
</tr>
<tr>
<td>Actuator - Sequential Input (N.O.)</td>
<td>8 &amp; 19</td>
</tr>
<tr>
<td>Actuator - Alternate Action (N.O.)</td>
<td>15 &amp; 17</td>
</tr>
<tr>
<td>Actuator - Continuous (N.O.)</td>
<td>6 &amp; 17</td>
</tr>
<tr>
<td>Sequential Output</td>
<td>9</td>
</tr>
<tr>
<td>Stop Side Safety (N.O.)</td>
<td>19 &amp; 20</td>
</tr>
<tr>
<td>Swing Side Safety (N.O.)</td>
<td>19 &amp; 21</td>
</tr>
<tr>
<td>Fire Alarm Contact (N.C.)</td>
<td>13 &amp; 14 (Fire Shunt)</td>
</tr>
<tr>
<td>Auxiliary Relay Contacts (5 amp max)</td>
<td>10 - Common</td>
</tr>
<tr>
<td></td>
<td>11 - N.O.</td>
</tr>
<tr>
<td></td>
<td>12 - N.C.</td>
</tr>
<tr>
<td>E.S. Relay Contacts (5 amp max)</td>
<td>22 - Common</td>
</tr>
<tr>
<td></td>
<td>23 - N.O.</td>
</tr>
<tr>
<td></td>
<td>24 - N.C.</td>
</tr>
<tr>
<td>12V DC &amp; 24V DC Negative*</td>
<td>2, 4, 13, 17, &amp; 19</td>
</tr>
<tr>
<td>12V DC Positive*</td>
<td>5 &amp; 7</td>
</tr>
<tr>
<td>24V DC Positive*</td>
<td>1 &amp; 3</td>
</tr>
</tbody>
</table>

*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.

**Certifications**
- Grade 1 - ANSI A117.1, A156.19, UL 10C, UL 325/228, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act

**Body Construction**
- Cast Iron Body
- Full Complement Bearing
- 1-1/2” Diameter Piston
- 3/4” Diameter Double Heat Treated Pinion Journal

**Fluid**
- All Weather Fluid

**Handing**
- Non-Handed

**Size**
- Adjustable Spring Size 1-4

**Warranty**
- 2 years

**Cover**
- Metal, standard

**Fasteners**
- Wood and machine screws

**Mounting**
- Topjamb (Pull Side)

**Arms**
- Standard single lever arm and track

**Finishes/Colors/Powder Coat**
- Aluminum (689)
- Statuary Bronze (690)
- Light Bronze (691)
- Black (693)
- Dark Bronze (695)
- Brass (696)
- Custom colors optional

- Optional SRI primer - powder coat only
- Optional plated finishes*
  *End caps are black

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

---

**Features**

- **TOP JAMB (PULL SIDE)**
  - **Mounting**
  - **Finish**
  - **Cover**
  - **Cylinder**
  - **ARM FUNCTION**

  - AVAILABLE
  - NOT AVAILABLE

- **Meet 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

<table>
<thead>
<tr>
<th>Mounting Details</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1/4” 32 mm</td>
<td></td>
</tr>
<tr>
<td>2-5/8” 67 mm</td>
<td></td>
</tr>
<tr>
<td>1-7/8” 48 mm</td>
<td></td>
</tr>
<tr>
<td>1-1/16” 27 mm</td>
<td></td>
</tr>
<tr>
<td>33-1/2” 850 mm</td>
<td></td>
</tr>
<tr>
<td>4-3/8” 110 mm</td>
<td></td>
</tr>
<tr>
<td>4-7/8” 125 mm</td>
<td></td>
</tr>
<tr>
<td>22-3/4” 578 mm</td>
<td></td>
</tr>
</tbody>
</table>

**Butt Hinges**
- Should not exceed 5” (127 mm) in width

**Auxiliary Stop**
- Recommended

**Reveal**
- Should not exceed 1/8” (3 mm)

**Head Frame**
- Minimum 2” (51 mm)

**Top Rail**
- Minimum 1-1/8” (29 mm)

**Opening Time and Force**
- Variable by adjustments to the electronic control module located on the operator assembly
- Maximum hold open time adjustable up to approximately five minutes

**System Diagram**
- See "AUTOMATIC OPERATORS" section pages 35 for typical system wiring and pages 37-38 for electrical data

**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

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4631-3971</td>
<td>Cast Iron Cylinder Assembly</td>
<td>Non-handed, Standard</td>
</tr>
<tr>
<td>4631-3071</td>
<td>Cast Iron Cylinder Assembly</td>
<td>Non-handed, Mounting plate, Standard</td>
</tr>
<tr>
<td>4631-3071CS</td>
<td>Cast Iron Cylinder Assembly</td>
<td>Non-handed, Mounting plate, Includes 4630-3454 Motor Clutch, 4630-3180 I/O Board Assembly and 4630-3462 Controller, Standard</td>
</tr>
</tbody>
</table>

### Cover

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4630-72MC</td>
<td>Metal Cover</td>
<td>Non-handed, Standard</td>
</tr>
</tbody>
</table>

### Track

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4630-3038</td>
<td>Standard Track</td>
<td>Non-handed, Will not accept hold open clip or bumper assembly, Standard</td>
</tr>
</tbody>
</table>

### Arm

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4630-3077T</td>
<td>Standard Arm</td>
<td>Non-handed, Track roller not included with arm</td>
</tr>
</tbody>
</table>

### Installation Accessories

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4630-3034</td>
<td>Track Roller</td>
<td>Quiet low friction roller assembly, Shoulder dimension “X” = 1/8” (3mm)</td>
</tr>
</tbody>
</table>
## 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-CS Switch End Cap
- Black powder coat only

### 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-

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%

<table>
<thead>
<tr>
<th>Exterior (and Vestibule) door width</th>
<th>Interior door width</th>
</tr>
</thead>
<tbody>
<tr>
<td>36” 914mm</td>
<td>36” 914mm</td>
</tr>
<tr>
<td>4631</td>
<td>38” 965mm</td>
</tr>
<tr>
<td>Minimum door width</td>
<td>48” 1219mm</td>
</tr>
<tr>
<td></td>
<td>size 2</td>
</tr>
<tr>
<td></td>
<td>size 3</td>
</tr>
<tr>
<td></td>
<td>Minimum door width</td>
</tr>
</tbody>
</table>

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.

### Certifications
- Grade 1 - ANSI A117.1, A156.19, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act

### Body Construction
- Cast Iron Body
- Full Complement Bearing
- 1-1/2” Diameter Piston
- 3/4” Diameter Double Heat Treated Pinion Journal

### Fluid
- All Weather Fluid

### Handing
- Non-Handed

### Size
- Adjustable Spring Size 2-5

### Warranty
- 2 years

### Features
- Special Templates

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

<table>
<thead>
<tr>
<th>MOUNTING</th>
<th>FINISH</th>
<th>COVER</th>
<th>CYLINDER</th>
<th>ARM FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Jamb</td>
<td>Powder Coat</td>
<td>Plastic</td>
<td>Non-Handed</td>
<td>Regular</td>
</tr>
<tr>
<td>Parallel Arm</td>
<td>Metal</td>
<td>Metal</td>
<td>Accessibility</td>
<td>Extra Duty</td>
</tr>
<tr>
<td>Concealed Arm</td>
<td>Plated</td>
<td>Covered</td>
<td>Power Operator</td>
<td>Custom K-Stop</td>
</tr>
<tr>
<td>Top Jamb (Pull Side)</td>
<td>Powder Coat</td>
<td>Powder Coat</td>
<td>Hold-Open</td>
<td>Spring Cushion</td>
</tr>
<tr>
<td>Top Jamb (Push Side)</td>
<td>Powder Coat</td>
<td>Powder Coat</td>
<td>DPS Switch</td>
<td>90°</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AVAILABLE</th>
<th>NOT AVAILABLE</th>
</tr>
</thead>
</table>

- 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

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butt Hinges</td>
<td>Should not exceed 5” (127 mm) in width</td>
</tr>
<tr>
<td>Auxiliary Stop</td>
<td>Recommended</td>
</tr>
<tr>
<td>Reveal</td>
<td>- 4-1/2” (114 mm) allows up to 90° power opening and 100° manual opening</td>
</tr>
<tr>
<td></td>
<td>- 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</td>
</tr>
<tr>
<td>Head Frame</td>
<td>Minimum 1-3/4” (44 mm). The standard mounting plate is also used to meet flush ceiling conditions</td>
</tr>
<tr>
<td>Top Rail</td>
<td>- Minimum 1-3/4” (44 mm)</td>
</tr>
<tr>
<td></td>
<td>- Flush ceiling installation requires 3-3/4” (95 mm) minimum</td>
</tr>
<tr>
<td>Opening Time and Force</td>
<td>- Variable by adjustments to the electronic control module located on the operator assembly</td>
</tr>
<tr>
<td></td>
<td>- Maximum hold open time adjustable up to approximately five minutes</td>
</tr>
<tr>
<td>System Diagram</td>
<td>See &quot;AUTOMATIC OPERATORS&quot; section page 35 for typical system wiring and pages 37-38 for electrical data</td>
</tr>
<tr>
<td>Maximum Opening</td>
<td>- Templating allows 90° power opening and 100° manual opening</td>
</tr>
<tr>
<td></td>
<td>- Consult factory for all pivot mounted installations</td>
</tr>
</tbody>
</table>

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

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-

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

<table>
<thead>
<tr>
<th>Size</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>36”</td>
<td>914mm</td>
</tr>
<tr>
<td>42”</td>
<td>1067mm</td>
</tr>
</tbody>
</table>

4642 size 5
Minimum door width

Interior door width

<table>
<thead>
<tr>
<th>Size</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>36”</td>
<td>914mm</td>
</tr>
<tr>
<td>38”</td>
<td>965mm</td>
</tr>
<tr>
<td>48”</td>
<td>1219mm</td>
</tr>
<tr>
<td>54”</td>
<td>1372mm</td>
</tr>
</tbody>
</table>

4642 size 3
4642 size 4
4642 size 5
Minimum door width

Indicates recommended range of door width for closer size. 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.
- 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**

- 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:**

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9531</td>
<td>Automatic Operator (RH)</td>
</tr>
<tr>
<td>2</td>
<td>8310-3853WS</td>
<td>Wireless Actuators</td>
</tr>
<tr>
<td>1</td>
<td>8310-865</td>
<td>Wireless Receiver</td>
</tr>
</tbody>
</table>

**VESTIBULE ENTRY SYSTEM (WIRELESS)**

- 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:**

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9542</td>
<td>Automatic operator (RH)</td>
</tr>
<tr>
<td>1</td>
<td>9531</td>
<td>Automatic operator (RH)</td>
</tr>
<tr>
<td>3</td>
<td>8310-853</td>
<td>Wall Plate Actuators</td>
</tr>
<tr>
<td>1</td>
<td>8310-849</td>
<td>Sequencer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other products from Von Duprin and Schlage Electronics</td>
</tr>
</tbody>
</table>

**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:**

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Part No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>9542</td>
<td>Automatic operator (RH)</td>
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<tr>
<td>1</td>
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<td>3</td>
<td>8310-853</td>
<td>Wall Plate Actuators</td>
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<tr>
<td>1</td>
<td>8310-849</td>
<td>Sequencer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other products from Von Duprin and Schlage Electronics</td>
</tr>
</tbody>
</table>
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
Electro-mechanical Powered Systems

STANDARD CONTROL BOX - 9100 SERIES

For clarity, not all components are shown on the control box PC board.

- J8, 10-position Control Box Power Cable
- J1, 6-position Main Power Cable
- J5, 2-position Motor Power Cable
- J3, 4-position Hall Effect Cable

Plug cables into these receptacles.

24VDC -
24VDC +
Safety Sen
Safety GND
Common GND
N/O Strike Relay
N/C Strike Relay
Aux GND
Aux ACT
3 Way HO
3 Way GND
3 Way OFF
Main Act
Main Act

Black DC+
Red DC+

Electric Lock, Electric Strike, etc.

N.O. or N.C. Depending on Device

Connect Fail Safe to N/C
Fail Secure to N/O

Optional 3 Position Switch

Activation Device N.O. Dry Contacts
Disabled when optional 3 position switch is in Off position

Multiple activation devices should be connected in parallel.
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.

**Certifications**
- Grade 1 - A156.19, UL325, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act

**Handing**
- Non-Handed

**Door Width**
- 30” - 48”
- 30” minimum door width for 27”
- 36” door width only for full length pull operator

**Warranty**
- 2 years

**Cover**
- Metal 27”, standard
- Metal 36”, optional

**Fasteners**
- Wood and machine screws

**Mounting**
- Single interior door, surface mount, offset pivot / butt hinge (Pull Side)

**Arms**
- Standard arm and track

**Finishes/Colors/Powder Coat**
- Anodized aluminum, standard
- Dark bronze, optional

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

Table of Contents
Top Jamb Single Door Mounting

Mounting details

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

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

<table>
<thead>
<tr>
<th>Butt Hinges</th>
<th>Should not exceed 5&quot; (127 mm) in width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reveal</td>
<td>Should not exceed 1/8&quot; (3 mm)</td>
</tr>
<tr>
<td>Head Frame</td>
<td>Minimum 2&quot; (51 mm)</td>
</tr>
<tr>
<td>Top Rail</td>
<td>Minimum 2&quot; (51 mm)</td>
</tr>
<tr>
<td>Opening and Closing Time</td>
<td>Variable by adjustments to the electronic control module located on the operator assembly</td>
</tr>
<tr>
<td></td>
<td>Maximum hold open time adjustable up to approximately 30 seconds</td>
</tr>
<tr>
<td>System Diagram</td>
<td>See “AUTOMATIC OPERATORS” section page 51 for typical system wiring and page 53 for electrical data</td>
</tr>
<tr>
<td>Maximum Opening</td>
<td>Template allows 90 degree power opening and 90 degree manual opening</td>
</tr>
</tbody>
</table>

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
### Accessories

#### Motor Gearbox

9130-3454
Motor Gearbox Assembly
- Driving mechanism for operator (switch included)
- For 27” unit

9130-3454S
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

Door width

<table>
<thead>
<tr>
<th>30”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td>762mm</td>
<td>1219mm</td>
</tr>
</tbody>
</table>

9131

Minimum door width

Indicates recommended range of door width for operator.

NOTE: For All Benchmark Series.

30” minimum door width for 27” pull operator.

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

### Certifications
- Grade 1 - ANSI A156.19, UL325/228, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act

### Handing
- Non-Handed

### Door Width
- 26” - 48”
- 26” minimum door width for 27”
- 36” door width only for full length pull operator

### Warranty
- 2 years

### Fasteners
- Wood and machine screws

### Mounting
- Single interior door, surface mount, offset pivot / butt hinge (Push Side)

### Arms
- Regular arm

### Finishes/Colors/
- Powder Coat
  - Anodized aluminum, standard
  - Dark bronze, optional

### Special Templates
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.
Top Jamb Single Door Mounting

**Butt Hinges**
- Should not exceed 5” (127 mm) in width

**Reveal**
- Push installations should not exceed 6” (152 mm) for REGULAR ARM and 9-3/4” (248 mm) for LONG ARM

**Head Frame**
- Minimum 2” (51 mm)

**Top Rail**
- Minimum 2” (51 mm)
- Flush ceiling installation requires 5-1/4” (133 mm) minimum

**Opening and Closing Time**
- Variable by adjustments to the electronic control module located on the operator assembly
- Maximum hold open time adjustable up to approximately 30 seconds

**System Diagram**
- See "AUTOMATIC OPERATORS" section pages 54 for typical system wiring and page 55 for electrical data

**Maximum Opening**
- Template allows 90 degree power opening and 90 degree manual opening

**Notes:**
- Push ‘N Go permits non-switch activation with a microprocessor control box that ensures reliability and maintains customer settings
- Power boost allows for increased closing force near latch
- On/off switch is included as standard
- All potentiometers are clearly labeled with their functions
- LED lights indicate power to control box and motor gearbox
# 9140 Series Benchmark Accessories

## Motor Gearbox

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>9140-3454S</td>
<td>Motor Gearbox Assembly (W/O Switch)</td>
<td>Driving mechanism for operator (switch not included), For 27” unit</td>
</tr>
</tbody>
</table>

## Control Box

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>9130-3462</td>
<td>Control Box (120v)</td>
<td>Electronic controlling device with power supply output and power boost feature for Benchmark</td>
</tr>
</tbody>
</table>

## Brackets

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>9140-3018</td>
<td>Mounting bracket</td>
<td>Standard</td>
</tr>
<tr>
<td>9140-3351-1</td>
<td>Switch Bracket</td>
<td>29” cable, Used with a 36” door, Used to locate switch at end of cover on full length unit</td>
</tr>
</tbody>
</table>

## Covers

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>9140-72MC</td>
<td>Metal Cover</td>
<td>Non-handed, 27”, Extruded aluminum cover, Standard</td>
</tr>
<tr>
<td>9140-72FC</td>
<td>Full Metal Cover</td>
<td>Non-handed, 36”, Extruded aluminum cover</td>
</tr>
<tr>
<td>9140-163</td>
<td>Cover Insert</td>
<td>Used to cover operator shaft opening (includes 2 pieces)</td>
</tr>
<tr>
<td>9140-163-1</td>
<td>Cover End Cap Insert</td>
<td>Used to cover switch hole opening</td>
</tr>
<tr>
<td>9140-334</td>
<td>Cover End Cap</td>
<td>Black plastic, Includes 9130-163-1 cover and cap insert</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Door width</th>
<th>26”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td>660mm</td>
<td></td>
<td>1219mm</td>
</tr>
</tbody>
</table>

9142
Minimum door width

Indicates recommended range of door width for operator.

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

<table>
<thead>
<tr>
<th>Certifications</th>
<th>Grade 1 - ANSI A156.19, UL325/228 ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handing</td>
<td>Non-Handed</td>
</tr>
<tr>
<td>Templating</td>
<td>Peel-n-Stick templates - 2-3/8” x 6-3/4” Mounting Hole Pattern</td>
</tr>
</tbody>
</table>
| Door Width             | Minimum door width 52” - 96” 
|                        | 72” door width only for full length double operator                                         |
| Warranty               | 2 years                                                                                      |
| Cover                  | Metal, standard                                                                             |
| Fasteners              | Wood and machine screws                                                                      |
| Mounting               | Pair of doors, surface mount, offset pivot / butt hinges (Push Side)                         |
| Arms                   | Regular arms                                                                                 |
| Finishes/Colors/Powder Coat | Anodized aluminum, standard       
|                         | Dark bronze, optional                                                                        |

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

Features
**Offset pivot/butt hinge, center pivot, push**

**Butt Hinges**
Should not exceed 5” (127 mm) in width

**Reveal**
Push installations should not exceed 6” (152 mm) for REGULAR ARM and 9-3/4” (248 mm) for LONG ARM

**Head Frame**
Minimum 2” (51 mm)

**Top Rail**
- Minimum 2” (51 mm)
- Flush ceiling installation requires 5-1/4” (133 mm) minimum

**Opening and Closing Time**
- Variable by adjustments to the electronic control module located on the operator assembly
- Maximum hold open time adjustable up to approximately 32 seconds

**System Diagram**
See "AUTOMATIC OPERATORS" section pages 54 for typical system wiring and page 55 for electrical data

**Maximum Opening**
Template allows 90 degree power opening and 90 degree manual opening

**Notes:**
- Determined by wiring
- Push N’ Go permits non-switch activation with a microprocessor control box that ensures reliability and maintains customer settings
- Power boost allows for increased closing force near latch
- All potentiometers clearly labeled with their functions
- LED lights indicate power to control box and motor gearbox
<table>
<thead>
<tr>
<th><strong>Motor Gearbox</strong></th>
<th><strong>Control Box</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>9150-3454S Motor Gearbox Assembly</td>
<td>9150-3462 Control Box (120v)</td>
</tr>
<tr>
<td>■ Driving mechanism for operator (switch included)</td>
<td>■ Electronic controlling device with power supply output and power boost feature for Benchmark</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Brackets</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>9150-3018 Mounting Bracket</td>
</tr>
<tr>
<td>■ Standard</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Covers</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>9150-72MC Metal Cover</td>
</tr>
<tr>
<td>■ Non-handed</td>
</tr>
<tr>
<td>■ 72˝</td>
</tr>
<tr>
<td>■ Extruded aluminum cover</td>
</tr>
<tr>
<td>■ Standard</td>
</tr>
<tr>
<td>9150-163 Cover Insert</td>
</tr>
<tr>
<td>■ Used to cover operator shaft opening (includes 2 pieces)</td>
</tr>
<tr>
<td>9150-163-1 Cover End Cap Insert</td>
</tr>
<tr>
<td>■ Used to cover switch hole opening</td>
</tr>
<tr>
<td>9150-334 Cover End Cap</td>
</tr>
<tr>
<td>■ Black plastic</td>
</tr>
<tr>
<td>■ Includes 9130-163-1 cover and cap insert</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Arms</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>9150-3077 Regular arm</td>
</tr>
<tr>
<td>■ Non-handed</td>
</tr>
<tr>
<td>9150-3077L Long arm</td>
</tr>
<tr>
<td>■ Non-handed</td>
</tr>
<tr>
<td>9150-79 Rod and shoe</td>
</tr>
<tr>
<td>■ For use with regular arm</td>
</tr>
<tr>
<td>9150-79LR Long rod and shoe</td>
</tr>
<tr>
<td>■ Used with long arm, for deep reveals</td>
</tr>
</tbody>
</table>
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

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.

**Certifications**
- Grade 1 - ANSI A156.19, UL325, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act

**Floor Width**
- Minimum door width 33” - 48” with finger guard.
  - Note: Single door width per leaf 33” minimum, 48” maximum

**Warranty**
- 2 years

**Fasteners**
- Wood and machine screws

**Mounting**
- Single door, overhead concealed, center pivot, offset pivot, butt hinge

**Arms**
- Center Pivot Arm or Offset Pivot Arm

**Finishes/Colors/Powder Coat**
- Anodized Aluminum
- Anodized Dark Bronze

---

**Special Templates**
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.
Concealed Single Door Mounting

Mounting details

2810 Series Senior Swing

Head Frame
Minimum 36” (L) x 5-3/4” (H) x 4-1/2” (W) (914 mm x 146 mm x 114 mm)

Top Rail
Minimum 2” (51 mm)

Opening and Closing Time
- Variable by adjustments to the electronic control box
- Maximum hold open time adjustable up to approximately 32 seconds

System Diagram
See “AUTOMATIC OPERATORS” section page 51 for typical system wiring and page 53 for electrical data

Maximum Opening
Template allows 90 degree power opening and 90 degree manual opening

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
Concealed Single Door Mounting

Head Frame Minimum 33” (L) x 5-3/4” (H) x 4-1/2” (W) (838 mm x 146 mm x 114 mm)

Top Rail Minimum 2” (51 mm)

Opening and Closing Time  Variable by adjustments to the electronic control box
Maximum hold open time adjustable up to approximately 32 seconds

System Diagram See “AUTOMATIC OPERATORS” section page 51 for typical system wiring and page 53 for electrical data

Maximum Opening Template allows 90 degree power opening and 90 degree manual opening

- Minimum header length 33”
- Installations require bottom pivot and two intermediate pivots

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

Outlet pivot or butt hinge, slide arm, push

Table of Contents
2810 Series Senior Swing

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

- 2810-334 Header End Caps
  - Wth 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

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2810-3072</td>
<td>Concealing Channel</td>
</tr>
<tr>
<td></td>
<td>- Used to conceal arm in overhead concealed applications</td>
</tr>
<tr>
<td></td>
<td>- For offset pivot installations only</td>
</tr>
<tr>
<td></td>
<td>- If ordering separately specify length and hand</td>
</tr>
<tr>
<td>2810-168</td>
<td>Slide channel</td>
</tr>
<tr>
<td></td>
<td>- Offset pivot or butt hinge installations only</td>
</tr>
<tr>
<td></td>
<td>- Mounts in top rail of door</td>
</tr>
<tr>
<td></td>
<td>- Allows arm to slide</td>
</tr>
</tbody>
</table>

### Installation Accessories

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2810-384B</td>
<td>Door Stop Breakaway</td>
</tr>
<tr>
<td></td>
<td>- Allows in-swinging door to swing out in case of emergency</td>
</tr>
<tr>
<td></td>
<td>- Disables operator in breakaway mode</td>
</tr>
<tr>
<td></td>
<td>- For center pivoted installations only</td>
</tr>
<tr>
<td>2810-384F</td>
<td>Door Stop Fixed</td>
</tr>
<tr>
<td></td>
<td>- Prevents out-swinging door from swinging in</td>
</tr>
<tr>
<td></td>
<td>- For center pivoted installations only</td>
</tr>
</tbody>
</table>

### Pivots

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2810-107</td>
<td>Bottom Pivot Assembly</td>
</tr>
<tr>
<td></td>
<td>- Includes pivot body, pivot post and bottom pivot plate</td>
</tr>
<tr>
<td></td>
<td>- For overhead concealed, center pivoted installations</td>
</tr>
<tr>
<td></td>
<td>- Includes; 2810-107, 2810-110 and 2810-117</td>
</tr>
<tr>
<td>2810-107</td>
<td>Bottom Pivot Body</td>
</tr>
<tr>
<td></td>
<td>- For center pivoted installations</td>
</tr>
<tr>
<td>2810-117</td>
<td>Bottom Pivot Plate</td>
</tr>
<tr>
<td></td>
<td>- Applies to floor for center pivoted installations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2810-110</td>
<td>Pivot Post</td>
</tr>
<tr>
<td></td>
<td>- Connects pivot body to bottom pivot plate for center pivoted installations</td>
</tr>
<tr>
<td>2810-11B</td>
<td>Spindle Plate</td>
</tr>
<tr>
<td></td>
<td>- Hides bottom of motor gearbox</td>
</tr>
<tr>
<td></td>
<td>- Completes header box</td>
</tr>
<tr>
<td></td>
<td>- Cutout allows for motor gearbox shaft</td>
</tr>
<tr>
<td></td>
<td>- For 3-3/4” offset pivot, butt hinge or center pivot with finger guard installations</td>
</tr>
<tr>
<td>2810-11A</td>
<td>Spindle Plate</td>
</tr>
<tr>
<td></td>
<td>- Hides bottom of motor gearbox</td>
</tr>
<tr>
<td></td>
<td>- Completes header box</td>
</tr>
<tr>
<td></td>
<td>- Cutout allows for motor gearbox shaft</td>
</tr>
<tr>
<td></td>
<td>- For 2-3/4” center pivot installations</td>
</tr>
</tbody>
</table>
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 options

Stops

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

*Available with Center Pivoted installations only

Table of sizes

<table>
<thead>
<tr>
<th>Door width</th>
<th>33”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>838mm</td>
<td>1219mm</td>
</tr>
</tbody>
</table>

2811

Minimum door width

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.

| Certifications | Grade 1 - ANSI A156.19, UL325, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act |
| Fluid | All Weather Fluid |
| Handing | Handed |
| Door Width | Combined width min 52” - 96” Simultaneous pair - width per leaf 26” minimum to 48” maximum |
| Warranty | 2 years |

| Fasteners | Wood and machine screw pack |
| Mounting | Double door, overhead concealed, center pivot, offset pivot, butt hinge |
| Arms | Offset Pivot Arm or Center Pivot Arm |
| Finishes/Colors/ Powder Coat | Anodized Aluminum Anodized Dark Bronze |

Special Templates

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

Features

| 2850 Series Senior Swing |

<table>
<thead>
<tr>
<th>MOUNTING</th>
<th>HANDING</th>
<th>FINISH</th>
<th>COVER</th>
<th>ARM FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SURFACE MOUNT SINGLE DOOR</td>
<td>CONCEALED SINGLE DOOR</td>
<td>STANDARD ANODIZED</td>
<td>REGULAR (DOUBLE LEVER) OFFSET PIVOT BUTT HINGE ARM</td>
<td></td>
</tr>
<tr>
<td>SURFACE MOUNT SIMULTANEOUS PAIR</td>
<td>CONCEALED SIMULTANEOUS PAIR</td>
<td>STANDARD (SINGLE LEVER)</td>
<td>DOUBLE EGRESS (PUSH/PULL) CENTER PIVOT ARM</td>
<td></td>
</tr>
<tr>
<td>CONCEALED SINGLE DOOR</td>
<td>HANDED</td>
<td>METAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONCEALED SIMULTANEOUS PAIR</td>
<td>NON-HANDED</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* For double egress only.
Concealed Simultaneous Pair

Mounting details

Head Frame  Minimum 52” (L) x 5-3/4” (H) x 4-1/2” (W) (1524 mm x 146 mm x 114 mm)

Top Rail     Minimum 2” (51 mm)

Opening and Closing Time
- Variable by adjustments to the electronic control box
- Maximum hold open time adjustable up to approximately 32 seconds.

System Diagram  See “AUTOMATIC OPERATORS” section page 51 for typical system wiring and page 53 for electrical data

Maximum Opening 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

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

Center pivot, fixed stop, push
Shown w/ 3-3/4” pivot
Mounting details

Concealed Simultaneous Pair

Offset pivot or butt hinge, slide arm, push

Shown w/ 3-3/4” pivot

---

**Head Frame**
Minimum 52” (L) x 5-3/4” (H) x 4-1/2” (W) (1524 mm x 146 mm x 114 mm)

**Top Rail**
Minimum 2” (51 mm)

**Opening and Closing Time**
- Variable by adjustments to the electronic control box
- Maximum hold open time adjustable up to approximately 32 seconds

**System Diagram**
See “AUTOMATIC OPERATORS” section page 51 for typical system wiring and page 53 for electrical data

**Maximum Opening**
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
## Accessories

### Motor Gearbox

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2850-3454</td>
<td>Motor Gearbox</td>
</tr>
</tbody>
</table>
- Senior swing
- Driving mechanism for operator
- Provides maximum 15 lbs opening force
- Handed

### Mount Brackets

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2850-375</td>
<td>Mounting Bracket</td>
</tr>
</tbody>
</table>
- Motor gearbox mounting bracket for 3-3/4” offset pivot, butt hinge or center pivot with finger guard installations
- Front bracket

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2850-275</td>
<td>Mounting Bracket</td>
</tr>
</tbody>
</table>
- Motor gearbox mounting bracket for 2-3/4” center pivot installations
- Front bracket

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2850-3018</td>
<td>Rear Mounting Bracket</td>
</tr>
</tbody>
</table>
- Motor gearbox mounting bracket
- Rear bracket

### Control Box

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2850-3462</td>
<td>Control box</td>
</tr>
</tbody>
</table>
- Senior swing
- Electronic controlling device for Senior Swing

### Header

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2850-3572HL</td>
<td>Header</td>
</tr>
</tbody>
</table>
- Mounting header
- Pair door, two operators
- Specify length 52” to 98” maximum
- Standard

### End Cap

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2850-334</td>
<td>Header End Caps</td>
</tr>
</tbody>
</table>
- End cap with openings for wiring

### Arms

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2850-3077CP</td>
<td>Center pivot arm</td>
</tr>
</tbody>
</table>
- Center pivot installations only
- Used with overhead concealed operators and center pivoted doors

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2850-3077OP</td>
<td>Offset pivot arm</td>
</tr>
</tbody>
</table>
- Offset pivot or butt hung installations only
- Handed
- Used with overhead concealed operators

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2850-3077OPCM</td>
<td>Offset Pivot Arm Assembly</td>
</tr>
</tbody>
</table>
- 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

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

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

2850-12
Filler Plate Blank
- Completes length of header box

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

2850-110
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

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
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 96”)

Specify finish
☐ Standard Anodized Finish ____________
   Aluminum or Dark Bronze

Operator options

Stops*
☐ Pair Positive Mechanical Stop (POS)
☐ Pair Panic Breakaway Stop (BKY)
*Available with Center Pivoted installations only

Table of sizes

<table>
<thead>
<tr>
<th>Door width</th>
<th>52”</th>
<th>96”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1324mm</td>
<td>2438mm</td>
</tr>
</tbody>
</table>

2853
Minimum door width

Indicates recommended range of door width for operator.

NOTE: For all Senior Swing Series
Simultaneous Pair – Width per leaf 26” minimum to 48” maximum.
The 2860 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.

<table>
<thead>
<tr>
<th>Certifications</th>
<th>Grade 1 - ANSI A156.19, UL325/228, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handing</td>
<td>Handed</td>
</tr>
<tr>
<td>Door Width</td>
<td>Minimum combined door with 52” - 96”</td>
</tr>
<tr>
<td></td>
<td>Simultaneous pair - width per leaf 26” minimum to 48” maximum</td>
</tr>
<tr>
<td>Warranty</td>
<td>2 years</td>
</tr>
</tbody>
</table>

| Fasteners       | Wood and machine screw packs                                                                       |
| Mounting        | Independent pair, overhead concealed, center pivot, offset pivot, butt hinge                       |
| Arms            | Offset Pivot Arm or Center Pivot Arm                                                                 |
| Finishes/Colors/Powder Coat | Anodized Aluminum                                  |
|                 | Anodized Dark Bronze                                |

**Special Templates**

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

**Features**

<table>
<thead>
<tr>
<th>MOUNTING</th>
<th>HANDING</th>
<th>FINISH</th>
<th>COVER</th>
<th>ARM FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Mount Single Door</td>
<td>Handed</td>
<td>Standard (Single Lever)</td>
<td>Regular (Double Egress/Push/Pull)</td>
<td>Offset Pivot Butt Hinge Arm</td>
</tr>
<tr>
<td>Surface Mount Simultaneous Pair</td>
<td>Handed+</td>
<td>Standard Anodized</td>
<td>Standard</td>
<td>Center Pivot Arm</td>
</tr>
<tr>
<td>Surface Mount</td>
<td>Standard</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concealed Single Door</td>
<td>Non-Handed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concealed Simultaneous Pair</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concealed Independent Pair</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* For double egress only.
**Head Frame**
Minimum 65” (L) x 5 3/4” (H) x 4 1/2” (W) (1651 mm x 146 mm x 114 mm)

**Top Rail**
Minimum 2” (51 mm)

**Opening and Closing Time**
- Variable by adjustments to the electronic control box
- Maximum hold open time adjustable up to approximately 32 seconds.

**System Diagram**
See “AUTOMATIC OPERATORS” section page 51 for typical system wiring and page 53 for electrical data

**Maximum Opening**
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
**Mounting details**

**Concealed Independent Pair**

**Head Frame**
Minimum 65” (L) x 5-3/4” (H) x 4-1/2” (W) (1651 mm x 146 mm x 114 mm)

**Top Rail**
Minimum 2” (51 mm)

**Opening and Closing Time**
- Variable by adjustments to the electronic control box
- Maximum hold open time adjustable up to approximately 32 seconds

**System Diagram**
See “AUTOMATIC OPERATORS” section page 51 for typical system wiring and page 53 for electrical data

**Maximum Opening**
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

---

**Offset pivot/butt hinge, push**

**Head Frame**
Minimum 65” (L) x 5-3/4” (H) x 4-1/2” (W) (1651 mm x 146 mm x 114 mm)

**Top Rail**
Minimum 2” (51 mm)

**Opening and Closing Time**
- Variable by adjustments to the electronic control box
- Maximum hold open time adjustable up to approximately 32 seconds

**System Diagram**
See “AUTOMATIC OPERATORS” section page 51 for typical system wiring and page 53 for electrical data

**Maximum Opening**
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- Header lengths 70” - 98” max with either POS or BKY
- Adjustable hold time of 1-32 seconds
- Actuators available separately, see pages 115-131

---

**Table of Contents**

LCN Door Control Catalog

LCN®
2860 Series Senior Swing

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 30770P offset pivot arm
## Accessory Components

### Channels

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2860-3072</td>
<td><strong>Concealing Channel</strong>&lt;br&gt;Used to conceal arm in overhead concealed applications&lt;br&gt;For offset pivot installations only&lt;br&gt;If ordering separately specify length and hand</td>
</tr>
<tr>
<td>2860-168</td>
<td><strong>Slide Channel</strong>&lt;br&gt;Offset pivot or butt hinge installations only&lt;br&gt;Mounts in top rail of door&lt;br&gt;Allows arm to slide</td>
</tr>
</tbody>
</table>

### Installation Accessories

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2860-384B</td>
<td><strong>Door Stop Breakaway</strong>&lt;br&gt;Allows in-swinging door to swing out in case of emergency&lt;br&gt;For center pivoted installations only</td>
</tr>
<tr>
<td>2860-384F</td>
<td><strong>Door Stop Fixed</strong>&lt;br&gt;Prevents out-swinging door from swinging in&lt;br&gt;For center pivoted installations only</td>
</tr>
</tbody>
</table>

### Pivots

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2860-3107</td>
<td><strong>Bottom Pivot Assembly</strong>&lt;br&gt;Includes pivot body, pivot post and bottom pivot plate&lt;br&gt;For overhead concealed, center pivoted installations&lt;br&gt;Includes: 2860-107, 2860-110 and 2860-117</td>
</tr>
<tr>
<td>2860-107</td>
<td><strong>Bottom Pivot Body</strong>&lt;br&gt;Pivot body for center pivoted installations</td>
</tr>
<tr>
<td>2860-110</td>
<td><strong>Pivot Post</strong>&lt;br&gt;Connects pivot body to bottom pivot plate for center pivoted installations</td>
</tr>
<tr>
<td>2860-117</td>
<td><strong>Bottom Pivot Plate</strong>&lt;br&gt;Applied to floor for center pivoted installations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2860-12</td>
<td><strong>Filler Plate Blank</strong>&lt;br&gt;Completes length of header box</td>
</tr>
<tr>
<td>2860-11A</td>
<td><strong>Spindle Plate</strong>&lt;br&gt;Hides bottom of motor gearbox&lt;br&gt;Completes header box&lt;br&gt;Cutout allows for motor gearbox shaft&lt;br&gt;For 2-3/4″ center pivot installations</td>
</tr>
<tr>
<td>2860-11B</td>
<td><strong>Spindle Plate</strong>&lt;br&gt;Hides bottom of motor gearbox&lt;br&gt;Completes header box&lt;br&gt;Cutout allows for motor gearbox shaft&lt;br&gt;For 3-3/4″ offset pivot, butt hinge or center pivot with finger guard installations</td>
</tr>
</tbody>
</table>
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 options

Stops*
☐ Pair Positive Mechanical Stop (POS)
☐ Pair Panic Breakaway Stop (BKY)
*Available with Center Pivoted installations only

Table of sizes

<table>
<thead>
<tr>
<th>Door width</th>
<th>65” 1651mm</th>
<th>96” 2438mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum door width</td>
<td>2863</td>
<td></td>
</tr>
</tbody>
</table>

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.

| Certifications | Grade 1 - ANSI A156.19, UL325/22B, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act |
| Fluid          | All Weather Fluid |
| Handing        | Handed |
| Door Width     | Minimum 33” - 48” |
|                | Single door - width per leaf 33” minimum, 48” maximum |
| Warranty       | 2 years |

| Fasteners      | Machine screw pack |
| Mounting       | Single door, surface mount, offset pivot. butt hinge, pull side |
| Arms           | Standard arm (3077T) |
| Finishes/Colors/Powder Coat | Anodized Aluminum |
|                | Anodized Dark Bronze |

**Features**

**Special Templates** Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.
Top Jamb Single Door Mounting

Butt Hinges
Should not exceed 5” (127 mm) in width

Reveal
Should not exceed 4” (102 mm)

Head Frame
Minimum 1-3/4” (44 mm). Face frame 6-3/4” (171 mm) total operator clearance

Top Rail
Minimum 2-3/4” (70 mm)

Opening and Closing Time
- Variable by adjustments to the electronic control box
- Maximum hold open time adjustable up to approximately 32 seconds

System Diagram
See “AUTOMATIC OPERATORS” section page 51 for typical system wiring and page 53 for electrical data

Maximum Opening
Template allows 90 degree power opening and 90 degree manual opening

Notes:
- Push N’ Go permits non-switch activation with a 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

Offset pivot/butt hinge, center pivot, pull

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

**Hollow metal frame**

*Suggested installation.*
# 9530 Series Senior Swing Accessories

## Motor Gearbox

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9530-3454</td>
<td>Motor Gearbox</td>
</tr>
<tr>
<td></td>
<td>- Senior swing</td>
</tr>
<tr>
<td></td>
<td>- Handed</td>
</tr>
<tr>
<td></td>
<td>- Driving mechanism for operator</td>
</tr>
<tr>
<td></td>
<td>- Provides maximum 15 lbs opening force</td>
</tr>
</tbody>
</table>

## Mount Brackets

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9530-275</td>
<td>Mounting Bracket</td>
</tr>
<tr>
<td></td>
<td>- Motor gearbox mounting bracket for 2-3/4” offset pivot or butt hinge installations</td>
</tr>
<tr>
<td></td>
<td>- Front bracket</td>
</tr>
<tr>
<td>9530-3018</td>
<td>Rear Mounting Bracket</td>
</tr>
<tr>
<td></td>
<td>- Motor gearbox mounting bracket</td>
</tr>
<tr>
<td></td>
<td>- Rear bracket</td>
</tr>
<tr>
<td>9530-334-1</td>
<td>Angled Bracket</td>
</tr>
<tr>
<td></td>
<td>- Mounting bracket for surface applications (includes 2 mounting brackets)</td>
</tr>
</tbody>
</table>

## Control Box

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9530-3462</td>
<td>Control Box</td>
</tr>
<tr>
<td></td>
<td>- Electronic controlling device for Senior Swing</td>
</tr>
</tbody>
</table>

## Headers

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9530-3572HL</td>
<td>Header</td>
</tr>
<tr>
<td></td>
<td>- Standard</td>
</tr>
<tr>
<td></td>
<td>- Single door, single operator</td>
</tr>
<tr>
<td></td>
<td>- Specify length 33” to 48” maximum</td>
</tr>
<tr>
<td>9530-3572DD</td>
<td>Header</td>
</tr>
<tr>
<td></td>
<td>- Standard</td>
</tr>
<tr>
<td></td>
<td>- Double door, single operator</td>
</tr>
<tr>
<td></td>
<td>- Specify length 49” to 98” maximum</td>
</tr>
</tbody>
</table>

## End Caps

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9530-334</td>
<td>Header End Caps</td>
</tr>
<tr>
<td></td>
<td>- With openings for wiring</td>
</tr>
<tr>
<td>9530-334-2</td>
<td>End Dress Plate</td>
</tr>
<tr>
<td></td>
<td>- Metal finish end cap</td>
</tr>
</tbody>
</table>
### Arms

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>9530-3077PLCM</td>
<td>Standard Arm Assembly</td>
<td>Handed, Track roller included (includes 3038, 3077T, 3034 &amp; 73)</td>
</tr>
<tr>
<td>9530-3077T</td>
<td>Standard Arm</td>
<td>Handed, Track roller not included</td>
</tr>
</tbody>
</table>

### Tracks

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>9530-3038</td>
<td>Track</td>
<td>Non-handed, Includes 3034 &amp; 73</td>
</tr>
<tr>
<td>9530-73</td>
<td>Track End Cap</td>
<td>Black plastic end caps</td>
</tr>
<tr>
<td>9530-3034</td>
<td>Roller</td>
<td>Quiet low friction roller assembly</td>
</tr>
</tbody>
</table>

### Installation Assembly

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>9530-11A</td>
<td>Spindle Plate</td>
<td>Hides bottom of motor gearbox, Completes header box, Cutout allows for motor gearbox shaft, For 2-3/4” offset pivot or butt hinge installations</td>
</tr>
<tr>
<td>9530-12</td>
<td>Filler</td>
<td>Plate blank, Completes length of header box (specify Length)</td>
</tr>
<tr>
<td>9530-18</td>
<td>Mounting Plate</td>
<td>Optional mounting plate for standard hollow metal door frames, Specify length 36-1/2” to 101-1/2” maximum, when using angle brackets, Specify length 33” to 98” maximum when using end dress plates</td>
</tr>
</tbody>
</table>

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 options

Mounting plate
- Plate __ (Specify Length 33” to 101-1/2”)

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

Table of sizes

<table>
<thead>
<tr>
<th>Door width</th>
<th>Minimum door width</th>
</tr>
</thead>
<tbody>
<tr>
<td>33”</td>
<td>838mm</td>
</tr>
<tr>
<td>48”</td>
<td>1219mm</td>
</tr>
</tbody>
</table>

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.

**Certifications**
Grade 1 - ANSI A156.19, UL325/22B, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act

**Fluid**
All Weather Fluid

**Handing**
Handed

**Door Width**
- Minimum door width 33” - 48”
- Single door - width per leaf 33” minimum, 48” maximum

**Warranty**
2 years

**Fasteners**
Machine screw pack

**Mounting**
Single door, surface mount, offset pivot, butt hinge (Push Side)

**Arms**
Regular Arm (3077)

**Finishes/Colors/Powder Coat**
- Anodized Aluminum
- Anodized Dark Bronze

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

Butt Hinges
Should not exceed 5" (127 mm) in width

Reveal
push installations should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM

Head Frame
Minimum 1-3/4" (44 mm). Face frame 6-3/4" (171 mm) total operator clearance

Top Rail
Minimum 2-3/4" (70 mm)

Opening and Closing Time
- Variable by adjustments to the electronic control box
- Maximum hold open time adjustable up to approximately 32 seconds

System Diagram
See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data

Maximum Opening
Template allows 90 degree power opening and 90 degree manual opening

Notes:
- Push N’ Go permits non-switch activation with a 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
### Accessories

#### 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
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
- HE ___ (Specify length 33˝ to 48˝)
- DD ___ (Specify length 49˝ to 98˝)

Specify finish
- Standard Anodized Finish ____________
  Aluminum or Dark Bronze

Operator options

Mounting plate
- Plate ____ (Specify Length 33˝ to 101-1/2˝)

Arm
- Long Arm (3077L)

Table of sizes

<table>
<thead>
<tr>
<th>Door width</th>
<th>33˝</th>
<th>48˝</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>838mm</td>
<td>1219mm</td>
</tr>
</tbody>
</table>

9542 Minimum door width

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.

### Certifications
- Grade 1 - ANSI A156.19, UL325/228, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act

### Handing
- Handed

### Door Width
- Minimum combined door width 52” - 98” (push)
- Minimum combined door width 60” - 98” (pull; double egress)
- Simultaneous pair - width per leaf 30” minimum - 48” maximum

### Warranty
- 2 years

### Fasteners
- Machine screw pack

### Mounting
- Simultaneous pair, surface mount, pull side, push side, double egress

### Arms
- 2 Regular Arms (push)
- 2 Standard Arms (pull)
- 1 Regular and 1 Standard (double egress)

### Finishes/Colors/Powder Coat
- Anodized Aluminum
- Anodized Dark Bronze

---

**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.

**Butt Hinges**
Should not exceed 5” (127 mm) in width

**Reveal for push**
Should not exceed 10” (254 mm) for REGULAR ARM and 20” (508 mm) for LONG ARM

**Reveal for pull**
Should not exceed 4” (102 mm)

**Reveal**
Double egress installations should not exceed 4” (102 mm)

**Head Frame**
- Minimum 1-3/4” (44 mm)
- Face frame 6-3/4” (171 mm) total operator clearance

**Top Rail**
Minimum 2-3/4” (70 mm)

**Opening and Closing Time**
- Variable by adjustments to the electronic control box
- Maximum hold open time adjustable up to approximately 32 seconds.

**System Diagram**
See “AUTOMATIC OPERATORS” section page 51 for typical system wiring and page 53 for electrical data

**Maximum Opening**
Template allows 90 degree power opening and 90 degree manual opening

**Notes:**
- Push N’ Go permits non-switch activation with a 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.

---

**Butt Hinges**
Should not exceed 5” (127 mm) in width.

**Reveal for push**
Should not exceed 10” (254 mm) for REGULAR ARM and 20” (508 mm) for LONG ARM.

**Reveal for pull**
Should not exceed 4” (102 mm).

**Reveal**
Double egress installations should not exceed 4” (102 mm).

**Head Frame**
- Minimum 1-3/4” (44 mm)
- Face frame 6-3/4” (171 mm) total operator clearance

**Top Rail**
Minimum 2-3/4” (70 mm).

**Opening and Closing Time**
- Variable by adjustments to the electronic control box
- Maximum hold open time adjustable up to approximately 32 seconds.

**System Diagram**
See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data.

**Maximum Opening**
Template allows 90 degree power opening and 90 degree manual opening.

---

Notes:
- Push N’ Go permits non-switch activation with a 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

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9550-3454</td>
<td>Motor Gearbox</td>
</tr>
<tr>
<td></td>
<td>- Senior swing</td>
</tr>
<tr>
<td></td>
<td>- Handed</td>
</tr>
<tr>
<td></td>
<td>- Driving mechanism for operator</td>
</tr>
<tr>
<td></td>
<td>- Provides maximum 15 lbs opening force</td>
</tr>
</tbody>
</table>

#### Mount Brackets

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9550-275</td>
<td>Mounting Bracket</td>
</tr>
<tr>
<td></td>
<td>- Motor gearbox mounting bracket for 2-3/4” offset pivot or butt hinge installations</td>
</tr>
<tr>
<td>9550-3018</td>
<td>Rear Mounting Bracket</td>
</tr>
<tr>
<td></td>
<td>- Motor gearbox mounting bracket</td>
</tr>
<tr>
<td>9550-334-1</td>
<td>Angled Bracket</td>
</tr>
<tr>
<td></td>
<td>- Mounting bracket for surface applications (includes 2 mounting brackets)</td>
</tr>
</tbody>
</table>

#### Control Box

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9550-3462</td>
<td>Control Box</td>
</tr>
<tr>
<td></td>
<td>- Electronic controlling device for Senior Swing</td>
</tr>
</tbody>
</table>

#### Header

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9550-982</td>
<td>Companion Cable</td>
</tr>
<tr>
<td></td>
<td>- Cable that allows one control box to run two motor gear boxes</td>
</tr>
<tr>
<td></td>
<td>- For use with Senior Swing</td>
</tr>
<tr>
<td>9550-3572HL</td>
<td>Header</td>
</tr>
<tr>
<td></td>
<td>- Pair door, two operators</td>
</tr>
<tr>
<td></td>
<td>- Specify other length 52” to 98” (Push)</td>
</tr>
<tr>
<td></td>
<td>- Specify other length 60” to 98” (Pull; Double Egress)</td>
</tr>
<tr>
<td></td>
<td>- Standard</td>
</tr>
</tbody>
</table>

#### End Caps

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9550-334</td>
<td>Header End Caps</td>
</tr>
<tr>
<td></td>
<td>- With openings for wiring</td>
</tr>
<tr>
<td>9550-334-2</td>
<td>End Dress Plate</td>
</tr>
<tr>
<td></td>
<td>- Metal finish end cap</td>
</tr>
</tbody>
</table>
### Accessories

#### 9550-3038
- Track
  - Non-handed
  - Standard

#### 9550-73
- Track End Cap
  - Black plastic end caps

#### 9550-3034
- Roller
  - Quiet low friction roller assembly

#### 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

#### 9550-3038
- Track
  - Non-handed

#### 9550-73
- Track End Cap
  - Black plastic end caps

#### 9550-3034
- Roller
  - Quiet low friction roller assembly

#### 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

#### 9550-3038
- Track
  - Non-handed

#### 9550-73
- Track End Cap
  - Black plastic end caps

#### 9550-3034
- Roller
  - Quiet low friction roller assembly

#### 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

#### 9550-11A
- 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

<table>
<thead>
<tr>
<th>Combined door width</th>
</tr>
</thead>
<tbody>
<tr>
<td>52” (1321mm)</td>
</tr>
<tr>
<td>60” (1524mm)</td>
</tr>
<tr>
<td>98” (2489mm)</td>
</tr>
</tbody>
</table>

9550 (Push)
9550 (Pull; Double Egress)

Minimum door width

Indicates recommended range of door width for operator.

NOTE: For all Senior Swing Series.
Simultaneous Pair – Width per leaf 26” minimum (push) 30” minimum (pull) to 48” maximum.
The 9560 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

Certifications
Grade 1 - ANSI A156.19, UL325/228, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act

Handing
Handed

Warranty
2 years

Cover
Metal, Standard

Fasteners
Machine screw pack

Mounting
Independent pair, surface, pull, push, double egress

Arms
Single lever (push side), Double lever (Pull Side), Double egress (Push/Pull)

Finishes/Colors/
Powder Coat
- Anodized Aluminum
- Anodized Dark Bronze

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

**9560 Series Senior Swing**

#### 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.

---

**Butt Hinges**

Should not exceed 5” (127 mm) in width

**Reveal for push**

Should not exceed 10” (254 mm) for REGULAR ARM and 20” (508 mm) for LONG ARM

**Reveal for pull**

Should not exceed 4” (102 mm)

**Reveal**

Double egress installations should not exceed 4” (102 mm)

**Head Frame**

- Minimum 1-3/4” (44 mm)
- Face frame 6-3/4” (171 mm) total operator clearance

**Top Rail**

Minimum 2-3/4” (70 mm)

**Opening and Closing Time**

- Variable by adjustments to the electronic control box
- Maximum hold open time adjustable up to approximately 32 seconds.

**System Diagram**

See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data

**Maximum Opening**

Template allows 90 degree power opening and 90 degree manual opening

---

**Notes:**

- Push N’ Go permits non-switch activation with a 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.

Butt Hinges
Should not exceed 5" (127 mm) in width

Reveal for push
Should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM

Reveal for pull
Should not exceed 4" (102 mm)

Reveal
Double egress installations should not exceed 4" (102 mm)

Head Frame
- Minimum 1-3/4" (44 mm)
- Face frame 6-3/4" (171 mm) total operator clearance

Top Rail
Minimum 2-3/4" (70 mm)

Opening and Closing Time
- Variable by adjustments to the electronic control box
- Maximum hold open time adjustable up to approximately 32 seconds.

System Diagram
See “AUTOMATIC OPERATORS” section page 51 for typical system wiring and page 53 for electrical data

Maximum Opening
Template allows 90 degree power opening and 90 degree manual opening

Notes:
- Push N’ Go permits non-switch activation with a 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

<table>
<thead>
<tr>
<th>Motor Gearbox</th>
<th>Mounting Brackets</th>
<th>Control Box</th>
<th>Header</th>
<th>End Caps</th>
</tr>
</thead>
<tbody>
<tr>
<td>9560-3454 Motor Gearbox</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior swing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Handed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Driving mechanism for operator</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provides maximum 15 lbs opening force</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9560-275 Mounting Bracket</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9560-3018 Rear Mounting Bracket</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9560-334-1 Angled Bracket</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9560-3572HL Header End Caps</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9560-334-2 End Dress Plate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9560-3454 Motor Gearbox</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9560-275 Mounting Bracket</td>
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<td>9560-3018 Rear Mounting Bracket</td>
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<td>9560-334-1 Angled Bracket</td>
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<td>9560-3572HL Header</td>
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<td>9560-334-2 End Dress Plate</td>
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<td>9560-3572HL Header End Caps</td>
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<tr>
<td>9560-334-2 End Dress Plate</td>
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### Notes
- **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
- Includes 3077 regular arm assembly, 3038 track, and 3034 track roller

9560-3034 Roller
- Black plastic end caps
- 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.
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 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

<table>
<thead>
<tr>
<th>Combined door width</th>
<th>65˝ 1651mm</th>
<th>98˝ 2489mm</th>
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</thead>
</table>

Indicates recommended range of door width for operator.

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”

**8310-868S Surface Mount Box**
- Rugged Plastic Box, 4-1/2” Round
- Optional accessory - can be used w/any 4-1/2” round actuator

**8310-868F Flush Mount Box**
- Rugged Plastic Box, 4-1/2” Round
- Optional accessory - can be used w/any 4-1/2” round actuator

**8310-865 Receiver**
- Receiver, Wireless, 1 Channel, w/ Sequencing Feature
- Used in conjunction w/ Wireless Actuators & Transmitter(s)

**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

**8310-874 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
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”

8310-869S
Surface Mount Box
- Rugged Plastic Box, 6˝ Round
- Optional accessory - can be used w/ any 6˝ round actuator

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

8310-802
Weather/Trim Ring
- Plastic Weather/Trim Ring, 6˝ Round
- Optional accessory - can be used w/ any 6˝ round plastic mounting box.

8310-876
Escutcheon
- Tapered stainless steel escutcheon covers the gap between the wall and the back of the wall plate actuators when mounted in electrical boxes (by others) to minimize cart damage or vandalism
- Optional accessory - Can be used w/ any 6˝ round actuator
- Not to be used with wireless function

8310-8444
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

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” (122mm)
- 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)
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)
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard

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

8310-867F
Flush Mount Box
- Rugged Plastic Box
- 4-3/4” Square
- Optional accessory - can be used w/ any 4-3/4” square actuator

8310-853TWP
Surface Mounted Actuator
- Same as the 8310-853WP, with the added engraving of “Push to Open”

8310-867S
Surface Mount Box
- Rugged Plastic Box, 4-3/4” Square
- Optional accessory - can be used w/ any 4-3/4” square actuator

8310-853TWP
Surface Mounted Actuator
- Same as the 8310-853, with the added engraving of “Push to Open”

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

8310-813
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)

8310-813
Rockwell

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)

8310-865
Receiver
**8310 Series**

*Auto Operator Actuators & Accessories*

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**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)

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**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)

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**8310-3857T**

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

**8310-3857TWS**

- **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

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*NOTE: Weather/Trim Rings are sold separately*
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)
**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 prep 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)
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 Sensor is used
- Spacers are used w/ 8310-877 Header Mount Safety Sensor

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

8310-847
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

8310-859
Handheld Remote Control
- Used to program 8310-877 Header Mount Safety Sensor or 8310-854 Header Mount Motion Sensor

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

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)

Alert: After November 2017, this package must be purchased for unknowing-art activation requirements in A156.10 for single door.
8310 Series
Auto Operator Actuators & Accessories

Packages

Automatic Operator Sensors & Accessories

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)

Alert: After November 2017, this package must be purchased for unknowing-act activation requirements in A156.10 for double doors.

NOTE: Not for use with Double Egress. These two sensor packages must be used on installations with knowing-act activation only.
<table>
<thead>
<tr>
<th><strong>Automatic Operator Sensors &amp; Accessories</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>8310-805</strong> Door Position Switch</td>
</tr>
<tr>
<td>- Surface mount</td>
</tr>
<tr>
<td>- 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</td>
</tr>
<tr>
<td>- Disables approach side sensor when door is closed</td>
</tr>
<tr>
<td><strong>8310-805C</strong> Door Position Switch</td>
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<tr>
<td>- Concealed</td>
</tr>
<tr>
<td>- 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</td>
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<td>- Disables approach side sensor when door is closed</td>
</tr>
<tr>
<td><strong>8310-824</strong> Transformer, 24v,</td>
</tr>
<tr>
<td>- Hardwired</td>
</tr>
<tr>
<td>- Optional accessory - Used to remotely power any 24v sensor/ receiver</td>
</tr>
<tr>
<td><strong>8310-824P</strong> Transformer</td>
</tr>
<tr>
<td>- 24v, plug in</td>
</tr>
<tr>
<td>- Optional accessory - Used to remotely power any 24v sensor/ receiver</td>
</tr>
<tr>
<td><strong>8310-854ECA</strong> Drop Ceiling Bracket</td>
</tr>
<tr>
<td>- Bracket used w/ 8310-854 Header Mount Activation Sensor</td>
</tr>
<tr>
<td>- Optional</td>
</tr>
<tr>
<td><strong>8310-854ERA</strong> Protective Cover</td>
</tr>
<tr>
<td>- Cover used w/ 8310-854 Header Mount Activation Sensor</td>
</tr>
<tr>
<td>- Optional</td>
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<tr>
<td><strong>8310-3803</strong> Wireless Conversion Kit</td>
</tr>
<tr>
<td>- Jamb mount, 3v</td>
</tr>
<tr>
<td>- Converts standard jamb actuator to wireless version</td>
</tr>
<tr>
<td>- Includes 8310-865 Receiver, 8310-844J (2) Jamb Mounted</td>
</tr>
<tr>
<td>- Transmitter - Requires 8310-819S or 8310-819F Jamb Box</td>
</tr>
<tr>
<td><strong>8310-3809</strong> Wireless Conversion Kit</td>
</tr>
<tr>
<td>- Jamb mount, 9v</td>
</tr>
<tr>
<td>- Converts standard wall mount actuator to wireless version</td>
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<tr>
<td>- Includes 8310-865 Receiver, 8310-844 (2) Wall Mount Transmitter</td>
</tr>
<tr>
<td>- Requires Surface or Flush Box and Weather Ring</td>
</tr>
<tr>
<td><strong>8310-3889</strong> Safety Module Kit</td>
</tr>
<tr>
<td>- Used w/ 7901, 7902, 7981, 7982 Control Boxes.</td>
</tr>
<tr>
<td>- Includes 8310-3888 Safety Module Harness. Required when 8310-877 Header Mount Safety Sensor is used w/ Pneumatic</td>
</tr>
<tr>
<td>- Automatic Operators (2610, 4810, 4820 or 4840 Series)</td>
</tr>
<tr>
<td><strong>8310-3888</strong> Harness</td>
</tr>
<tr>
<td>- Safety module, service part</td>
</tr>
<tr>
<td>- Safety Module Harness for pneumo control box</td>
</tr>
</tbody>
</table>

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**LCN Door Control Catalog**

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 Bollard 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.

**Handing**
- Handed

**Butt Hinges**
- Should not exceed 5” (127 mm) in width

**Auxiliary Stop**
- Recommended at hold-open point

**Top Rail**
- Minimum 2” (51 mm)

**Rabbet Depth**
- Minimum 1-1/4” (32 mm)

**Maximum opening**
- Hold-open points up to 180°
- Hold-open point adjustable at the soffit shoe

**Fasteners**
- Wood and machine screw pack

**Finishes/Colors/ Powder Coat**
- Aluminum (689)
- Statuary Bronze (690)
- Light Bronze (691)
- Black (693)
- Dark Bronze (695)
- Brass (696)
- Custom colors optional
- Optional SRI primer - powder coat only
- Optional plated finishes

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**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®.

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