Door controls
Trinity Church...
In 1876, Mr. L. C. Norton was sent to Boston, Massachusetts to help build the Boston Trinity Church. The church took over four years to complete. The church was located on the Back Bay facing south and west thus at times, encountering some very severe wind conditions. The church began operation in 1880, the pastor, Rev. Brooks and his congregation quickly found out that the strong winds would make the doors close with a thunderous bang. Needless to say, the pastor was not going to stand for all the noise; those doors needed to be controlled! This prompted Mr. Norton to action.

Mr. Norton’s first attempt to remedy the situation was to hang the doors on double-spring hinges. Mr. Norton had now uncovered a second problem. The slamming stopped but now the strong winds made the doors stand open. The cold, drafting air raised protest amongst the people in the church. He tried rubber stops, special door linings, and some other ideas. Nothing worked. One day, continuing to ponder the problem with the doors at the Trinity Church, he put some things away in a closet and being in a hurry, he threw the door shut. To his amazement, the door did not slam. Instead, the door bounced back. He tried this over and over with the same result. An idea came to him; he rushed to town and purchased a beer pump. With the beer pump, a makeshift arm, and some special brackets he had designed, Mr. Norton installed his invention on one of the exterior church doors. He opened the door and let it go...CRASH! The door slammed so hard it broke the pump into many pieces.

Mr. Norton spent many months trying to solve the problem; finally, he used the principles of the lever, improved the main components, and decided to reposition the device on the door. He took his updated version and again installed it on one of the troublesome church doors. Rev. Brooks saw Mr. Norton’s new design and to his delight, the closer worked perfectly. Mr. Norton had used air pressure to make the doors close quietly. The problems with the doors at the Boston Trinity Church were now solved.

Growing Pains...
Soon after the doors at the Trinity Church were under control, Mr. Norton formed a company to manufacture his new found invention. The factory was located in Boston, Massachusetts and business started out strong. In fact, at times, there were more orders than production could match.

Time flew by. Mr. Norton’s company began to experience difficulty. Competition was fierce. Some competitors began to infringe on patents, which drained Mr. Norton of both cash flow and other resources. Mr. Norton also made a few business decisions that would hamper company growth. The early years presented other challenges too. New closer designs were being introduced at an increasingly fast pace. This quick growth brought about some challenging quality issues. Business associates both good and bad, came and went. The factory moved to Brooklyn, New York and then back to Boston, Massachusetts. In these years, the door closer business was a volatile one. Most good companies were forced into change whether they liked it or not. The door closer industry was no exception.

New Beginnings...
Competition drove Mr. Norton in a new direction. His air check had worked well but was slowly giving way to new technology. In 1900, Mr. Norton developed a liquid door check. This new liquid door check controlled the door through the entire door swing by incorporating three independent hydraulic regulations. Back-check, general speed, and latch speed were necessary for total door control. In 1908, the company was moved to Chicago, Illinois. By the early 1920’s, the door closer business was doing well but Mr. Norton was wearing down, he needed help.
In 1925, **Mr. L. C. Norton** teamed with **Mr. D. R. Lasier** and formed the Norton-Lasier Company. The business was located at 466 West Superior Street in Chicago, Illinois. Norton & Lasier knew that if their company was to survive, they must build a far superior product at a very fair price. They called their improved door closer an LCN. After a few years, Mr. Norton left the business to Mr. Lasier and moved to California. During the years of 1926 through 1948, under the leadership of Mr. D. R. Lasier, LCN manufactured and shipped high-quality traditional style closers all over the world. Many of these closers are still in use today. In 1949, the factory moved to Princeton, Illinois. In 1958, LCN introduced the heavy-duty 4010/4110 series closer. Schlage Lock Company purchased LCN in 1959. In 1974, Ingersoll-Rand purchased Schlage Lock Company (and LCN). Today, LCN offers a complete line of door control products including heavy-duty hydraulic closers, power operators, fire/life safety closer/holders, high security closers & more.

The model numbers may have changed but the passion, quality, and excitement will always remain. LCN closers are made with premier materials and our products are tested far beyond the industry requirements.

1851 – Lewis C. Norton born May 5th in New Hampshire.
1880 – First door closer installed at Boston Trinity Church.
1881 – Manufacturing begins at Boston plant.
1900 – Mr. Norton introduces a liquid door check.
1908 – Company moves to Chicago.
1917 – David R. Lasier joins company as timekeeper.
1925 – Norton-Lasier Company begins operation.
1930 – Norton-Lasier Company produces wooden riding toys to cope with the Great Depression.
1942 – Norton-Lasier Company produces hydraulic aircraft fittings for the war effort.
1948 – Norton-Lasier Company officially changes name to **LCN**.
1958 – LCN introduces the 4010/4110 series door closer.
1959 – LCN sold to Schlage Lock Company.
1972 – LCN introduces Sentronic line of fire/life safety holder/closers.
1973 – LCN introduces the 4040 series door closer.
1974 – Schlage Lock (and LCN) sold to Ingersoll-Rand.
1978 – LCN introduces Equalizer units.
1980 – Production on traditional series ends.
1981 – LCN introduces the 1460 series door closer.
1981 – LCN introduces AutoEqualizer™ units.
1985 – LCN introduces the 1070 series door closer.
1993 – LCN introduces the powder coat finish.
1995 – LCN introduces Electric Operator units.
1996 – LCN introduces the 1520 series door closer.
1998 – LCN introduces the 1370 series door closer.
2006 – LCN introduces the new 4030 series door closer to replace the 1520 closer series.
2006 – LCN introduces the new Senior, Astro and Middle Swing Digital Control Box.
2007 – LCN introduces the new Tri-Volt Magnets.
2007 – LCN introduces the new 4040XP.
2007 – LCN introduces the new 1260 Series.
2013 – In December of 2013, the Security Technologies division of Ingersoll Rand became its own publicly traded company called Allegion.
2015 – LCN introduces the 1250, 1450 and 4050 series cast aluminum door closers.
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LCN
121 West Railroad Avenue
P.O. Box 100
Princeton, IL 61356-0100

For SSC Representative contact information, please visit
www.allegion.com/us and click “Contact Us”

To view or download an electronic copy, visit

LCN reserves the right to change the information
contained in this catalog without notice.
STANDARD POWDER COAT FINISHES
LCN powder coating provides superior protection against the effects of weather conditions and is an environmentally friendly process. The high quality, chip resistant finish is far superior to any previously offered. Corrosion resistance surpasses 100 hours salt spray testing (four times the industry standard). Non-metallic components also provide the same high resistance to the effects of the elements. All LCN products must be shipped with a finish.

LCN STANDARD FINISHES (CLOSEST BHMA EQUIVALENT):

- **ALUM** ALUMINUM (BHMA 689)
- **DKBRZ** DARK BRONZE (BHMA 695)
- **STAT** STATUARY BRONZE (BHMA 690)
- **LTBRZ** LIGHT BRONZE (BHMA 691)
- **BLK** BLACK (BHMA 693)
- **BRASS** BRASS (BHMA 696)

OPTIONAL PLATED FINISHES
Visible components such as metal covers, arms, fasteners, and finish plates are plated to match the selected finish. Surface mounted tracks are powder coated to complement the plated finish. Hidden assemblies such as cylinders, tracks, and mounting plates are supplied with a powder coated finish. Plated finishes require handing of closers.

**LCN PLATED FINISHES:**
- US 3 Bright Brass (BHMA 632)
- US 4 Satin Brass (BHMA 633)
- US 10 Satin Bronze (BHMA 639)
- US 11 Satin Bronze (BHMA 643)
- US 15 Satin Nickel (BHMA 646)
- US 26 Bright Chrome (BHMA 651)
- US 26D Satin Chrome (BHMA 652)

**LCN PAINTED FINISHERS**
- Aluminum ALUM (BHMA 689)
- Dark Bronze DKBRZ (BHMA 695)

**SPECIAL RUST INHIBITING (SRI) PROCESS**
For installations where a higher level of protection against weather conditions, or the effects of a potentially corrosive atmosphere is required, LCN offers a special rust inhibiting (SRI) process. Ferrous metal components receive an SRI pretreatment and a standard powder coat finish of your choice, or a custom powder coat finish for a nominal additional cost. Closers treated with the SRI process exceed the 100 hour protection level available with standard LCN powder coated finishes. For details, contact your local SSC representative or the LCN factory.

**STANDARD ANODIZED FINISHES**
LCN Senior Swing & Benchmark electromechanical power operators are offered with an anodized finish. Anodizing is an electrochemical process that thickens and toughens the protective oxide on aluminum metal.

**LCN ANODIZED FINISHES:**
- Aluminum ANCLR (BHMA 628)
- Dark Bronze ANDKBRZ (BHMA 710)

**OPTIONAL CUSTOM POWDER COAT FINISHES**
LCN offers custom powder coating to provide a custom appearance and all the corrosion resistance of standard powder coat finishes at a nominal additional cost. LCN uses the RAL numbering system for the 150+ custom colors available. Contact your local SSC representative for a brochure showing the available custom colors. Note: Custom powder coat finishes require a metal cover.
Subject to the terms and conditions of this limited warranty, Schlage Lock Company, LLC (the “Company”) extends a limited warranty against defects in material and workmanship for its LCN branded product(s) identified in the Product Table below (“Products”) as installed in the original location.

This limited warranty applies to Products purchased on or after March 3, 2014.

**Product Table - Cast Iron**

<table>
<thead>
<tr>
<th>Series</th>
<th>Warranty Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>4000 Series</td>
<td>30 Years</td>
</tr>
<tr>
<td>1460 Series</td>
<td>30 Years</td>
</tr>
<tr>
<td>1260 Series</td>
<td>20 Years</td>
</tr>
<tr>
<td>Concealed, High Security (except 2210DPS)</td>
<td>15 Years</td>
</tr>
<tr>
<td>Automatic Operators; SE, ME, HSA, SEH Series; SEM Magnets; 2210 DPS (includes both electronic and mechanical components)</td>
<td>2 Years</td>
</tr>
</tbody>
</table>

**Product Table - Cast Aluminum**

<table>
<thead>
<tr>
<th>Series</th>
<th>Warranty Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1250 Series</td>
<td>15 Years</td>
</tr>
<tr>
<td>1450 Series</td>
<td>25 Years</td>
</tr>
<tr>
<td>4050 Series</td>
<td>25 Years</td>
</tr>
</tbody>
</table>

**Term:** The limited warranty period for Products is as stated in the Product Table above. The "Commencement Date" for a limited warranty period shall be the date of Company’s delivery to the original purchaser of the Products. Proof of Product purchase may be required by Company to confirm the Commencement Date.

**What Company will do:** Company may require proof of Product purchase in order to provide coverage under this limited warranty. As Company’s only responsibility and user’s only remedy under this limited warranty, Company will furnish a replacement Product upon receipt and confirmation by Company, in its sole opinion, that the Product has, in fact, failed due to a manufacturing defect under normal use and maintenance. In the event a replacement Product cannot be provided, Company will either provide a suitable replacement Product or a refund in the amount of the original purchase price.

**What is not covered:** The following costs, expenses, and damages are not covered by the provisions of this limited warranty: (i) labor costs including, but not limited to, such costs as removal and installation of Product; (ii) shipping and freight expenses required to return Product to Company; (iii) failures, defects, or damage caused by any third party product or service; (iv) any other incidental, consequential, indirect, special and/or punitive damages, whether based on contract, warranty, tort (including, but not limited to, strict liability or negligence), patent infringement, or otherwise, even if advised of the possibility of such damages.

The provisions of this limited warranty do not apply to Product that is: (i) not the proper size for the application for which the Product is used; (ii) not installed in accordance with Company’s published Product installation instructions; (iii) installed with improper parts and/or incorrect parts (NOTE: It is recommended that Product be installed with LCN fasteners provided with Product); (iv) improperly stored, maintained, or operated; (v) modified, repaired, or altered in Company’s sole opinion, in any manner, without the express written consent of Company; (vi) used for purposes for which the Product is not designed or intended; (vii) subjected to misuse, abuse, negligence, or accident; or (vii) subjected to improper temperature, humidity, or other environmental conditions.

**Note:** 900/7900 Series compressors are not manufactured by Company and are excluded from coverage under this limited warranty. For more information, parts, or repairs concerning the compressors, contact the compressor manufacturer directly at (269) 926-6171.

**Additional Terms:** This limited warranty in lieu of all other warranties, express or implied. Company does not authorize any person to create for it any obligation or liability in connection with Product. Company’s maximum liability hereunder is limited to the original purchase price of the Product. No action arising out any claimed breach of this limited warranty by Company may be brought by the user more than one (1) year after the cause of action has arisen.

**How local law applies:** This limited warranty gives you specific legal rights, and you may also have other rights as permitted by law. Some local laws do not allow limitations on how long an implied warranty lasts or the exclusions or limitation of incidental or consequential damages so the limitations or exclusions provided herein may not apply to you.

**Program and Warranty Claims:** If product is to be claimed to be defective under this limited warranty, contact Customer Care at (877) 671-7011.

*Note:* Please contact LCN Customer Care prior to returning any product back to the factory. You will need prior authorization and an RMA for your return.
Since its founding in 1926, LCN has specialized in solving door control problems through the use of high quality, innovative door control products. By adhering to high standards of performance, LCN has earned a leadership role within the industry and is committed to meeting door control challenges of the future. With representatives located throughout the world, LCN provides the products and services necessary to solve your door control problems.

The LCN formula for success

Materials
LCN is committed to providing the best door closers in the world. In addition to the mechanical advantages derived from proven designs, much of the durability of the closer and arm system is related to the materials used in their manufacturing.

Extensive Abuse Test
Why do some hardware professionals claim that LCN stands for “Last Closer Needed?” LCN closers are put through grueling tests in which they exceed industry requirements.

Forged Steel Arms
The closing power and control generated within LCN closers is transferred to the door through forged steel arms. Forged steel arms have greater strength, better appearance and less bulk.

Chrome Silicon
Many closer manufacturers use less expensive oil-tempered springs, but LCN engineers know that such a spring loses up to 20% of its power after a few thousand cycles.

Heat-Treated
LCN steel pinions have larger, stronger teeth and are double heat-treated for the greatest possible strength on the shaft. Heat-treating makes the pinion harder, better able to resist wear after years of service and results in less stress on the cylinder.

Special Templates
When a standard door closer won’t do the job, there is only one proven, reliable source for special solutions — LCN. With over 3,000 special templates on file, LCN can provide a door control solution for one-of-a-kind doors such as vault, balanced, over-sized and arch doors.

Hydraulic Fluid
LCN uses a special formula hydraulic fluid with special lubrication properties to keep closer components working smoothly. This unique all-weather hydraulic fluid eliminates the need for seasonal adjustments.

Customer Service
At a time when machines are picking up more and more customer calls, real people are answering the phones at LCN. Every member of our customer service staff is trained and qualified to assist you with orders, closer selection and special applications.
PART 1 - GENERAL

1.1 QUALITY ASSURANCE

A. Reference Standards

   A117.1 Providing Accessibility and Usability for Physically Handicapped People
   A156.10 For Power Operated Pedestrian Doors
   A156.4 Door Controls - Closers
   A156.15 Life Safety Closer Holder Release Devices
   A156.18 Materials and Finishes
   A156.19 Power Assist and Low Energy Power Operated Doors

2. Americans with Disabilities Act (ADA)
4. Underwriters Laboratory (UL):
   228 Door Closers- Holders
   UL10C Standard Positive Pressure Fire Test of Door Assemblies
   UL10B Standard for Fire Test of Door Assemblies
5. National Fire Protection Association (NFPA)
   No. 80 Fire Doors and Windows
   No. 101 Life Safety Code

B. Source Quality Control

1. Obtain every kind of hardware (latch and lock sets, hinges, closers, etc.) from only one manufacturer, although several may be indicated as offering products complying with requirements.
2. All products shall meet grade 1 or the highest level of cycle test requirements of the applicable ANSI/BHMA standard.

C. Supplier Qualifications

1. Supplier must be a recognized builders hardware supplier who has been furnishing hardware in the projects vicinity for a period of not less than two years.
2. Supplier must be or employ an experienced hardware consultant who is available, at reasonable times during the course of the work, for consultation about the project’s hardware requirements, to Owner, Architect, and Contractor.

D. Fire-rated Openings

1. Provide hardware for fire rated openings in compliance with NFPA Standard No. 80, NFPA Standard No. 101, and local building codes.
2. [Manual hold-open arm function not allowed.] Provide hardware which has been tested and listed by UL for types and sizes of doors required and complies with the requirements of door and frame labels.

PART 2 - PRODUCTS

2.3 MATERIALS AND FABRICATION

A. General

1. Closers shall be installed to allow door swing as shown on plans. Doors swinging into exit corridors should provide for corridor clear width as required by codes.

2.8 CLOSERS AND DOOR CONTROL DEVICES

A. General

All closers shall be as manufactured by LCN CLOSERS, Princeton, Illinois, USA, and shall have the following features:

1. [Applies to 4010, 4020, 4110, 4210, 4510, 5010 Series only.] All manual door closers shall be certified to exceed 15 million (15,000,000) full load operating cycles by a recognized independent testing laboratory.
2. All closers shall carry manufacturer’s warranty, as stated on page 6.
3. All closers with electrical or pneumatic components shall carry a manufacturers two (2) year warranty.
   [Items 4 through 12 apply to closer cylinder, items 13 through 16 apply to closer arms.]
4. [Delete for 1250, 1450, and 4050] Fully hydraulic, rack and pinion action with high strength cast iron cylinders and one piece forged steel pistons.
5. Fluid of a type requiring no seasonal adjustments.
6. [Delete for 1460, 1260, 3030, 3130 4030 4040XP, 1250, 1450, and 4050 Series. 4040XP has a minimum 3/4" pinion shaft diameter.] Pinion shaft minimum diameter of 11/16".
7. Hydraulic regulation controlled by tamper-proof, non-critical screw valves, adjustable with a hex wrench.
8. Separate adjustments for backcheck, general speed, and latch speed.
9. [Applies to 1450, 1460, 4010, 4020, 4040XP, 4050, 4110, 4210, 4510, 5010 Series.] Where detailed on double lever arm closers, provide a delayed action feature to delay closing up to one minute from maximum opening to approximately 75º.
10. Backcheck shall be properly located for protection of the door, frame, and applied hardware.
11. [Applies to 2210, 4110, 4210, 4210T, 4510, and 4510T Series only.] Where detailed, provide advanced variable backcheck to start backcheck function at approximately 45º.
12. Include high efficiency, low friction full compliment pinion bearings.
13. [Delete for 1260, 1460, 6030 Series.] Forged steel main arms.
14. [Applies to 4110, 4210, 4510 Series and all EDA and CUSH arms.] Forged steel main and forearms.
15. [Applies to all single lever arm (track type) closers.] Where detailed, provide a quiet, low friction track and roller assembly and provisions for an optional bumper assembly to assist backcheck and or hold-open clip.
16. [Applies to all double lever arm closers, except EDA or CUSH arms.] Reversible shoe to increase latching power of the closer.
B. Size of Closers
1. Sized in accordance with ANSI/BHMA Standard A156.4 as shown in the applicable TABLE OF SIZES listed in the current LCN General Catalog.
2. Closing power of non-sized cylinders shall be adjustable over a range of sizes:([Applies to 1250, 1261, 1450, 1461, 1460T, 4011, 4021, 4040SE, 4040XP, 4040XPT, 4041DEL, 4050, 4111, 4211, 4511, 4631, 4642, 4811, 4822, 4841, 4031, 4031T Cylinders.]

C. Barrier Free Manual Closers
1. All closers for openings that must meet the minimum requirements of the ADA act, in lieu of ANSI/BHMA Standard A156.4, shall be sized in accordance with the applicable REDUCED OPENING FORCE table in the current LCN General Catalog.
2. All size 1 manual closers shall provide or be adjustable to provide less than 5 pounds opening force on a 36” door leaf and delay closing time in accordance with the ADA requirements.

D. Combination Door Closers and Holders
1. Provide closer/holders designed to hold the door in the open position under normal usage and to release and automatically close the door under fire conditions. Closers will include an integral electromagnetic holder mechanism designed for use with UL listed fire detectors, provided with normally closed switching contacts.
2. [Applies to all ME models.] Where detailed, multi-point closer/holders shall incorporate a hold-open bypass feature from 0º up to either 80º or 140º.
3. [Applies to 4310 ME only.] Where detailed, multi-point closer/holders shall provide a swing-free function with a no-drift feature.

E. High Security Closers
1. Provide closers designed to resist vandalism and tampering.
2. All exposed fasteners shall be TORX machine screws with a security pin.
3. All closer adjustments shall be shielded by the cover or finish plate, after installation.
4. Arm and, where furnished, high security roller assembly shall be designed to prevent disassembly.
5. [4210 and 4510 Series only.] All surface mounted high security closers shall include a cast iron cylinder certified by an independent testing laboratory to exceed fifteen million (15,000,000) operating cycles, heavy gauge metal covers with four mounting screws and double lever arms manufactured to prevent disassembly.
6. [4210T and 4510T Series only.] All surface mounted high security closers shall include a cast iron cylinder certified by an independent testing laboratory to exceed fifteen million (15,000,000) operating cycles, heavy gauge metal covers with four mounting screws, heavy duty arm with special security roller, and a heavy gauge high security track designed to eject foreign objects.

F. Automatic Operators
1. Where low kinetic energy, as defined by ANSI/BHMA Standard 156.19, automatic operators are indicated for doors required to be accessible to the disabled. Provide pneumatic, electrohydraulic or electromechanical ([2610, 2810, 2850, 2860, 4630, 4640, 4810, 4820, 4840, 9130, 9140, 9150, 9530, 9540, 9550, 9560 Series]) operators complying with the ADA for opening force and time to close standards.
2. Full closing force shall be provided when the power or assist cycle ends: ([2610, 2810, 2850, 2860, 4630, 4640, 4810, 4820, 4840, 9130, 9140, 9150, 9530, 9540, 9550, 9560 Series]).
3. [2610, 4810, 4820, 4840] Locate power unit and pneumatic exhaust away from door to minimize noise and vibration in pedestrian areas.
4. All automatic operator systems shall include the following features and functions.
   a) Provisions for separate conduits to carry high and low voltage wiring in compliance with the National Electric Code, section 725-31.
   b) The operator will be designed to prevent damage to the mechanism if the system is actuated while the door is latched or if the door is forced closed during the opening cycle.
   c) All covers, mounting plates and arm systems shall be powder coated and successfully pass a minimum of 100 hour testing as outlined in ANSI/BHMA Standard A156.18 ([2610, 4630, 4640, 4810, 4820, 4840 Series]).
   d) Electromechanical automatic operators shall be standard anodized either in aluminum or dark bronze. Custom anodized finishes and custom paint are available and can be specified. ([2810, 2850, 2860, 9130, 9140, 9150, 9530, 9540, 9550, 9560 Series])
   e) UL listed for use on labeled doors
   f) ([4630, 4640, 4810, 4820, 4840 Series]) shall be non-handed with spring power over a range of at least four sizes either 1 through 4 or 2 through 5.
   g) ([2810, 2850, 2860, 9130, 9140, 9150, 9530, 9540, 9550, 9560, Series]) are handed and feature a spring return.
h) Provisions in the control box or module shall provide control [inputs and outputs] for; electric strike delay, auxiliary contact, sequential operations, fire alarm systems, actuators, swing side sensors, stop side sensors. [2610, 4630, 4640, 4810, 4820, 4840, 9130, 9140, 9150 Series]

5. [4630, 4640 Series] All electrohydraulic automatic operators shall include the following features or functions:
   a) Second Chance Feature: When an obstruction or resistance to the opening swing is encountered the operator will pause at that point, then attempt to continue opening the door. If the obstruction or resistance remains, the operator will again pause the door.
   b) Easily accessible main power and maintain hold-open switches will be provided on the operator.
   c) An electronically controlled clutch to provide adjustable opening force.
   d) A microprocessor to control all motor and clutch functions.
   e) An on-board power supply capable of delivering both 12V and 24V outputs up to a maximum of 1.0 ampere combined load.
   f) All input and output power wiring shall be protected by a resettable circuit breaker.

-Or-

5. All electromechanical automatic operators shall include the following features of functions:
   a) Maximum 8-1/2 lbs of manual opening force [9130, 9140, 9150 Series].
   b) Maximum 15 lbs of manual opening force [2810, 2850, 2860, 9530, 9540, 9550, 9560 Series].
   c) Bottom loaded header for easy access to controls [2810, 2850, 2860, 9550, 9560 Series].
   d) Power Boost, which adds an additional 25 lbs of closing force at latch [2810, 2850, 2860, 9130, 9140, 9150, 9530, 9540, 9550, 9560 Series].
   e) Self contained automatic operators in a cast aluminum housing and a forged steel arm [2810, 2850, 2860, 9130, 9140, 9150, 9530, 9540, 9550, 9560 Series].

2.12 HARDWARE FINISHES

A. Finish
   1. All closers with powder coat finishes shall exceed a minimum 100 hour salt spray test, as described in ANSI/BHMA Standard A156.4 and ASTM B117.
   2. All closers detailed with plated finishes shall include plated covers (or finish plates), arms, and visible fasteners.
   3. All electromechanical automatic operators supplied with anodized finishes.
   4. All closers must be shipped with a finish.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General
   1. Installation shall be in accordance with the templates and installation instructions packaged with the closers at the time of manufacture.
   2. Installation shall be made with fasteners packaged with the closer by the manufacturer.
   3. All electrical connections shall be made in accordance with the manufacturers recommendations.
   4. Clean installed closer to remove dirt, debris, and marks incidental to installation work.
   5. Installation instructions and templates are to be turned over to the Owners representative upon completion of the installation work.
   6. Factory trained representative will be available for job site inspection of major projects upon completion of the hardware installation work.

3.2 ADJUSTMENT

A. Adjustment
   1. Install and regulate all closers in accordance with the installation instructions packaged with the closers at the time of manufacture.
   2. If unfamiliar with LCN products furnished, consult factory representative prior to installation for assistance.
## ANSI FUNCTION NUMBER TO LCN PRODUCT

### SURFACE MOUNTED

<table>
<thead>
<tr>
<th>ANSI NUMBER</th>
<th>MOUNTING</th>
<th>LCN CLOSER</th>
<th>PT-4A</th>
<th>PT-4B</th>
<th>PT-4C</th>
<th>PT-4D</th>
<th>PT-4E</th>
<th>PT-4F</th>
<th>PT-4G</th>
<th>PT-4H</th>
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**Note:** All closers listed in this section are certified grade 1 = 1,500,000 cycles, PT4A = 15% adjustable closing force, PT4B = 35% adjustable closing force, PT4C = 50% adjustable closing force, PT4D = adjustable hydraulic backcheck, PT4F = delayed action, PT4G = built-in factory dead stop (Cush-N-Stop), PT4H = spring power adjustable over a range of sizes, PT4J = backcheck position advanced 15 degrees.
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#### ANSI Standard A156.4-2013

Note: All closers listed in this section are certified grade 1 = 1,500,000 cycles, PT4A = 15% adjustable closing force, PT4B = 35% adjustable closing force, PT4C = 50% adjustable closing force, PT4D = adjustable hydraulic backcheck, PT4F = delayed action, PT4G = built-in factory dead stop (Cush-N-Stop), PT4H = spring power adjustable over a range of sizes, PT4J = backcheck position advanced 15 degrees.

### ANSI FUNCTION NUMBER TO LCN PRODUCT

#### Concealed In Door

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#### ANSI Standard A156.4-2013

Note: All closers listed in this section are certified grade 1 = 1,500,000 cycles, PT4A = 15% adjustable closing force, PT4D = adjustable hydraulic backcheck.
### ANSI FUNCTION NUMBER TO LCN PRODUCT

#### OVERHEAD CONCEALED

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#### LIFE SAFETY CLOSER/HOLDER RELEASE DEVICE

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### ANSI Standard A156.4-2013

#### ANSI NUMBER TO LCN PRODUCT

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### ANSI Standard A156.15-2001

Note: All closers listed in this section are certified grade 1 = 1,500,000 cycles.

PT8A = door under control from 7 degrees of maximum door opening to close,
PT8B = hold-open between 85 and 180 degrees, PT8D = 50% adjustable
PT8E = single acting, 165 degrees of opening, double acting 165 degrees of opening either way, PT8F = adjustable hydraulic backcheck, PT8J = delayed action, PT8L = 35% adjustable closing force.

Note: Options are: PT4D = adjustable hydraulic backcheck, PT4N = adjustable spring power, and PT4P = adjustable hold-open intensity.
Made from premier materials, LCN is committed to providing the best door closers in the world. In addition to the mechanical advantages derived from proven designs, much of the durability of the closer and arm system is directly related to the materials used in their manufacturing.

Precision machined **cast iron cylinders** and **forged steel pistons** work together because of the compatibility of their basic elements. **Heat-treated pinions** and **pistons** spread the load over a large gear tooth system to better handle the wear and stress of millions of operating cycles. Upper and lower full compliment pinion bearings provide the support and load capacity required by the design of the closer. **All weather fluid** eliminates the need for seasonal adjustments.

**Forged steel main arms** are superior to stamped steel arms used on closers where price is the primary concern. Specially designed shoe and elbow joints provide maintenance free service. A state-of-the-art, **powder coat** process delivers a high quality, corrosion resistant finish on all metal parts in popular architectural finishes.

LCN always uses the best materials available to provide the exceptional value and long service life that you, our customer, have every right to expect.
Today practically every door in modern commercial, industrial, and institutional buildings is opened by the person passing through and closed by a mechanical door closer which keeps the door under control at all times. The power to close the door is generated by the springs inside the closer. Regulated hydraulic circuits control the speed of the doors closing swing. Ideal door “conduct” is illustrated and described in the diagram below. It can be achieved by equipping each door with the appropriate LCN door closer.

**Perfect door operation... The aim of mechanical control.**

![Diagram showing door operation stages](image)

This diagram shows the main part or stages in correct door operation, whether under manual or mechanical control or a combination of the two.

1. On the opening swing, the door closer's function is to let the door open easily, except at the end of the swing where backcheck is applied.
2. Backcheck is a feature that cushions the opening swing to prevent the door from slamming into the stop. Special closers designed for potentially abusive applications begin the backcheck function much earlier (2A) such as LCN's advanced variable backcheck (AVB).
3. Through the long closing arc, a uniform, reasonable (main) speed should be maintained.
4. The latching arc allows the door to close quietly and firmly.

**Opening the door builds up the power, which later closes the door.**

As a controlled door is opened, the spring of the closer is compressed which builds up the power to close the door. Normally, more opening force would be required as spring compression increases. However, as an LCN closer changes its arm geometry while the door opens, it increases the door leverage. This offsets the spring compression, resulting in greater ease in opening the door.

**In opening, more leverage for the person.**

The changing arm geometry gives increased leverage over the door to overcome the growing power of the spring allowing one to pass through the door easily.

**In closing, more leverage for the closer.**

When the person releases the door and the closer takes over, spring power is applied through the arm system to close the door. Because the spring has been compressed, its power is very high. As the door closes the spring expands, providing the power to close the door.

**Special closers for reduced opening force.**

The 1990 Americans with Disabilities Act (ADA) and ANSI Standard A117.1 describe maximum opening force limitations for certain non-fire rated doors. The last page of each closer section in the catalog includes a section titled REDUCED OPENING FORCE CLOSERS. This section lists closers in that specific series that will comply with a maximum opening force based on the width of the door.

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 the door.

Refer to AUTOMATIC OPERATORS section for information on electric, pneumatic and electromechanical systems that meet reduced opening force requirements without affecting closer power.
HOW TO SELECT A DOOR CLOSER

CONCEALED OR SURFACE MOUNTED CLOSERS?
Door closers are available in two styles - concealed or surface mounted. In choosing a closer style for a particular application, consideration should be given to the type of door being controlled, frame conditions, aesthetic requirements, and control features needed. Information contained in the following material can serve as a guide in selecting the style and model of closer to meet specific requirements.

IF CONCEALED, WHERE?
Closers concealed in the head frame over the door are out of sight and entirely out of the pedestrians way. They cannot be harmed by scrub water, cleaning chemicals or floor dirt, and are protected from airborne contaminants, like dust. They are easy to reach for regulation without removing any parts. Closers for frame sections as thin as 1-3/4” (44 mm) are available.

Closers located within the door itself are also hidden and protected but recommended for interior doors only.

CONCEALED IN FRAME

CONCEALED IN 1-3/4” TUBE

CONCEALED IN DOOR

SURFACE MOUNTED CLOSERS – LOCATION?
Closer location is subject to the considerations of practicality and appearance. Good taste usually decrees that closers on doors along a corridor be located on the room side of the door so they are out of the line of sight from the corridor. Closers should be placed on the inside of exterior doors for appearance and to shelter them from the elements.

HINGE (PULL) SIDE MOUNT

TOP JAMB (PUSH SIDE) MOUNT

PARALLEL ARM (PUSH SIDE) MOUNT

WHERE ARE HEAVY DUTY CLOSERS REQUIRED?
Heavy duty closers should always be used in these places:

1) Schools or public buildings where heavy or abusive usage is expected.
2) Exterior doors.
3) Doors subject to draft, winds, or air pressure differentials.
4) High frequency doors such as those on department stores, malls, or mixed use tenancies.
WHICH ARM SYSTEM?

**Double lever** arm closers can provide control under difficult conditions for either interior or exterior doors. A parallel arm system is a type of double lever arm where the main arm is parallel to the face of the closed door. Available double lever arms:

- **REGULAR (REG)**
- **FUSIBLE LINK (FL)**
- **HOLD-OPEN (H)**
- **CUSH-N-STOP (CUSH)**
- **HOLD-OPEN CUSH-N-STOP (HCUSH)**
- **EXTRA DUTY (EDA)**
- **HOLD-OPEN EXTRA DUTY (HEDA)**
- **SPRING CUSH (SCUSH)**
- **SPRING HOLD-OPEN CUSH (SHCUSH)**
- **STANDARD (STD)**
- **DOUBLE EGRESS (DE)**
- **SWING-FREE (SF)**
- **STANDARD ADJUSTABLE (STD)**

**Single lever** arm (track) closers may be used on interior or sheltered exterior doors. The hold-open function in a single lever arm system is provided by either the track or the cylinder assembly. Available single lever arms:

- **HOLD-OPEN (H)**
- **CUSH-N-STOP (CUSH)**
- **STANDARD ADJUSTABLE (STD)**
DO YOU NEED SPECIAL CYLINDER FUNCTIONS?
Many LCN closers can be ordered with a delayed action function built into the cylinder. **Delayed action** (DEL) is a special hydraulic circuit that provides additional time to pass through the door. A special regulating screw controls the closing speed from maximum opening through approximately 75°. After that point the normal main speed resumes control to close the door. Delayed action is not available with single lever arm (track) closers.

Advanced Variable Backcheck (AVB) is available with high security and 4110 series closers to begin cushioning the opening swing at about 45° (2A) instead of the usual 75° (2). AVB is especially suited for potentially abusive applications.

Multi-point (ME series) closer/holders can be ordered with a hold-open bypass at either 80° or 140° function. This feature does not allow hold-open to take effect until opened beyond the selected degree of bypass.

IS SEASONAL ADJUSTMENT REQUIRED?
Temperature changes can affect the operation of common door closers by changing the viscosity of the hydraulic fluid inside the closer. As temperature rises, the fluid thins out and closes the door more rapidly. As temperatures decrease, the fluid thickens causing the closer to close the door very slowly.

LCN uses all weather Ultra X fluid to eliminate the need for seasonal adjustment.

HOW WILL THE DOORS BE HUNG?
While butt hinges provide the most common method of hanging doors, some doors are hung on pivots centered in the door, others on offset pivots. Surface mounted closers will handle doors hung in any of these three ways. LCN 4020 Series closers can even control a “balanced” door installation. Concealed closers may conflict in location with pivot leaves and thus may require special templating.

HOW FAR SHOULD THE DOOR OPEN?
Three basic rules apply to maximum degree of opening.

1. It is best to let the door swing as far as it can swing freely. Some closers are mounted in different locations for different degrees of opening.
2. Use a mechanical stop when a door can not swing 180° or at the selected hold-open point of a double lever arm system. The mechanical stop can be mounted on the floor, wall, overhead, or built into the closer arm.
3. The closer should be positioned so backcheck takes place well in advance of the stop position to cushion the opening swing and prevent door and frame damage from an abrupt stop.
**DOOR DIMENSIONS?**
The width of the door is the main consideration in determining the correct closer size. Size here refers to the minimum spring power and hence the closing force, generated by the closer. In the catalog, the interior and exterior TABLE OF SIZES for each closer are set up for ranges of door width and assume normal operating conditions. If a door is of exceptional height, weight, special construction, or if drafts and air pressure differentials exist, increased closer power should be considered.

Door thickness may be a factor. A concealed-in-the-door closer should not be used in a hollow metal door less than 1-1/2” (38 mm) thick or a wood door under 1-3/4” (44 mm). Exceptionally thick doors can affect hinge and pivot centers to the extent that closer functions and geometry are also affected.

The depth of the doors top rail is important to nearly every closer installation. Narrow top rails may require plates to successfully mount the closer. An insufficient top rail in flush, hollow, or composite filled doors may make concealed-in-the-door installations impractical.

**HAND OF A DOOR?**
Some door closers are handed. When approaching a door from the push side, if hinged on the left, it is a left hand door; if hinged on the right, it is a right hand door.

For purposes of handing door closers, right hand reverse bevel and left hand are identical. Also, left hand reverse bevel and right hand are identical.

**WILL A STANDARD CLOSER AND TEMPLATE MEET YOUR NEEDS?**
Occasionally the physical limitations of the selected closer may not provide the desired functions or degree of opening. Standard templated locations may interfere with other applied hardware. In these situations, contact the LCN Applications Engineering Department for assistance. Customized installation templates or products may be available to solve an unusual application.
WHY USE PLATES, BRACKETS, ADAPTORS AND OTHER SPECIAL PIECES?
A drop plate is now commonly used to drop (lower) closers to meet special conditions or adapt a closer to door or frame surfaces that are not adequate for normal mounting patterns.

Specialized brackets, adapters, and parallel arm shoes are available to simplify the installation of closers with a variety of frame and door conditions. The most commonly used are listed with each closer. Consult LCN for assistance if you are not sure.

WHAT FASTENERS SHOULD BE USED?
LCN closers are shipped with a wood and machine screw pack or Self-Reaming and Tapping screws (SRT) unless other fasteners are ordered. These screw packs are suitable for wood or properly reinforced hollow metal frames and metal or solid core wood doors. For wood door applications, LCN recommends the use of wood screws. For selected closers, metric machine screws are available in lieu of UNC/UNF machine screws.

When attaching closers to hollow core doors, optional THRU BOLTS (TB) are recommended to minimize crushing or squeezing the door. Thru bolting can also provide a very strong mechanical connection for potentially abusive applications. Because the TB barrel extends completely through the door, the door thickness must be specified when ordering if it is other than 1-3/4˝ (44 mm). TB's are only available for 1/4-20 machine screws.

For high security applications, TORX machine screws are available with most closers. These are standard for all exposed fasteners with high security closers. TORX fasteners feature a hex lobular drive with a security pin in the center. They can only be installed or removed with a special set of bits that are available from LCN.
WHAT FINISH IS DESIRED?
LCN powder coating provides superior protection against the effects of weather conditions and is an environmentally friendly process. The high quality, chip resistant finish is far superior to any previously offered. Corrosion resistance surpasses 100 hours salt spray testing (four times the industry standard). Non-metallic components also provide the same high resistance to the effects of the elements. All LCN products must be shipped with a finish.

LCN offers custom finishing services to complement special installations. This provides a custom appearance and all the corrosion resistance inherent in the standard powder coated finishes. It is recommended that the customer submit a physical sample of desired custom finish with the closer order. Custom powder coat finishes are available at additional cost. A metal cover must be ordered when custom powder coat finishes are desired.

With some exceptions, visible components such as covers, arms, fasteners, and finish plates are available in plated finishes. Tracks are painted to complement the plated finish. Hidden assemblies such as cylinders and mounting plates are supplied with a powder coated finish. Plated finishes are available at additional cost.

For installations where a higher level of protection against weathering is required, LCN offers a special rust inhibiting (SRI) process at an additional cost. Metal components receive an SRI pretreatment and a standard or custom powder coat finish. The SRI process with a powder coat finish exceeds the protection level available with powder coated parts. SRI can not be ordered with plated or anodized finishes. All closers must be shipped with a finish.

INSTALLATION PROCESS?
Before installation of the door closer;

- Review the installation instructions provided with the door closer.
- Verify the desired installation and template with the hardware schedule. Review other applied door hardware for possible interference.
- Verify that the frame attachments and door hinges or pivots are securely installed.
- Verify that the door is hung properly and operates smoothly through its entire range of opening. Misalignment, sagging or other conditions that prevent free movement of the door must be corrected prior to installation of the door closer.
- LCN recommends < 1/4 lb to open the door before installing closers for ADA applications.
- Check latching mechanisms for proper operation and release.
- Verify that the door and frame have specified reinforcements.
- Verify that all required tools are available.

Complete the installation by;

- Follow the installation instructions and use fasteners provided with the closer.
- Using the template provided with the closer, layout, drill and tap (for metal screws) the required mounting holes. Be sure to use the proper size drill bit and tap to ensure maximum holding power by the screws.
- For closers with adjustable spring power, adjust the cylinder spring power based on the width of the door as described in the installation instructions.
- The hydraulic back check, main speed and latch speed regulation adjustments of the door closer have been adjusted at the factory to meet normal installation conditions. If further adjustments are required to the hydraulic regulation, follow the directions included with the installation instructions.
- Lightly wipe the cover and arm surfaces with a soft, clean, dry cloth to remove any dirt or smudges that occurred during the installation.
### Arm Options

- **STD** - Standard Arm
- **REG** - Regular Arm
- **Rw/PA** - Regular Arm with Parallel Arm Shoe
- **R/62A** - Regular Arm with Auxiliary Parallel Arm Shoe
- **H** - Hold Open Arm
- **Hw/PA** - Hold Open Arm with Parallel Arm Shoe
- **LONG** - Long Arm
- **XLONG** - Extra Long Arm
- **HLONG** - Hold Open Long Arm
- **EDA** - Extra Duty Arm
- **EDAw/62G** - Extra Duty Arm with Thick Hub Shoe
- **HEDA** - Hold Open Extra Duty Arm
- **HEDAw/62G** - Hold Open Extra Duty Arm with Thick Hub Shoe
- **CUSH** - Cush-n-Stop Arm
- **HCUSH** - Hold Open Cush-n-Stop Arm
- **SCUSH(SCNS)** - Spring Cush-n-Stop Arm
- **SHCUSH(SHCNS)** - Spring Hold Open Cush-n-Stop Arm
- **SF** - Swing Free Arm
- **DE** - Double Egress Arm
- **FL** - Fusible Link Arm

### Control Box Options

- **SC** - Standard Control Box

### Cylinder Options

- **STD** - Standard Cylinder
- **DEL(DA)** - Delayed Action Cylinder
- **AVB** - Advanced Variable Backcheck
- **B80** - Bypass 80 Degree ME Cylinder
- **B140** - Bypass 140 Degree ME Cylinder
- **TEL** - Telephone Cylinder

### Cover Option

- **STD** - Standard Plastic Cover
- **MC** - Metal Cover
- **FC** - Full Cover
- **CL** - Cover Length
- **DSI** - Designer Series Cover

### Track Options

- **STD** - Standard Track
- **HO** - Hold Open Track
- **BUMPER** - Track with Bumper
- **HBUMPER** - Hold Open Track with Bumper

### Fastener Pack Options

- **WMS** - Wood & Machine Screws
- **TBWMS** - Thru-Bolt, Wood & Machine Screws
- **SRT** - Self Reaming & Tapping Screws
- **TBSRT** - Thru-Bolt, Self Reaming & Tapping Screws
- **TORX** - ‘TORX’ Machine Screws
- **TBTRX** - Thru-Bolt, ‘TORX’ Machine Screws
- **UNIV** - Universal Screw Pack

### Motor Gearbox Options

- **SF** - Standard Force Motor Gearbox

### Powder Coat Finishes

- **AL** - Aluminum
- **DKBRZ** - Dark Bronze
- **STAT** - Statuary Bronze
- **LTBRZ** - Light Bronze
- **BLK** - Black
- **BRASS** - Brass

### Miscellaneous Terms

- **ELR** - Extra Long Rod
- **SRI** - Special Rust Inhibitor
- **SE** - Single Point Electronic
- **ME** - Multi-Point Electronic
- **PAH** - Parallel Arm Holder
- **HSA** - Hold Open / Scanner Activated
- **ES** - Electric Strike Relay (Control Boxes)
- **S** - Sequential (Control Boxes)
- **RF** - Radio Frequency
- **TJ** - Top Jamb
- **PA** - Parallel Arm
- **G** - Flush Ceiling
- **T** - Track
- **DPS** - Door Position Switch
- **LR** - Long Rod
- **ST** - Special Template
- **RH** - Right Hand
- **LH** - Left Hand
- **HL** - Header Length
- **DD** - Double Door Header
- **POS** - Positive Mechanical Stop
- **BKY** - Panic Breakaway Stop
- **XP** - Extra Protection
A

ADA – Americans with Disabilities Act.

ADVANCED VARIABLE BACKCHECK CYLINDER (AVB) – Optional cylinder that starts backcheck at about 45° (2A) instead of the normal 75°(2).

ANODIZED – An electrochemical process that thickens and toughens the protective oxide on aluminum metal.

ANSI – American National Standards Institute publishes standards for commercial hardware. A156.4 is the basic door closer standard.

APPLIED STOP – Surface mounted stop attached to a cased opening frame.

ARCH TOP DOOR – Any door with an arched top rail.

ARMATURE EXTENSION – Standard metal extensions available for SEM magnets where the armature does not reach the magnet. Available in 1/2", 3/4", 1", 2", 4" or a kit including all sizes.

AUTOEQUALIZER™ – An LCN specific term for an electric or a pneumatic power operator. System is low-energy & carries a two-year warranty.

AUTOMATIC OPERATOR – A term used to describe a type of automated opening system.

AUXILIARY DOOR STOP – Hardware designed and installed to limit the swing of a door.

B

BACKCHECK – Hydraulic circuit designed to cushion the doors opening swing at about 75° Standard on all LCN closers.
**Glossary of terms**

**BACKCHECK SELECTOR VALVE** – Valve used to provide proper backcheck location for 4040XP and 4050 parallel arm mounting.

**BLADE STOP** – Narrow frame stop that will not accept a parallel arm shoe.

**BLADE STOP SPACER** – Spacer lowers a parallel arm 1/2” so the arm will clear a blade stop.

**BLOW-OPEN** – A type of control box that is used for a smoke evacuation system. Can be used with or without a normal power operator system.

**BRIGHT METALLIC** – Custom powder coat finish, which resembles that of US26 or US26D plated finish.

**BYPASS CYLINDER** – ME cylinder that will not hold-open within a specified range of door swing.

**CASED OPENING** – Frame section without stops.

**CAST ALUMINUM** – Material used in producing LCN’s competitively priced door closers.

**CAST IRON** – Material used in producing high quality door closers.

**CLEARANCE** – Distance from a PA SHOE to the push side of door or distance from the pull side of door to the wall on 90° installations.

**CLOSING FORCE** – Energy generated by a closer to close and latch the door.

**CONTROL BOX, Standard, 9100 SERIES** – Microprocessor door control without Power Boost or built in power supply.

**CONTROL BOX, 2800, 9500 SERIES** – Microprocessor door control, includes adjustment for opening, closing & backcheck speeds. Features Push ‘N Go & Power Boost.

**CONTROL BOX, 7900 SERIES** – Heavy duty, surface mounted control box that contains one or two electrically controlled pneumatic circuits.

**CONTROLLER ASSEMBLY** – Digital control suite used in the LCN electric power operator. Includes adjustments for opening force and opening speed.

**CONCEALED IN DOOR** – Closer with cylinder concealed in the top rail of the door with either an exposed or concealed arm.

**CUSH SHOE SUPPORT** – Support provides fifth screw anchorage of CUSH shoes on frames with narrow push side reveals.

**CUSH-N-STOP ARMS (CUSH)** – Extra duty, parallel arm that includes a stop in the CUSH shoe.

**CUSTOM POWDER COAT (RAL)** – An optional powder coat finish. Currently, LCN offers a wide selection for special powder coat finishes. LCN uses a European color standard, referred to as an RAL #, to differentiate between finishes.

**CUTOUT** – Preparation of the top rail of a door or frame for concealment of the closer, arm or track.
**CYLINDER ASSEMBLY** – Main closer component complete with any mounting plates or electronics.

**CYLINDER ONLY** – Hydraulic cast iron cylinder.

**D**

**DEEP REVEAL** – Reveal deeper than what an arm will accommodate.

**DELAYED ACTION (DEL)** – Delays closing from maximum opening to approximately 75°.

**DESIGNER SERIES COVER (DS1)** – An aesthetically pleasing cover design that appeals to many types of facilities & architects.

**DOOR POSITION SWITCH (DPS)** – A security option specific to the 2210 Series closer. A door position switch is used to monitor the closed position of a door in an opening.

**DOUBLE DOOR HEADER** – One automatic electromechanical power operator and one manual door within the same header, for a pair of doors.

**DOUBLE ACTING** – Term used to describe door swing. A double acting frame does not have a stop thus allowing the door to swing 95° in both directions.

**DOUBLE EGRESS ARM (DE)** – Designed for pull side installation on double egress frames. Actual arm varies depending on selected closer.

**DOUBLE LEVER ARM** – Two-part arm hinged at the elbow that provides superior leverage. Used on hinge side, top jamb and parallel arm mountings, the geometry of the arm provides greater mechanical advantage to the closer.

**DOUBLE RABBET FRAME** – Frame with a recess or offset formed on both sides of a stop to receive a door.

**DROP PLATE** – Designed to mount a closer on top rail or head frame to meet special conditions or mounting surface dimensions that are below minimums.

**E**

**ELECTRIC STRIKE** – An optional, electronic latching device that replaces a regular lock strike in a doorframe that allows the door to open from a remote location or by special access equipment.

**ELECTRIC STRIKE RELAY (ES)** – An optional feature found in an LCN 7900 Series control box that can be used to control an electric strike.

**ELECTROHYDRAULIC POWER OPERATOR** – Power operator with an electrically controlled opening feature and hydraulic closing feature.

**ELECTROMECHANICAL POWER OPERATOR** – Power operator with an electrically controlled opening feature and closing feature.

**ESCUTCHEON** – An optional, protective or decorative plate that can be installed with many surface mounted actuators.
Glossary of terms

**EXTRA DUTY ARM (EDA)** – Double lever arm with both main and forearm made of solid forged steel for extra strength.

**EXTRA LONG ARM (XLONG)** – 4040XP Series double lever arm for exceptionally deep reveals or other special applications.

**F (LCN®) FAST™ POWER ADJUST** – A green dial located on the end of the spring tube on selected heavy duty closers. Designed to help installers accurately adjust the closer power to match the conditions of the entrance.

**FIFTH SCREW** – Mounting screw farthest from the door on a parallel arm shoe.

**FIFTH SCREW SPACER** – Supports PA shoe mounted on frame stop.

**FINISH PLATE** – Decorative plate applied to overhead concealed closer to conceal closer mounting plate and screws.

**FIRE SHIELD** – 22-gage steel liner mounts in the track mortise of the door’s top rail for 20 minute labeled wood doors.

**FLUSH CEILING** – Condition when the ceiling is at the same height as the top of the frame.

**FLUSH PANEL ADAPTER** – Adapter provides PA shoe mounting surface when door and frame are flush.

**FOREARM** – Arm part that connects main arm to the shoe attachments in a double lever arm system.

**FRAME DEPTH** – Face to face dimension of the frame.

**FRAME FACE** – Exposed part of frame parallel to face of the wall.

**FULL COMPLIMENT BEARINGS** – Low friction, high load needle bearings found in all LCN closers.

**FULL COVER (FC)** – Cover that encloses cylinder assembly except for shaft/arm attachment.

**FUSIBLE LINK ARM (FL)** – Releases hold-open function when exposed to high temperatures. 135°F and 165°F available.

**HANDED** – Closer or part designed for ONLY right or left swinging doors.

**HEAD FRAME** – Member of the frame above the door.
HEADER – Aluminum enclosure for motor gearbox & controller.

HINGE SIDE – Face of door and frame on which the hinge pivot point is located.

HINGE SIDE MOUNT – Mounting with the closer cylinder on the hinge side of the door top rail.

HINGE (PULL) SIDE MOUNT

HINGE SIDE REVEAL – Depth measured from the frame face to the pull side of the door face.

HINGE STILE – Vertical member of a door prepared for installation of hinges.

HOLD-OPEN ARM (H) – Double lever arm that provides hold-open function that is either adjustable at elbow or shoe.

HOLD-OPEN CLIP – Located in track to provide hold-open function for single lever arms.

HOLD-OPEN CUSH (HCUSH) – Parallel arm that features solid forged steel main arm and forearm with stop in soffit shoe. Uses control handle to select hold-open function.

HOLD-OPEN LONG ARM (HLONG) – Hold-open arm extended by a long head and tube for deep reveals.

HOLD-OPEN TRACK with BUMPER (HBUMPER) – Track with hold-open clip and bumper assembly installed.

HOLDER SCANNER-ACTIVATED (HSA) – Electrically controlled closer/holder with built-in scanner.

HYDRAULIC FLUID – Fluid metered by valve system to control door.

INDEPENDENT PAIR – Two automatic doors that function separately.

J

JAMB – The vertical member that forms the sides of a door frame. There is a hinge side jamb and a strike side jamb.

L

LABELED DOOR – Conforms to all applicable codes, requirements, and procedures governing fire rated doors and bears the manufacturer’s identification label.

LATCH SPEED – Separate adjustment to control the last few degrees of the door’s closing swing.

LOCK STILE – Vertical member of a door prepared for installation of a lock.

LONG ARM (LONG) – Extended arm for deep reveals or other special applications.

LOW ENERGY OPERATOR – A type of automated opener used on a door that should take approximately 5 seconds to open to 90°. Low Energy operators do not require safety devices or guide rails. Conforms to ANSI A156.19.

M

MAIN ARM – Connects to the cylinder in a double lever arm system.

MAIN SPEED – Separate adjustment to control closing swing of the door to within a few degrees of latch.

MAXIMUM OPENING – Furthest degree of door opening.


MOTOR CLUTCH – The geared assembly in an LCN electric power operator. Once activated, the motor clutch drives the door open.

MOTOR GEARBOX – Electromechanical drive unit.
MORTISE – Material removed from frame and/or top rail of door.

MOUNTING/FINISH PLATE – Plate with exposed mounting screws and finish applied.

MULTI-POINT HOLD-OPEN (ME) – Infinite hold-open points from 0° up to maximum opening.

NO DESTRUCT FEATURE – A feature specific to the motor clutch assembly portion of an LCN electric power operator. This feature does not allow the user to back drive the motor, which could cause damage to the unit.

NON-HANDED – Closer or part designed for both right and left hand swinging doors.

NON-SIZED – Cylinder assembly with spring power adjustable over a range of sizes.

OPENING FORCE – Force required to open the door against the closer’s spring power.

OVERHEAD CONCEALED – Closer with cylinder concealed in head frame and either a concealed or exposed arm.

PA SHOE ADAPTER – Adapter provides horizontal mounting for PA shoe on a flush door and frame.

PA SHOE – Attaches the forearm to the soffit for a parallel arm system.

PACKING NUT – A threaded part that holds the pinion in place. Usually, the LCN model number and date of manufacture are stamped into this part. The date of manufacture is important because the owner can determine if the cylinder is in or out of warranty.

PANIC BREAKAWAY STOP – An optional safety device that permits egress on in-swinging exterior doors by allowing them to swing out in case of an emergency. Used with overhead concealed, center pivoted in-swinging doors.

PARALLEL ARM – A push side mounted double lever arm system where main arm is parallel to the door when in the closed position.

PARALLEL ARM MOUNT

PARALLEL ARM HOLDER (PAH) – An item usually used on the inactive leaf of a pair of doors for hold-open where the active leaf has a closer installed.

PINION – Transfers rotary motion of the arm system to the piston. Also provides attachment of arms to closer.

PISTON – One of the internal pieces of a door closer. The piston is moved by the rotating pinion, which in turn compresses the spring.

POSITIVE MECHANICAL STOP – Door stop for overhead concealed, center pivoted out swinging doors.

PNEUMATIC – This type of LCN Automatic Operator is driven by an air source. The air source can be built into the control box or provided separately within the building.

POWER BOOST – Provides additional closing force to ensure latching.

POWER OPERATOR – A term used to describe a type of automated opening system. Refer to “Automatic Operators”.

POWDER COAT – A standard finishing process that provides a very durable, corrosion resistant covering to the majority of products that LCN offers. An LCN powder coat finish offers over four times the ANSI salt spray test of 25 hours.

PULL SIDE – Hinge side of door.
**PUSH SIDE** – Face of door on stop side of frame.

**PUSH ‘N GO** – Provides power opening after partial (5°) manual opening of door.

**Q QUICK FIX PLATE™** – Retrofit mounting plate for the LCN 1260 closer used for closer replacement in push/pull applications.

**R RABBET** – Recess or offset formed in the face to receive a door.

**RADIO FREQUENCY (RF)** – A method of actuating LCN Automatic Operators. A RF transmitter signals a RF receiver to open a door.

**REGULAR ARM** – A double lever, non hold-open arm.

**REGULATING SCREW** – Valve that adjusts flow of hydraulic fluid within cylinder to control door closing speed.

**REVEAL** – Depth measured from the frame face to the door face.

**ROD & SHOE** – Part of forearm that provides adjustable length feature for double lever arms.

**SELF-REAMING and TAPPING SCREW (SRT)** – Philips head screw with self-reaming and self-tapping capability used in mounting installations.

**SECOND CHANCE FEATURE** – A feature that allows the Automatic Operator two attempts at opening the door. If resistance is encountered on the first attempt, the operator will pause and then try a second time. This feature is standard on the LCN electric automatic operators.

**SEM** – SEM is short for ‘single-point electronic magnet’. An actual product number is required when ordering.

**SENTRONIC** – A general term for the fire/life safety products that are offered by LCN.

**SEQUENCE** – An option to the LCN series of automatic operators. This option allows a pair of vestibule doors to open one after the other.

**SHOE** – Attaches forearm to frame or door face in a double lever arm system.

**SIMULTANEOUS PAIR** – Two automatic doors that open at the same time.

**SINGLE POINT HOLD-OPEN (SE)** – Electrically controlled hold-open using a special track and single lever arm.

**SINGLE LEVER (STANDARD) ARM (STD)** – Directly connects cylinder and track/roller assembly on the door or frame.

**SINGLE RABBET FRAME** – Frame with a recess or offset formed on one side of a stop to receive a door.

**SIZED** – A closer with a specific closer power for proper door applications.

**SLIDER** – This part is used in conjunction with a track roller in a Sentronic track assembly.
SLIM LINE COVER – A cover that conceals the cylinder but exposes both pinion shafts.

SOFFIT – Horizontal surface of a frame between vertical stops on a double rabbet frame.

SOFFIT SHOE – Connects parallel arm shoe to soffit.

SPECIAL RUST INHIBITOR (SRI) – A special corrosion resistant pre-treatment that is available for most LCN closers. Adding SRI to the standard LCN powder coat finish gives the closer a tremendous advantage over a potentially corrosive environment.

SPECIAL TEMPLATE (ST) – A special template is usually a modification to a standard product. Either the product itself changes location in the opening or a component is modified from the standard offering to accommodate other hardware or door and frame dimensions.

SPRING CUSH ARM (SCUSH) – Non-handed parallel arm for abusive applications. Features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe.

SPRING HOLD-OPEN CUSH ARM (SHCUSH) – Non-handed parallel arm for abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe. Uses control handle to select hold-open function.

SPRING POWER – Closing force exerted by the spring inside the cylinder to close the door.

SPRING POWER ADJUSTMENT – Mechanical pre-loading of spring to adjust closing force.

SPRING TUBE – Part of the closer assembly that contains the spring.

STANDARD CYLINDER – Cylinder with main speed, latch speed, and backcheck adjustments.

STANDARD TRACK – Non hold-open track.

STOP – Part of frame against which the door closes.

STOP HEIGHT – Distance the stop extends below the frame face.

STOP HEIGHT

SWING FREE ARM – ME arm designed to allow free movement of the door without disengaging the holding mechanism.

SWING FREE ARM

T

TBSRT – Thru bolts and self-reaming and tapping screw package.

TBTRX – Thru bolts and TORX security machine screw package.

TBWMS – Thru bolt, wood and machine screw package.

THICK HUB SHOE – Substituted for soffit shoe on EDA arm to clear blade stop.

TOP JAMB – Mounting with closer installed on frame face.

TOP JAMB (PUSH SIDE) MOUNT

TOP RAIL – Horizontal top member of a door that connects the latch and hinge stiles. Height is measured from stop on push side.

TOP RAIL
TORX – Security machine screw with TORX drive and security pin for tamper resistant applications.

TRACK BUMPER – Mounts in track to cushion opening swing, but reduces maximum opening. This is not a substitute for a mechanical door stop.

TRANSFORMER – Electrical device to reduce voltage from 120V AC to 24V AC.

TRI-VOLTAGE – SEM magnets available with current inputs of 12v, 24v and 120v.

ULTRA LIQUID X – All weather fluid that does not change viscosity over a wide temperature range.

UNIVERSAL – A term used to describe a door closer. Closers of this nature are non-sized and non-handed.

VESTIBULE – A small lobby or entrance that has at least two doors. One door is to the exterior and the other to the interior of the building. A variation could be multiple doors or banks of doors.

WMS – Standard wood and machine screw package.

WOOD MOUNTING CLIP – Designed to ease installation of concealed closer in wood frame.
Product selection guide

Surface mounted 4000 Series LCN closers feature a modern design engineered for each application, easy installation, and superior performance. This guide is based on the desired mounting of the closer.

Product comparison

This chart shows a basic comparison of 4000 Series closers. Refer to the specific closer chapter for complete details.

* INDICATES HIGH SECURITY CLOSER. REFER TO THAT SECTION OF THE CATALOG.
4000 Series surface mounted closers

APPLICATIONS
- For aluminum, hollow metal, or wood swinging doors and frames.
- Can be used with hinge or pivot mounted door.
- Adapter plates and other installation accessories available for unusual conditions.

FEATURES COMMON TO 4000 SERIES
- Each closer (except 4050, 4050T, 4040XP, 4040XPT, 4030, 4030T) is designed for a specific mounting: hinge side, top jamb, or parallel arm. 4040XP closer with regular or hold-open arm mounts hinge side or top jamb. 4030, 4040XP and 4050 regular parallel arm closers include 62PA SHOE required to parallel arm mount either regular or hold-open arm.
- Handled for right or left swinging doors, except for 4000T, 4030, 4030T, 4040XP, 4050, 4050T and 4040XPT.
- Closers to meet ADA reduced opening force requirements except 4000T.
- Adjustable hydraulic backcheck cushions opening swing prior to 90°.
- Separate regulation of general closing speed and latching speed.
- Joints in regular arm and shoe adapt to uneven trim.
- Reversible shoe to boost latching power on double lever arms.
- Available in a wide range of standard or optional custom powder coat finishes to blend with door and frame.
- Plated finishes available as an option to accent door and frame.
- Not designed for exterior mounting or exposed to elements.

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
30 year limited warranty; 25 year limited warranty (4050). See General Information Section for complete warranty details.

SPECIFICATIONS
Refer to “SPECIFICATIONS” section for suggested architectural specifications.

MATERIALS
- High strength cast iron or cast aluminum (4050) cylinder.
- Forged steel main arms.
- One piece forged steel piston.
- Double heat treated pinion.
- LCN’s all weather “Liquid X” fluid 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 arm (track style) closers.

FINISHES
- Available in six standard or 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 R1943.
Tested and certified under ANSI Standard A156.4 Grade One. 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 10C. Contact LCN for specific details on door closer fire ratings.

FASTENERS
4010, 4010T, 4020, 4020T, 4040XP, 4040XPT, 4050, 4050T, 4110, 4110T Series closers are shipped with: A standard SELF-REAMING and TAPPING SCREW (SRT) pack that contains Phillips head SRT screws to install the closer. 4000T series closers are shipped with: A standard WOOD and MACHINE SCREW (WMS) pack that contains Phillips head wood and machine screws to install the closer. 4030, 4030T series closers are shipped with: A standard WOOD and SELF-TAPPING MACHINE SCREW (WMS) pack that contains Phillips head wood and self-tapping machine screws to install the closer. Standard LCN thru bolts (TB) can be installed on 1-3/4” (44 mm) thick doors with 1/4-20 machine screws. Optional thru bolt (TB) sizes are available for 1-5/8” (41 mm) or 1-3/8” (35 mm) door thickness, but this must be specified when ordering.

Notes:
1. For Thru Bolts, specify door thickness if other than 1-3/4” (44mm), represented in diagram as dimension “X”.
2. Phillips head, metric machine screws are available, please specify.
3. LCN recommends the use of wood screws, available in optional WMS screw packs, for wood door applications.

MAINTENANCE
Closers mounted according to LCN installation instructions require no periodic maintenance or adjustments.
The 4010 is LCN’s best performing heavy duty closer designed specifically for institutional and other rugged high traffic applications.

**Certifications**
- Grade 1 - ANSI A156.4, 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
- 11/16” Diameter Double Heat Treated Pinion Journal

**Fluid**
- All Weather Fluid

**Handing**
- Handed

**Templating**
- Peel-n-Stick templates - 2-1/2” x 6” Mounting Hole Pattern

**Size**
- Adjustable 1-5 or Sized 6

**Warranty**
- 30 years

**Cover**
- Plastic, Standard
- Metal, Optional

**Fasteners**
- Self Reaming and Tapping Screws (SRT)

**Mounting**
- Hinge (Pull 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

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

![4010 Series Features](image-url)

- **AVAIL able**
- **NOT AVAILABLE**

* Closer available with less than 5.0 lbs. opening force on 36” door.
** Maximum opening/hold-open point with standard template.

**ARM FUNCTION**
- 140°
- 140°
- 140°
- 140°
- 140°
- 140°
- 140°
- 140°
- 140°
- 140°

LCN Door Control Catalog
**4010 Series**

**Mounting details**

**Hinge (Pull) Side Mounting**

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

- **Auxiliary Stop**
  Recommended at hold-open point or where a door cannot swing 140°

- **Reveal**
  Should not exceed 3/4” (19 mm). Should not exceed 1/8” (3 mm) for Fusible link arm

- **Top Rail**
  - Less than 3-3/4” (95 mm) requires PLATE, 4010-18
  - Plate requires 2” (51 mm) minimum
  - Clearance of 2-1/4” (57 mm) behind door required for 90° installation

- **Delayed Action**
  - Add suffix “DEL” to selected cylinder
  - Not available with 4016 cylinder
  - Delays closing from maximum opening to approximately 70°.
  - Delay time adjustable up to approximately 1 minute

- **Maximum Opening**
  Can be templated for:
  - 100°:  A = 5-15/16” (151 mm)
    B = 11-15/16” (303 mm)
  - 140°:  A = 4-3/16” (106 mm)
    B = 10-3/16” (259 mm)

  Hold-open points up to maximum opening with hold-open arm

- **Arm Clearance**
  - Regular arm:  C = 1-1/16” (27 mm)
  - Hold-open arm:  C = 1-3/8” (35 mm)
  - Fusible link arm requires:
    C = 1-5/8” (41 mm)

*Note:
- Hold-open points up to maximum opening with hold-open arm*
### Cylinders

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Feature</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>4011(6)-3071</td>
<td>Cast Iron Cylinder Assembly</td>
<td>Handed, Standard</td>
<td>Handed</td>
</tr>
</tbody>
</table>

### Covers

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Feature</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>4010-72</td>
<td>Plastic Cover</td>
<td>Non-handed, Standard</td>
<td>Non-handed</td>
</tr>
<tr>
<td>4010-72MC</td>
<td>Metal Cover</td>
<td>Handed, Required for plated finishes and custom powder coat finishes</td>
<td>Handed</td>
</tr>
</tbody>
</table>

### Installation Accessories

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Feature</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>4010-18</td>
<td>Plate</td>
<td>Required where top rail is less than 3-3/4˝ (95 mm)</td>
<td>Standard</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Requires minimum 2˝ (51 mm) top rail</td>
<td></td>
</tr>
</tbody>
</table>

### Arms

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Feature</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>4010-3077</td>
<td>Regular Arm</td>
<td>Non-handed</td>
<td>Non-handed</td>
</tr>
<tr>
<td>4010-3049</td>
<td>Hold-Open Arm</td>
<td>Handed, Provides hold-open function, adjustable at elbow</td>
<td>Handed</td>
</tr>
<tr>
<td>4010-3049FL</td>
<td>Fusible Link Arm</td>
<td>Handed, Releases hold-open function when exposed to temperatures above 165°F. 1/8˝ (3 mm) maximum reveal</td>
<td>Handed</td>
</tr>
</tbody>
</table>

**NOTE:** Check local codes before specifying FL arms. NOT A life safety product!
How-to-order 4010 Series closers

1. Select cylinder size
   - 4011 (adjustable from size 1 to 5)
   - 4016 (DEL not available)
2. Specify hand
   - RH
   - LH
3. Select finish
   - Standard Powder Coat
   - Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass

Closer options

Cylinder
   - Delayed Action (DEL)
Cover
   - Metal (MC)
Arm
   - Hold-Open (H)
   - Fusible Link, 165°F (FL)
Finish
   - Custom Powder Coat (RAL) (handed metal cover required)
   - Plated Finish, US (handed metal cover required)
   - SRI primer (use with powder coat finishes only)

Screw Pack
   - TB* & SRT Screw (TBSRT)
   - Wood & Machine Screw (WMS)
   - 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, 4010-18
   - Special Template
      - ST

Table of sizes

- Select closer based on width of door
- The spring power of non-sized 4011 cylinder is adjustable from size 1 through size 5 and is shipped set to size 3
- Sized 4010 Series cylinders available in size 6
- Delayed action not available with 4016 cylinder

Reduced opening force 4010 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 effecting closing power.

<table>
<thead>
<tr>
<th>Exterior (and Vestibule) door width</th>
<th>24” (610mm)</th>
<th>30” (762mm)</th>
<th>36” (914mm)</th>
<th>42” (1067mm)</th>
<th>48” (1219mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4011</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4016</td>
<td>minimum door width</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interior door width</th>
<th>24” (610mm)</th>
<th>34” (864mm)</th>
<th>36” (914mm)</th>
<th>48” (1219mm)</th>
<th>54” (1372mm)</th>
<th>60” (1524mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4011</td>
<td>size 2</td>
<td>size 3</td>
<td>size 4</td>
<td>size 5</td>
<td>size 6</td>
<td></td>
</tr>
<tr>
<td>4016</td>
<td></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.
* Adjustable Size 1 thru 5.

<table>
<thead>
<tr>
<th>DOOR WIDTH</th>
<th>36”</th>
<th>42”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0* lbs.</td>
<td>4011</td>
<td>4011</td>
<td>4011</td>
</tr>
<tr>
<td>8.5* lbs.</td>
<td>4011</td>
<td>4011</td>
<td>4011</td>
</tr>
</tbody>
</table>

* Maximum opening force.
The 4010T is LCN’s best performing heavy duty track closer designed specifically for interior doors in institutional and other rugged high traffic applications.

### Certifications
- Grade 1 - ANSI A156.4, 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
- 11/16” Diameter Double Heat Treated Pinion Journal

### Fluid
- All Weather Fluid

### Handing
- Handed

### Templating
- Peel-n-Stick templates - 2-1/2” x 6” Mounting Hole Pattern

### Size
- Sized 1, 3 or 4

### Warranty
- 30 years

### Cover
- Plastic, Standard
- Metal, Optional

### Fasteners
- Self Reaming and Tapping Screws (SRT)

### Mounting
- Hinge (Pull Side)

### Arms
- Standard Arm and Track with Roller

### 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.

![Diagram of 4010T Series Features](image)

*Available with less than 5.0 lbs. Opening force @ 36°

*Maximum opening/hold-open point with standard template.
### Mounting details

#### Hinge (Pull) Side Mounting

<table>
<thead>
<tr>
<th>Component</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Butt Hinges</strong></td>
<td>Should not exceed 5&quot; (127 mm) in width</td>
</tr>
<tr>
<td><strong>Auxiliary Stop</strong></td>
<td>Recommended at hold-open point or where a door cannot swing 180°. Note: Optional track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop</td>
</tr>
<tr>
<td><strong>Reveal</strong></td>
<td>Should not exceed 1/8&quot; (3 mm) for standard arm</td>
</tr>
<tr>
<td></td>
<td>Should not exceed 3-5/16&quot; (84 mm) for double egress arm</td>
</tr>
<tr>
<td><strong>Top Rail</strong></td>
<td>Less than 3-3/4&quot; (95 mm) requires PLATE, 4010T-18</td>
</tr>
<tr>
<td></td>
<td>Note: Plate requires 2&quot; (51 mm) minimum</td>
</tr>
<tr>
<td><strong>Head Frame</strong></td>
<td>Requires 1-1/2&quot; (38 mm) minimum</td>
</tr>
<tr>
<td><strong>Clearance</strong></td>
<td>2-1/4&quot; (57 mm) behind door required for 90° or 180° installation</td>
</tr>
<tr>
<td><strong>Maximum Opening</strong></td>
<td>Templating allows 180° with standard arm, limited to 120° when optional bumper is installed</td>
</tr>
<tr>
<td></td>
<td>Consult factory if door will be held open at 180°</td>
</tr>
<tr>
<td></td>
<td>Variable hold-open angles with infinite options</td>
</tr>
</tbody>
</table>

**Notes:**
- Many track style door closers are capable of allowing 180° of door swing.
- The majority of track style closers are at their weakest closing force in the 180 – 130° range.
- Consult factory for applications where door must swing 180°.
**Accessories**

### Cylinders

**4011T(3)(4)-3071**
- Cast Iron Cylinder Assembly
- Handed
- Standard

### Covers

**4010T-72**
- Plastic Cover
- Non-handed
- Standard

**4010T-72MC**
- Metal Cover
- Handed
- Required for plated finishes and custom powder coat finishes
- Optional

### Arms

**4010T-3077T**
- Standard Arm
- Handed
- Does not include track roller

**4010T-3077DE**
- Double Egress Arm
- Handed
- For double egress doors and frames
- Does not include track roller
- Maximum reveal is 3 5/16˝ (84mm)
- Optional

### Tracks

**4010T-3038**
- Standard Track
- Non-handed
- Non hold-open
- Will accept hold-open clip and/or bumper assembly
- Standard

**4010T-3038B**
- Standard Track with Bumper
- Non-handed
- Non hold-open
- With bumper assembly installed
- Will accept hold-open clip
- Optional

**4010T-3038H**
- Hold-Open Track
- Non-handed
- With hold-open clip installed
- Will accept bumper assembly
- Optional

**4010T-3038HB**
- Hold-Open Track with Bumper
- Non-handed
- With hold-open clip and bumper assembly installed
- Optional
**Installation Accessories**

**4010T-18**  
Plate  
- Required where top rail is less than 3-3/4” (95 mm)  
- Requires minimum 2” (51 mm) top rail

**4010T-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

**4010T-3054**  
Hold-Open Clip  
- Mounts in track to provide hold-open function)  
- Hold-open point controlled by clip location  
- Consists of clip and mounting screws  
- Requires 4010T-3034H Track Roller

**4010T-3034**  
Track Roller  
- Quiet, low friction roller assembly  
- Shoulder dimension “X” = 1/16” (2mm)  
- Spring-loaded hold-open mechanism

**4010T-3034H**  
Track Roller  
- Quiet, low friction roller assembly  
- Shoulder dimension “X” = 1/16” (2mm)  
- Spring-loaded hold-open mechanism
How-to-order 4010T Series closers

1. Select cylinder size
   - 4011T (ADA)
   - 4013T
   - 4014T

2. Specify hand
   - RH
   - LH

3. Select finish
   - Standard Powder Coat __________
     - Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.

Closer will be shipped with:
- Standard cylinder
- Standard cover
- Standard arm
- Track roller
- Standard track
- Self-reaming and tapping screws unless options listed below are selected.

Closer options

<table>
<thead>
<tr>
<th>Cover</th>
<th>Arm</th>
<th>Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal (MC)</td>
<td>Double Egress (DE) **</td>
<td>Regular with Bumper (BUMPER)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hold-Open (HO)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hold-Open with Bumper (HBLUMPER)</td>
</tr>
</tbody>
</table>

** Note: Using this closer on double-egress doors and frames requires the closer to be ordered with a “DE” suffix (i.e., 4014T DE). Standard “DE” option will accommodate pull side reveals up to 3-5/16”. For deeper reveals, consult factory.

Screw Pack
- TB* & SRT Screw (TBSRT)
- Wood & Machine Screw (WMS)
- 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, 4010T-18
- Special Template
  - ST- __________

Finish
- Custom Powder Coat (RAL) __________
  - (handed metal cover required)
- Plated Finish, US __________
  - (handed metal cover required)
- SRI primer (use with powder coat finishes only)

** Note: Using this closer on double-egress doors and frames requires the closer to be ordered with a “DE” suffix (i.e., 4014T DE). Standard “DE” option will accommodate pull side reveals up to 3-5/16”.
For deeper reveals, consult factory.

Table of sizes

- Select closer based on width of door
- Sized 4010T Series cylinders available in size 1, 3 or 4
- Closing power of all 4010T 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>4011T*</td>
<td>size 1</td>
<td>size 3</td>
<td>size 4</td>
<td></td>
</tr>
<tr>
<td>4013T</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4014T</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Minimum door width. To meet ADA, refer to chart below.

Indicates recommended range of door width for closer size.

** Note: Using this closer on double-egress doors and frames requires the closer to be ordered with a “DE” suffix (i.e., 4014T DE). Standard “DE” option will accommodate pull side reveals up to 3-5/16”. For deeper reveals, consult factory.

Reduced opening force 4010T 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 AUTOMATIC OPERATORS section for information on systems that meet reduced opening force requirements without effecting closing power.

<table>
<thead>
<tr>
<th>DOOR WIDTH</th>
<th>36˝</th>
<th>42˝</th>
<th>48˝</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8.5* lbs.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>5.0* lbs.</td>
<td>4011T</td>
<td>4011T</td>
</tr>
</tbody>
</table>

* Maximum opening force.
The 4020 is LCN’s best performing heavy duty closer designed specifically for institutional and other rugged high traffic applications.

### Certifications
- Grade 1 - ANSI A156.4, 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
- 11/16” Diameter Double Heat Treated Pinion Journal

### Fluid
All Weather Fluid

### Handing
Handed

### Templating
Peel-n-Stick templates - 2-1/2” x 6” Mounting Hole Pattern

### Size
Adjustable 1-5 or Sized 6

### Warranty
30 years

---

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

---

**Features**

- **4020 Series**
- LCN’s best performing heavy duty closer designed specifically for institutional and other rugged high traffic applications.

**Certifications**
- Grade 1 - ANSI A156.4, 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
- 11/16” Diameter Double Heat Treated Pinion Journal

**Fluid**
All Weather Fluid

**Handing**
Handed

**Templating**
Peel-n-Stick templates - 2-1/2” x 6” Mounting Hole Pattern

**Size**
Adjustable 1-5 or Sized 6

**Warranty**
30 years

---

**Cover**
- Plastic, Standard
- Metal, Optional

**Fasteners**
Self Reaming and Tapping Screws (SRT)

**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

---

**MOUNTING**
- Image/Pull/Side
- Top Jamb/Push/Pull
- Parallel Arm
- Stop Face

**FINISH**
- Powder Coat
- Plastic
- Metal

**COVER**
- Non-Handed
- Non-Size
- Accessibility
- Delayed Action

**CYLINDER**
- Regular (D/DB/D9)
- Standard (DS)
- Hold Open (HD)
- Adjustable (AD)
- Mulitple Cylinder (MC)

**ARM FUNCTION**
- 180°
- 140°
- 140°
- 140°

---

* Available
○ Not Available

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

* Maximum opening/hold-open point with standard template.

** Advanced Variable Backcheck.
### 4020 Series

#### Mounting details

**Top Jamb (Push) Side Mounting**

---

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

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

**Reveal**
- 2-9/16" (65 mm) allows 180° opening with regular arm
- 4-13/16" (122 mm) allows up to 140° opening with regular arm
- 8” (203 mm) allows up to 140° opening with LONG ARM where standard rod and shoe is replaced with optional long rod and shoe (4020-79LR)

**Head Frame**
- Less than 3-7/16” (87 mm) requires PLATE, 4020-18 Use PLATE, 4020-18G for flush ceiling condition.
- Either plate requires 1-3/4” (44 mm) frame minimum.

**Top Rail**
- Requires minimum 1-1/2” (38 mm)
- Closer on 4020-18 plate requires 2” (51 mm) minimum
- Closer on 4020-18G plate requires 2-3/4” (70 mm) minimum

**Delayed Action**
- Add suffix “DEL” to selected cylinder.
- Not available with 4026 cylinder
- Delays closing from maximum opening to approximately 75°
- Delay time adjustable up to approximately 1 minute

**Maximum Opening**
- Can be templated for:
  - 100°: A = 6” (152 mm)  B = 12 3/8” (314 mm)
  - 140°: A = 4 3/8” (102 mm)  B = 10 3/8” (264 mm)
  - 180°: A = 2” (51 mm)  B = 8 3/8” (213 mm)

**Notes:**
- Hold-open points up to maximum opening or 140°, whichever is less, for hold-open or fusible link arm
- For hold-open beyond 140°, use 4110 Series closer
### Accessories

#### Cylinders

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Handed</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>4021(6)-3071</td>
<td>Cast Iron Cylinder Assembly</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

#### Covers

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Handed</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>4020-72</td>
<td>Plastic Cover</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>4020-72MC</td>
<td>Metal Cover</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

#### Arms

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Handed</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>4020-3077</td>
<td>Regular Arm</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>4020-3077L</td>
<td>Long Arm</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>4020-3049</td>
<td>Hold-Open</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>4020-3049FL</td>
<td>Fusible Link</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

#### Installation Accessories

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Handed</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>4020-18</td>
<td>Plate</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>4020-18G</td>
<td>Plate</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

**NOTE:** Check local codes before specifying FL arms. NOT A life safety product!

---

*LCN Door Control Catalog*  
*Phone: 877-671-7011*  
*Fax: 800-248-1460*  
*www.allegion.com/us*  
*009426 rev. 07/17*
How-to-order 4020 Series closers

1. Select cylinder size
   - 4021 (adjustable from size 1 to 5)
   - 4026 (DEL not available)

2. Specify hand
   - RH
   - LH

3. Select finish
   - Standard Powder Coat
   - Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.

Closer options

Cylinder
   - Delayed Action (DEL)

Cover
   - Metal (MC)

Arm
   - Hold-Open (H)
   - Fusible Link, 165°F (FL)

Finish
   - Custom Powder Coat (RAL) (handed metal cover required)
   - Plated Finish, US (handed metal cover required)
   - SRI primer (use with powder coat finishes only)

Screw Pack
   - TB* & SRT Screw (TBSRT)
   - Wood & Machine Screw (WMS)
   - 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, 4020-18
   - Plate, 4020-18G

Special Template
   - ST-__________

Table of sizes

- Select closer based on width of door
- The spring power of non-sized 4021 cylinder is adjustable from size 1 through size 5 and is shipped set to size 3
- Sized 4020 Series cylinders available in size 6
- Delayed action not available with 4026 cylinder

Reduced opening force 4020 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 AUTOMATIC OPERATORS section for information on systems that meet reduced opening force requirements without effecting closing power.

<table>
<thead>
<tr>
<th>Door Width</th>
<th>36”</th>
<th>42”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td>24”</td>
<td>8.5 lbs.</td>
<td>4021</td>
<td>4021</td>
</tr>
<tr>
<td>30”</td>
<td>5.0 lbs.</td>
<td>4021</td>
<td>4021</td>
</tr>
</tbody>
</table>

* Maximum opening force.

<table>
<thead>
<tr>
<th>Exterior (and Vestibule) door width</th>
<th>24”</th>
<th>30&quot;</th>
<th>36”</th>
<th>42”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td>24”</td>
<td>610mm</td>
<td>762mm</td>
<td>914mm</td>
<td>1067mm</td>
<td>1219mm</td>
</tr>
<tr>
<td>30”</td>
<td>762mm</td>
<td>914mm</td>
<td>1067mm</td>
<td>1219mm</td>
<td>1372mm</td>
</tr>
<tr>
<td>36”</td>
<td>914mm</td>
<td>1067mm</td>
<td>1219mm</td>
<td>1372mm</td>
<td>1524mm</td>
</tr>
<tr>
<td>42”</td>
<td>1067mm</td>
<td>1219mm</td>
<td>1372mm</td>
<td>1524mm</td>
<td>1676mm</td>
</tr>
<tr>
<td>48”</td>
<td>1219mm</td>
<td>1372mm</td>
<td>1524mm</td>
<td>1676mm</td>
<td>1829mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interior door width</th>
<th>24”</th>
<th>34”</th>
<th>38”</th>
<th>48”</th>
<th>54”</th>
<th>60”</th>
</tr>
</thead>
<tbody>
<tr>
<td>24”</td>
<td>610mm</td>
<td>864mm</td>
<td>965mm</td>
<td>1219mm</td>
<td>1372mm</td>
<td>1524mm</td>
</tr>
<tr>
<td>30”</td>
<td>762mm</td>
<td>914mm</td>
<td>1219mm</td>
<td>1372mm</td>
<td>1524mm</td>
<td>1676mm</td>
</tr>
<tr>
<td>36”</td>
<td>914mm</td>
<td>1067mm</td>
<td>1372mm</td>
<td>1524mm</td>
<td>1676mm</td>
<td>1902mm</td>
</tr>
<tr>
<td>42”</td>
<td>1067mm</td>
<td>1219mm</td>
<td>1524mm</td>
<td>1676mm</td>
<td>1902mm</td>
<td>2042mm</td>
</tr>
<tr>
<td>48”</td>
<td>1219mm</td>
<td>1372mm</td>
<td>1676mm</td>
<td>1902mm</td>
<td>2042mm</td>
<td>2243mm</td>
</tr>
</tbody>
</table>

Minimum door width

Indicates recommended range of door width for closer size.

* Adjustable Size 1 thru 5.
The 4020T is LCN’s best performing heavy duty track closer designed specifically for interior doors in institutional and other high traffic applications.

<table>
<thead>
<tr>
<th>Certifications</th>
<th>Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act</th>
</tr>
</thead>
</table>
| 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 |
| Templating | Peel-n-Stick templates - 2-1/2” x 6” Mounting Hole Pattern |
| Size | Sized 1, 3 or 4 |
| Warranty | 30 years |

### Features

**4020T Series**

The 4020T is LCN’s best performing heavy duty track closer designed specifically for interior doors in institutional and other high traffic applications.

| Cover | Plastic, Standard  
■ Metal, Optional |
| Fasteners | Self Reaming and Tapping Screws (SRT) |
| Mounting | Top Jamb (Pull Side) |
| Arms | Standard arm, track with roller |
| 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

Contact LCN Product Support for assistance.

- AVAILABLE
- NOT AVAILABLE

& Closer available with less than 5.0 lbs. opening force on 36” door.
* Maximum opening/hold-open point with standard template.
** Advanced Variable Backcheck.
### 4020T Series

#### Mounting details

**Top Jamb (Pull Side) 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°
  - Note: Optional track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop

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

**Head Frame**
- Less than 3-7/8” (98 mm), requires PLATE, 4020T-18
- Plate requires 1-3/4” (44 mm) minimum

**Clearance**
- 1-1/2” (38 mm) behind door required for 90° or 180° installation

**Maximum Opening**
- Templating allows 180° with standard track arm, limited to 100° with optional bumper installed
- Consult factory if door will be held open at 180°
- Variable hold-open angles with infinite options

---

**Notes:**
- Many track style door closers are capable of allowing 180° of door swing
- The majority of track style closers are at their weakest closing force in the 180° – 130° range
- Consult factory for applications where door must swing 180°
4020T-3071 Cast Iron Cylinder Assembly
- Handed
- Standard

4020T-72 Plastic Cover
- Handed
- Standard

4020T-72MC Metal Cover
- Handed
- Required for plated finishes and custom powder coat finishes
- Optional

4020T-3077T Standard Arm
- Handed
- Roller not included with arm

4020T-3038 Standard Track
- Non-handed
- Non hold-open
- Will accept hold-open clip and/or bumper assembly
- Standard

4020T-3038B Standard Track with Bumper
- Non-handed
- Non hold-open
- With bumper assembly installed
- Will accept hold-open clip
- Optional

4020T-3038H Hold-Open Track
- Non-handed
- With hold-open clip installed
- Will accept bumper assembly
- Optional

4020T-3038HB Hold-Open Track with Bumper
- Non-handed
- With hold-open clip and bumper assembly installed
- Optional

Right Hand Shown
Left Hand Shown
### Installation Accessories

**4020T-18 Plate**
- Required where head frame is less than 3-7/8" (98 mm)
- Requires minimum 1-3/4" (44 mm) frame face

**4020T-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

**4020T-3054 Hold-Open Clip**
- Mounts in track to provide hold-open function
- Hold-open point controlled by clip location
- Consists of clip and mounting screws
- Requires 4020T-3034H Track Roller

**4020T-3034H Track Roller**
- Quiet, low friction roller assembly
- Shoulder dimension "X" = 1/16" (2mm)
- Spring-loaded hold-open mechanism
How-to-order 4020T Series closers

1. Select cylinder size
   - 4021T (ADA)
   - 4023T
   - 4024T

2. Specify hand
   - RH
   - LH

3. Select finish
   - Standard Powder Coat
     - Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.

Closer will be shipped with:
- Standard cylinder
- Standard cover
- Standard arm
- Track roller
- Standard track
- Self-reaming and tapping screws unless options listed below are selected.

Closer options

Cover
   - Metal (MC)

Track
   - Standard with Bumper (BUMPER)
   - Hold-Open (HO)
   - Hold-Open with Bumper (HBUMPER)

Finish
   - Custom Powder Coat (RAL)
     (handed metal cover required)
   - Plated Finish, US
     (handed metal cover required)
   - SRI primer (use with powder coat finishes only)

Screw Pack
   - TB* & SRT Screw (TBSRT)
   - Wood & Machine Screw (WMS)
   - 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, 4010T-18

Special Template
   - ST- _________

Table of sizes

- Select closer based on width of door
- 4020T Series cylinders available in size 1, 3 or 4
- Closing power of all 4020T Series closers may be increased 15%
- Specify next higher size closer where strong drafts exist

Interior door width

<table>
<thead>
<tr>
<th>Interior door width</th>
<th>4021T*</th>
<th>4023T</th>
<th>4024T</th>
</tr>
</thead>
<tbody>
<tr>
<td>26”</td>
<td>size 1</td>
<td>size 3</td>
<td>size 4</td>
</tr>
<tr>
<td>660mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>864mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>965mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1219mm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Minimum door width

Indicates recommended range of door width for closer size.
The 4030 is a cast iron, universal closer designed specifically for doors in moderate traffic conditions. This versatile closer compliments the rest of the heavy duty 4000 Series and offers the choice of three mountings and multiple arm options.

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

**Body Construction**
- Cast Iron Body
- Full Complement Bearing
- 1-1/8” Diameter Piston
- 1/2” Diameter Single Heat Treated Pinion Journal

**Fluid**
- All Weather Fluid

**Handing**
- Non-Handed

**Templating**
- Peel-n-Stick templates - 1-23/32” x 6-17/16” Mounting Hole Pattern

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

**Warranty**
- 30 years

**Features**

**Cover**
- Metal, Standard

**Fasteners**
- Self Reaming and Tapping Screws (SRT)

**Mounting**
- Hinge (Pull Side), Top Jamb (Push Side), Parallel Arm (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

**Warranty**
- 30 years

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

---

**Available**
- Close 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.**

**Advanced Variable Backcheck**

---

LCN Door Control Catalog
### 4030 Series

#### Mounting details

**Hinge (Pull) Side 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°

**Reveal**
- Should not exceed 3/16” (5 mm) for regular arm or 3/16” (5 mm) for hold-open arm

**Top Rail**
- Requires 2-7/8” (73 mm) minimum

**Clearance**
- 1-3/4” (44 mm), behind door required for installation

**Maximum Opening**
- Can be templated for 180°
- Hold-open points up to maximum opening with hold-open arm
### Mounting details

#### 4030 Series

#### Top Jamb (Push Side) Mounting

<table>
<thead>
<tr>
<th>Butt Hinges</th>
<th>Should not exceed 5&quot; (127 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>
</tbody>
</table>
| Reveal | - up to 3-1/2" (89 mm) allows 180° opening  
- up to 7-11/16" (191 mm) with long arm allows for 140° opening |
| Top Rail | Requires 1-1/2" (38 mm) minimum from stop |
| Head Frame | - Less than 2-1/4" (57 mm) requires PLATE, 4030-18TJ  
- Plate requires 1-1/2" (38 mm) minimum |
| Maximum Opening | - Can be templated for 180°  
- Hold-open points up to maximum opening with hold-open arm |
**4030 Series**

**Mounting details**

### Parallel arm mount

- **Butt Hinges**: Should not exceed 5” (127 mm) in width
- **Auxiliary Stop**: Recommended at hold-open point or where a door cannot swing maximum opening
- **Clearance**:
  - For 4030-62PA shoe is 4” (102 mm) from door face
  - EDA arm is 5-1/2” (140 mm) from door face
- **Top Rail**:
  - Less than 5” (127 mm) measured from the stop requires PLATE, 4030-18PA
  - Plate requires 1-3/4” (44 mm) minimum
- **Stop Width**: Minimum 1” (25 mm)
- **Head Frame**: Flush or single rabatted requires PA SHOE ADAPTER, 4030-419
- **Blade Stop**: Clearance, requires 1/2” (13 mm) BLADE STOP SPACER, 4030-61
- **Auxiliary Shoe**:
  - 4030-62A allows installation of regular arm with overhead holder/stop
  - Special templating required
- **EDA Arm**: Requires SHOE SUPPORT, 4030-30 for fifth screw anchorage where reveal is less than 3-1/16” (78 mm)
- **Maximum Opening**:
  - REGULAR or HOLD-OPEN arms can be templated for 180°
  - EDA template allows 110° maximum opening
  - Hold-open points up to maximum opening with hold-open arm

**Notes:**
- 4030 closers ordered with EDA arms include 4030-201 FIFTH HOLE SPACER to support the shoe
- REGULAR or HOLD-OPEN arm mounting requires PA SHOE, 4030-62PA for regular or HOLD-OPEN arms. Add prefix “P” to closer description (eg. P4031.)
- P4031 closer includes 4030-201 FIFTH HOLE SPACER to support PA SHOE
CUSH mount

Spring CUSH mount
Spring CUSH dead stop points are approximately 5° greater than templated stop point.

Clearance
For CUSH or SPRING CUSH shoe is 5-1/2” (140 mm) from door face

Head Frame
Flush or rabitted requires CUSH FLUSH PANEL ADAPTER, 4030-419

CUSH or Spring CUSH ARM
Requires SHOE SUPPORT, 4030-30 for fifth screw anchorage where reveal is less than 3-1/16” (78 mm)

Maximum opening
CUSH and SPRING CUSH arms can be templated for maximum opening/hold-open point at:

<table>
<thead>
<tr>
<th>Angle</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>85°</td>
<td>3-5/8”</td>
<td>9-3/4”</td>
</tr>
<tr>
<td></td>
<td>(92 mm)</td>
<td>(248 mm)</td>
</tr>
<tr>
<td>90°</td>
<td>3”</td>
<td>9-1/8”</td>
</tr>
<tr>
<td></td>
<td>(76 mm)</td>
<td>(232 mm)</td>
</tr>
<tr>
<td>100°*</td>
<td>1-7/8”</td>
<td>8”</td>
</tr>
<tr>
<td></td>
<td>(48 mm)</td>
<td>(203 mm)</td>
</tr>
</tbody>
</table>

*100° mounting will not work with swing clear hinges.

Note:
- 4031 closers ordered with CUSH or SPRING CUSH arms include 4030-201 FIFTH HOLE SPACER to support the shoe
**4030 Series**

**Accessories**

### Cylinders

- **4031-3071** Cast Iron Cylinder Assembly
  - Non-handed
  - Standard

### Installation Accessories

- **4030-18TJ** Plate
  - Required for top jamb mounting where head frame is less than 2-1/4” (57 mm) or flush ceiling condition exists
  - Requires 1-1/2” (38 mm) minimum

- **4030-18PA** Plate
  - Required for parallel arm mounting where top rail is less than 5” (127 mm), measured from the stop
  - Requires 1-3/4” (44 mm) minimum

- **4030-30** CUSH Shoe Support
  - Provide anchorage for fifth screw used with CUSH arms where reveal is less than 3-1/16” (78 mm)

- **4030-61** Blade Stop Spacer
  - Lowers parallel arm shoe to clear 1/2” (13 mm) blade stop

### Covers

- **4030-72MC** Metal Cover
  - Non-handed
  - Standard

### Accessories

- **4030-62A** Auxiliary Shoe
  - Requires a top rail of 7” (178 mm)
  - Replaces -62PA for parallel arm mounting of regular arm with some overhead holder/stop
  - Optional

- **4030-419** PA Flush Panel Adapter
  - Provides horizontal mounting surface for PA or CUSH shoe on single rabbed or flush frame

- **4030-62PA** PA Shoe
  - Required for parallel arm mounting
Arms

4030-3077
Regular Arm
- Non-handed
- Mounts hinge side or top jamb
- P4031 closer includes PA SHOE, 4030-62PA is required for parallel arm mounting

4030-3077LD
Light Duty Arm
- Non-handed
- Mounts hinge side, top jamb or parallel arm (62PA required)
- Optional

4030-3077L
Long Arm
- Non-handed
- Includes LONG ROD AND SHOE, 4030-79LR for top jamb mount with deep reveals
- Optional

4030-3077LD
Light Duty Arm
- Non-handed
- Includes LONG ROD AND SHOE, 4030-79LR for top jamb mount with deep reveals
- Optional

4030-3049
Hold-Open Arm
- Non-handed
- Mounts hinge side, top jamb or parallel arm (62PA required)
- Hold-open adjustable at shoe
- Optional

4030-3049L
Long Hold-Open Arm
- Non-handed
- Includes LONG HEAD AND TUBE, 4030-3048L for top jamb mount with deep reveals
- Optional

4030-3077EDA
Extra Duty Arm
- Non-handed
- Extra duty arm features solid forged steel main and forearm for potentially abusive installations
- Optional

4030-3049EDA
Hold-Open EDA Arm
- Handed
- Arm, provides hold-open function adjustable at shoe
- Optional

4030-3077CNS
Cush-n-Stop® Arm
- Non-handed
- Solid forged steel main arm and forearm with stop in soffit shoe
- Optional

4030-3049CNS
Hold-Open CUSH Arm
- Non-handed
- Provides hold-open function with templated stop/hold-open points
- Handle controls hold-open function
- Optional

4030-3077SCNS
Spring CUSH Arm
- Non-handed
- For abusive applications
- Features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe
- Handle controls hold-open function
- Optional

4030-3049SCNS
Spring HCUSH Arm
- Non-handed
- For abusive applications
- Features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe
- Handle controls hold-open function
- Optional
How-to-order 4030 Series closers

1. Select finish
   - Standard Powder Coat
   - Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.

Closer options

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

Arm
   - Regular w/62PA (Rw/PA)
   - Regular w/62A (R/62A)
   - Long (LONG)
   - Hold-Open (H)
   - Hold-Open w/62PA (Hw/PA)
   - Long Hold-Open (HLONG)
   - Light Duty (LD)
   - Light Duty w/62A (LD/62A)
   - Light Duty w/62PA (LD/PA)
   - Light Duty Long (LDL)
   - EDA
   - HEDA (specify right or left hand)
   - Cush-N-Stop (CUSH)
   - HCush-N-Stop (HCUSH)
   - Spring Cush (SCUSH)
   - Spring HCush (SHCUSH)

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

Installation Accessories
   - Plate, 4030-18TJ
   - Plate, 4030-18PA
   - CUSH Shoe Support, 4030-30
   - Blade Stop Spacer, 4030-61
   - Auxiliary Shoe, 4030-62A
   - PA Flush Panel Adapter, 4030-419

Special Template
   - ST-

Table of sizes

- Non-sized 4031 cylinder is adjustable from sizes 1 to 4 and is shipped set to size 3.

<table>
<thead>
<tr>
<th>Exterior (And Vestibule) door width</th>
<th>26” 660mm</th>
<th>30” 762mm</th>
<th>36” 914mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>4031</td>
<td>size 3</td>
<td>size 4</td>
<td></td>
</tr>
</tbody>
</table>

Minimum door width

<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>4031</td>
<td>size 2</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.

Reduced opening force 4030 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 AUTOMATIC OPERATORS section for information on systems that meet reduced opening force requirements without effecting 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>4031</td>
<td>4031</td>
<td>4031</td>
</tr>
<tr>
<td>5.0* lbs.</td>
<td>4031</td>
<td>4031</td>
<td>4031</td>
</tr>
</tbody>
</table>

* Maximum opening force.
The 4030T is a single lever (track) arm, surface mounted closer designed for interior use on narrow head frames and top rails. The choice of three mountings and ease of installation offer a versatile solution to door control in moderate traffic applications. The 4030T compliments the heavy duty 4000 Series.

### Features

**4030T Series**

The 4030T is a single lever (track) arm, surface mounted closer designed for interior use on narrow head frames and top rails. The choice of three mountings and ease of installation offer a versatile solution to door control in moderate traffic applications. The 4030T compliments the heavy duty 4000 Series.

### Certifications

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

### Body Construction

- Cast Iron Body
- Full Complement Bearing
- 1-1/8” Diameter Piston
- 1/2” Diameter Single Heat Treated Pinion Journal

### Fluid

All Weather Fluid

### Handing

Non-Handed

### Size

Adjustable Spring Size 1-3

### Warranty

30 years

### Cover

Metal, Standard

### Fasteners

Self Reaming and Tapping Screws (SRT)

### Mounting

Pull side on door, pull side on frame and push side on door

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

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

Reveal  Should not exceed 7/32” (6 mm)

Top Rail  Requires 2-7/8” (73 mm) minimum

Clearance  1-3/4” (44 mm), behind door required for installation

Maximum Opening  Can be templated for 180°

Notes:
- Many track style door closers are capable of allowing 180° of door swing.
- The majority of track style closers are at their weakest closing force in the 180°-130° range.
- Consult factory for applications where door must swing 180°.
**Butt Hinges**  
Should not exceed 5” (127 mm) in width

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

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

**Top Rail**  
Requires 1” (25 mm) minimum

**Head Frame**  
Requires 2-7/8” (73 mm) minimum

**Maximum Opening**  
- Can be templated for 180°
- Consult factory if door will be held open at 180°
- Hold-open points up to Maximum opening point with hold-open option

**Notes:**
- Many track style door closers are capable of allowing 180° of door swing.
- The majority of track style closers are at their weakest closing force in the 180°-130° range.
- Consult factory for applications where door must swing 180°
**4030T Series**

**Mounting details**

**Stop Face (Push) Side Mounting**

<table>
<thead>
<tr>
<th>Description</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 at hold-open point or where a door cannot swing 110°</td>
</tr>
<tr>
<td>Reveal</td>
<td>Should not exceed 1-3/4” (44 mm)</td>
</tr>
<tr>
<td>Top Rail</td>
<td>Requires 4-1/8” (105 mm) minimum measured from the stop</td>
</tr>
<tr>
<td>Head Frame</td>
<td>Minimum 1-1/4” (32 mm)</td>
</tr>
<tr>
<td><strong>Maximum opening</strong></td>
<td>Can be templated for 110°</td>
</tr>
<tr>
<td></td>
<td>Hold-open points up to maximum opening with hold-open option</td>
</tr>
</tbody>
</table>

**Notes:**
- Many track style door closers are capable of allowing 180° of door swing.
- The majority of track style closers are at their weakest closing force in the 180°-130° range.
- Consult factory for applications where door must swing 180°.
## Cylinders

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>Handedness</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4031T-3071</td>
<td>Cast Iron Cylinder Assembly</td>
<td>Non-handed</td>
<td>Standard</td>
</tr>
</tbody>
</table>

## Covers

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>Handedness</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4030T-72MC</td>
<td>Metal Cover</td>
<td>Non-handed</td>
<td></td>
</tr>
</tbody>
</table>

## Arms

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>Handedness</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4030T-3077T</td>
<td>Standard Arm</td>
<td>Non-handed</td>
<td>Single lever mounts hinge side, top jamb or stop face. Track roller included.</td>
</tr>
</tbody>
</table>

## Tracks

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>Handedness</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4030T-3038H</td>
<td>Hold-Open Track</td>
<td>Non-handed</td>
<td>Hold-open track mounts on either side of the door. Comes with 4030T-3054 Hold-open clip. Optional.</td>
</tr>
</tbody>
</table>

## Installation Accessories

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4030T-3054</td>
<td>Hold-Open Clip</td>
<td>Mounts in track to provide hold-open function. Hold-open point controlled by clip location. Requires 4030T-3034H.</td>
</tr>
</tbody>
</table>
How-to-order 4030T Series closers

1. Select finish
   - Standard Powder Coat __________
     Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.

Closer options

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

Track
   - Hold-open (H)

Optional Screw Packs
   - TB*, Wood & Machine Screw (TBWMS)

Table of sizes

- Non-sized 4031T cylinder is adjustable from sizes 1 to 3 and is shipped set to size 3.

Reduced opening force 4030T 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 AUTOMATIC OPERATORS section for information on systems that meet reduced opening force requirements without effecting 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>4031T</td>
<td>4031T</td>
<td>4031T</td>
</tr>
</tbody>
</table>

*Maximum opening force.*
The 4040XP is LCN’s most durable and flexible heavy duty closer designed for institutional and other demanding high traffic applications.

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

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

### Fluid
- All Weather Liquid X Fluid

### Handling
- Non-Handed

### Templating
- Peel-n-Stick templates - 2-1/4” x 5” Mounting Hole Pattern

### Size
- Adjustable Spring Size 1-6, includes Patented Green Dial

### Warranty
- 30 years

---

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

---

### MOUNTING
- Hinge (Pull Side), Top Jamb (Push Side), Parallel Arm (Push Side)

### FINISH
- Powder Coat
- Plastic
- Metal

### COVER
- Plastic, Standard
- Metal, Optional

### CYLINDER
- Standard Single
- Hold Open
- EDMA
- CSA
- Single
- Double Egress

### ARM FUNCTION
- AVB
- DELAYED ACTION

---

Available with less than 5.0 lbs. opening force on 36” door.
- Maximum opening/hold-open point with standard template.
- Advanced Variable Backcheck.
- Delay feature incorporates standard 4040 cylinder (not XP).
### 4040XP Series

**Mounting details**

**Hinge (Pull Side) 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>Recommended at hold-open point or where a door cannot swing beyond 120°</td>
</tr>
<tr>
<td>Reveal</td>
<td>Should not exceed 3/4” (19 mm) for regular arm or hold-open arm</td>
</tr>
<tr>
<td>Top Rail</td>
<td>Less than 3-3/4” (95 mm) requires PLATE, 4040XP-18. Plate requires 2” (51 mm) minimum</td>
</tr>
<tr>
<td>Clearance</td>
<td>2-3/8” (60 mm) behind door required for 90° installation</td>
</tr>
<tr>
<td>Delayed Action</td>
<td>Incorporates standard 4041 cylinder, without XP cylinder</td>
</tr>
<tr>
<td></td>
<td>Delays closing from 120° to 70°</td>
</tr>
<tr>
<td></td>
<td>Delay time adjustable up to approximately 1 minute</td>
</tr>
<tr>
<td>Maximum Opening</td>
<td>Templating allows up to 120°</td>
</tr>
<tr>
<td></td>
<td>Hold-open points 90° up to 120° with hold-open arm.</td>
</tr>
</tbody>
</table>
### Butt Hinges
Should not exceed 5” (127 mm) in width

### Auxiliary Stop
Recommended at hold-open point or where a door cannot swing beyond 120°

<table>
<thead>
<tr>
<th>Reveal</th>
<th>Arm Type</th>
<th>Reveal</th>
<th>Max Opening</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regular Arm</td>
<td>2-9/16”</td>
<td>Up to 120°</td>
</tr>
<tr>
<td></td>
<td>Long</td>
<td>4-13/16”</td>
<td>Up to 120°</td>
</tr>
<tr>
<td></td>
<td>Hold-Open</td>
<td>2-9/16”</td>
<td>Up to 120°</td>
</tr>
<tr>
<td></td>
<td>Long Hold-Open Arm</td>
<td>8”</td>
<td>Up to 120°</td>
</tr>
</tbody>
</table>

### Top Rail
- Requires 1-1/4” (32 mm) minimum
- 2-1/4” (57 mm) minimum with closer on PLATE, 4040XP-18TJ
- 3” (76 mm) minimum with closer on PLATE, 4040XP-18G

### Head Frame
- Less than 3-1/2” (89 mm) requires PLATE, 4040XP-18TJ
- With flush ceiling, use PLATE, 4040XP-18G. Either plate requires 1-3/4” (44 mm) minimum

### Maximum Opening
- Templating allows up to 120°.
- Hold-open points 85° up to 120° with hold-open arm.

### Delayed Action
- Incorporates standard 4041 cylinder, without XP cylinder
- Delays closing from 120° to 70°
- Delay time adjustable up to approximately 1 minute
### Butt Hinges
Should not exceed 5” (127 mm) in width

### Auxiliary Stop
Recommended at hold-open point, where the door cannot swing 180°, or where CUSH-N-STOP arm is not used

### Reveal
Should not exceed 7/32” (6 mm)

### Top Rail
Less than 5-3/8” (137 mm) measured from the stop requires PLATE, 4040XP-18PA. Plate requires 2” (51 mm) minimum from the stop

### Head Frame
Flush or rabbed requires PA SHOE ADAPTER, 4040XP-419

### Stop Width
Minimum 1” (25 mm). CUSH arm requires minimum 1-1/2” (38 mm)

### Blade Stop
Clearance requires 1/2” (13mm) BLADE STOP SPACER, 4040XP-61.

### Clearance
- 4040XP-62PA shoe is 4” (102 mm) from door face.
- EDA shoe projects 5-1/2” (140 mm) from door face.
- CUSH shoe projects 6” (152 mm) from door face

### Delayed Action
- Incorporates standard 4041 cylinder, without XP cylinder
- Delays closing from 120° to 70°.
- Delay time adjustable up to approximately 1 minute.

### Maximum Opening
- 180° opening/hold-open points with all except CUSH arms
- 110° opening/hold-open with CUSH arms

---

Notes:
- Optional mounting requires PA SHOE, 4040XP-62PA for regular or HOLD-OPEN arms
- Add prefix “P” to closer description (eg. P4040XP)
- P4040XP closer includes 4040XP-201 FIFTH HOLE SPACER to support PA SHOE
**EDA mount**

![EDA mount diagram]

**CUSH mount**

![CUSH mount diagram]

---

**Clearance**

4040XP-62EDA is 5-1/2” (140 mm) from door face. 6” (152 mm) for CUSH.

---

**Head Frame**

Flush or rabatted requires CUSH FLUSH PANEL ADAPTER, 4040XP-419.

---

**CUSH ARM**

Requires SHOE SUPPORT, 4040XP-30 for fifth screw anchorage where reveal is less than 3-1/16” (78 mm).

---

**Delayed Action**

- Incorporates standard 4041 cylinder, without XP cylinder.
- Delays closing from maximum opening to: 115° with 180° template, 95° with 110° template, 85° with 100° template, 75° with 90° template. Delay time adjustable up to approximately 1 minute.

---

**Maximum Opening**

<table>
<thead>
<tr>
<th>EDA arm can be templated for points at:</th>
<th>CUSH arms can be templated for opening/hold-open point at:</th>
</tr>
</thead>
<tbody>
<tr>
<td>110°: A = 6-3/8” (162 mm) B = 7-3/4” (197 mm)</td>
<td>85°: A = 7-15/16” (202 mm) B = 9-1/8” (232 mm)</td>
</tr>
<tr>
<td>or 180°: A = 2-7/8” (73 mm) B = 4-1/4” (108 mm)</td>
<td>90°: A = 7-3/16” (183 mm) B = 8-1/2” (216 mm)</td>
</tr>
</tbody>
</table>

Hold-open points up to maximum opening with HEDA arm: 100°: A = 6-1/16” (154 mm) B = 7-1/4” (184 mm)

or 110°: A = 5-1/16” (129 mm) B = 6-3/8” (162 mm)

---

**Notes:**

- 4040XP Series closers ordered with EDA or CUSH arms include 4040XP-201 FIFTH HOLE SPACER to support the shoe.
- Spring Cush stop points are approximately 5” more than templated stop point.
- Hold open at templated stop points.
4040XP Series

Accessories

**Cylinders**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>4040XP-3071</td>
<td>Cast Iron Cylinder Assembly</td>
<td>Non-handed, Heavy duty</td>
</tr>
<tr>
<td>4041-3071 DEL</td>
<td>Cast Iron Cylinder Assembly</td>
<td>Used for delayed action closing, Non-handed, Heavy duty</td>
</tr>
</tbody>
</table>

**Covers**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>4040XP-72</td>
<td>Plastic Cover</td>
<td>Includes 4040XP-54 snap-on cover clip, Non-handed, Standard</td>
</tr>
<tr>
<td>4040XP-72MC</td>
<td>Metal Cover</td>
<td>Handed, Required for plated finishes and custom powder coat finishes</td>
</tr>
</tbody>
</table>

**Installation Accessories**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>4040XP-18</td>
<td>Plate</td>
<td>Required for hinge side mount where top rail is less than 3-3/4” (95 mm), Requires minimum 2” (51 mm) minimum top rail</td>
</tr>
<tr>
<td>4040XP-18G</td>
<td>Plate</td>
<td>Locates top jamb mounted closer flush with top of head frame face in flush ceiling condition, Requires 1-3/4” (44 mm) minimum head frame</td>
</tr>
<tr>
<td>4040XP-18TJ</td>
<td>Plate</td>
<td>Centers top jamb mounted closer vertically on head frame where face is less than 3-1/2” (89 mm), Plate requires 1-3/4” (44 mm) minimum head frame</td>
</tr>
<tr>
<td>4040XP-18PA</td>
<td>Plate</td>
<td>Required for parallel arm mounting where top rail is less than 5-1/2” (140 mm), measured from the stop, Requires 2” (51 mm) minimum top rail</td>
</tr>
<tr>
<td>4040XP-62PA</td>
<td>PA Shoe</td>
<td>Required for parallel arm mounting</td>
</tr>
</tbody>
</table>
Arms

4040XP-3077
Regular Arm
- Non-handed
- Mounts pull side or top jamb with shallow reveal
- P4041 closer includes PA SHOE, 4040XP-62PA required for parallel arm mounting

4040XP-3077L
Long Arm
- Non-handed
- Includes LONG ROD AND SHOE, 4040XP-79LR for top jamb mount
- Optional

4040XP-3077ELR
Extra Long Arm
- Non-handed
- Includes EXTRA LONG ROD AND SHOE, 4040XP-79ELR for top jamb mount with deep reveal
- Optional

4040XP-3049
Hold-Open Arm
- Non-handed
- Mounts pull side or top jamb with shallow reveal, hold-open adjustable shoe
- 4040XP closer includes 4040XP-62PA shoe required for parallel arm mounting
- Optional

4040XP-3049L
Long Hold-Open Arm
- Non-handed
- Includes LONG HEAD AND TUBE, 4040XP-3048L for top jamb mount
- Optional

4040XP-3077EDA
Extra Duty Arm
- Non-handed
- Features forged, solid steel main and forearm for potentially abusive installations
- Optional

4040XP-3077EDA/62G
Extra Duty Arm with 62G
- Non-handed
- Features forged, solid steel main and forearm for potentially abusive installations
- 62G shoe provides additional blade stop clearance
- Optional

4040XP-3077EDA/62G
Hold-Open Extra Duty Arm with 62G
- Handed
- Features forged, solid steel main and forearm for potentially abusive installations
- 62G shoe provides additional blade stop clearance. Hold-open function is adjusted at the shoe
- Optional

4040XP-3049CNS
HCUSH Arm
- Non-handed
- Hold-open function with templated stop/hold-open points
- Handle controls hold-open function
- Optional

4040XP-3049EDA
Hold-Open Extra Duty Arm
- Handed
- Parallel arm features forged, solid steel main and forearm for potentially abusive installations
- Hold-open function is adjusted at the shoe
- Optional

4040XP-3077SCNS
Spring CUSH Arm
- Non-handed
- For abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe
- Optional

4040XP-3049ED
Hold-Open Extra Duty Arm
- Handed
- Parallel arm features forged, solid steel main and forearm for potentially abusive installations
- Hold-open function is adjusted at the shoe
- Optional
## Installation Accessories cont.

### 4040XP-30
**CUSH Shoe Support**
- Provides anchorage for fifth screw used with CUSH arms, where reveal is less than 3-1/16” (78 mm)
- Optional

### 4040XP-61
**Blade Stop Spacer**
- Required to lower parallel arm shoe to clear 1/2” (13 mm) blade stop
- Optional

### 4040XP-419
**PA Flush Panel Adapter**
- Provides horizontal mounting surface for parallel arm shoe on single rabatted or flush frame
- Optional

### 4040XP-62A
**Auxiliary Shoe**
- Requires a top rail of 7” (178 mm)
- Shoe replaces -62PA for parallel arm mounting of regular arm with overhead holder/stop
- Optional

### 4040XP-54
**Snap-On Cover Clip**
- Used to secure 4040XP-72 Plastic Cover to cylinder body
How-to-order 4040XP Series closers

1. Select finish
   - Standard Powder Coat
     - Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.
   - Custom Powder Coat (RAL) (handed metal cover required)
   - Plated Finish, US (handed metal cover required)
   - SRI primer (use with powder coat finishes only)

Closer will be shipped with:
- Standard cylinder
- Standard cover
- Regular arm
- Self-reaming and tapping screws unless options listed below are selected.

Orders Information

4040XP Series Closer will be shipped with:
- Standard cylinder
- Standard cover
- Regular arm
- Self-reaming and tapping screws

1. Select finish
   - Standard Powder Coat
     - Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.
   - Custom Powder Coat (RAL) (handed metal cover required)
   - Plated Finish, US (handed metal cover required)
   - SRI primer (use with powder coat finishes only)

Optional Screw Packs
- TB* w/ Self-Reaming and Tapping (TBSRT)
- Wood & Machine Screw (WMS)
- 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, 4040XP-1B
- Plate, 4040XP-1BJ
- Plate, 4040XP-1BG
- Plate, 4040XP-1BPA
- CUSH Shoe Support, 4040XP-30
- Blade Stop Spacer, 4040XP-61
- Auxiliary Shoe, 4040XP-62A
- PA Flush Panel Adapter, 4040XP-419

Special Template
- ST- _________

Table of sizes

- 4040XP cylinders are adjustable from size 1 through size 6 and is shipped set to size 3
- Closing power of 4040XP Series closers may be adjusted 50%

Exterior (and vestibule) door width

<table>
<thead>
<tr>
<th>Size</th>
<th>Minimum door width</th>
</tr>
</thead>
<tbody>
<tr>
<td>24” 601mm</td>
<td>size 3</td>
</tr>
<tr>
<td>30” 762mm</td>
<td>size 4</td>
</tr>
<tr>
<td>36” 914mm</td>
<td>size 5</td>
</tr>
<tr>
<td>42” 1067mm</td>
<td>size 6</td>
</tr>
</tbody>
</table>

Interior door width

<table>
<thead>
<tr>
<th>Size</th>
<th>Minimum door width</th>
</tr>
</thead>
<tbody>
<tr>
<td>24” 601mm</td>
<td>size 2</td>
</tr>
<tr>
<td>30” 762mm</td>
<td>size 3</td>
</tr>
<tr>
<td>36” 914mm</td>
<td>size 4</td>
</tr>
<tr>
<td>48” 1219mm</td>
<td>size 5</td>
</tr>
<tr>
<td>54” 1372mm</td>
<td>size 6</td>
</tr>
</tbody>
</table>

Reduced opening force 4040XP 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 effecting 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>4040XP</td>
<td>4040XP</td>
<td>4040XP</td>
</tr>
<tr>
<td>5.0* lbs.</td>
<td>4040XP</td>
<td>4040XP</td>
<td>4040XP</td>
</tr>
</tbody>
</table>

* Maximum opening force.
The 4040XPT is LCN’s most flexible heavy duty track closer designed specifically for interior doors in institutional and other rugged high traffic applications.

<table>
<thead>
<tr>
<th>Certifications</th>
<th>Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act</th>
</tr>
</thead>
</table>
| Body Construction | - Cast Iron Body  
- Full Complement Bearings  
- 1-1/2” Diameter Piston  
- 3/4” Diameter Double Heat Treated Pinion Journal |
| Fluid | All Weather Liquid X Fluid |
| Handing | Non-Handed |
| Size | Adjustable Spring Size 1-4 |
| Warranty | 30 years |
| Cover | - Plastic, Standard  
- Metal, Optional |
| Fasteners | Self Reaming and Tapping Screws (SRT) |
| Mounting | Pull side on door, pull side top jamb, push side on door |
| Arms | Standard Arm and Track with Roller |
| 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**
  - 4040XPT Series
  - **AVAILABLE**
  - **NOT AVAILABLE**
  - Closer available with less than 5.0 lbs. opening force on 36” door.  
  - Maximum opening/hold-open point with standard template.

<table>
<thead>
<tr>
<th>MOUNTING</th>
<th>FINISH</th>
<th>COVER</th>
<th>CYLINDER</th>
<th>*ARM FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>HINGE/PULL SIDE</td>
<td>TOP JAMB (PULL)</td>
<td>TOP JAMB (PUSH)</td>
<td>PARALLEL ARM</td>
<td>MOUNTING COVER</td>
</tr>
<tr>
<td></td>
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</tbody>
</table>

LCN Door Control Catalog

phone: 877-671-7011  
fax: 800-248-1460  
www.allegion.com/us  
009426  rev. 07/17
**Butt Hinges**
Should not exceed 5" (127 mm) in width

**Auxiliary Stop**
- Recommended at hold-open point or where a door cannot swing 120°
- Optional track bumper assembly assists backcheck in cushioning the opening swing of the door
- It is not intended to replace an auxiliary stop

**Reveal**
Should not exceed 1/8" (3 mm) for standard arm

**Top Rail**
Less than 3-3/4" (95 mm) requires PLATE, 4040XPT-18. Plate requires 1-13/16" (44 mm) minimum

**Head Frame**
Requires 1-1/4" (32 mm) minimum

**Clearance**
2-1/4" (57 mm) behind door required for 90° installation

**Maximum Opening**
- Templating allows 120° with standard arm, limited to 110° when optional bumper is installed
- Variable hold-open angles with infinite options

**Notes:**
- Many track style door closers are capable of allowing 180° of door swing
- The majority of track style closers are at their weakest closing force in the 180° – 130° range
- Consult factory for applications where door must swing 180°
### Butt Hinges
- Should not exceed 5” (127 mm) in width

### Auxiliary Stop
- Recommended at hold-open point or where a door cannot swing 180°
- Optional track bumper assembly assists backcheck in cushioning the opening swing of the door
- It is not intended to replace an auxiliary stop

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

### Head Frame
- Less than 3-7/8” (98 mm), requires PLATE, 4040XPT-18TJ. Plate requires 1-3/4” (44 mm) minimum

### Maximum Opening
- Templating allows 180° with standard track arm, limited to 110° with optional bumper installed
- Consult factory if door will be held open at 180°
- Hold-open points at 85°, 90°, 95°, 100°, 105° or 110° with hold-open tracks

### Notes:
- Many track style door closers are capable of allowing 180° of door swing
- The majority of track style closers are at their weakest closing force in the 180° – 130° range
- Consult factory for applications where an exterior or large/heavy door must swing 180°
### 4040XPT Series

#### Mounting details

**Stop Face (Push Side) Mounting**

---

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

**Auxiliary Stop**
- Recommended at hold-open point or where a door cannot swing 120°
- Optional track bumper assembly assists backcheck in cushioning the opening swing of the door
- It is not intended to replace an auxiliary stop

**Clearance**
- Projects 2-1/4” (57 mm) from face of door

**Top Rail**
- Less than 5-1/4” (133 mm) measured from the stop, requires PLATE, 4040XPT-18
- Plate requires 3-1/2” (89 mm) minimum

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

**Maximum Opening**
- Templating allows 120° with standard track arm, limited to 110° with optional bumper tracks
- Hold-open points at 85°, 90°, 95°, 100°, 105° or 110° with hold-open tracks

---

**Notes:**
- Many track style door closers are capable of allowing 180° of door swing
- The majority of track style closers are at their weakest closing force in the 180° – 130° range
- Consult factory for applications where door must swing 180°

---

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop Face</td>
<td>2-3/4&quot; (57 mm)</td>
</tr>
<tr>
<td>Top Rail</td>
<td>1-1/4&quot; (32 mm)</td>
</tr>
<tr>
<td>Stop Width</td>
<td>Minimum 1-1/4&quot; (32 mm)</td>
</tr>
<tr>
<td>Clearance</td>
<td>Projects 2-1/4&quot; (57 mm) from face of door</td>
</tr>
</tbody>
</table>

---

**4040XPT-18**

---
4040XPT-3071
Cast Iron Cylinder Assembly
- Non-handed
- Standard

4040XPT-72
Plastic Cover
- Non-handed
- Snap-on
- Standard

4040XPT-72MC
Metal Cover
- Handed
- Required for plated finishes and custom powder coat finishes
- Optional

4040XPT-3077T
Standard Arm
- Non-handed
- Arm does not include track roller

4040XPT-3077DE
Double Egress Arm
- Handed
- For double egress doors and frames
- Does not include track roller
- Maximum reveal is 2-11/16” (68mm)
- Optional

4040XPT-3038
Standard Track
- Non-handed
- Non hold-open
- Will accept hold-open clip and/or bumper assembly
- Standard

4040XPT-3038B
Standard Track with Bumper
- Non-handed
- Non hold-open
- Will accept hold-open clip
- Optional

4040XPT-3038H
Hold-Open Track
- Non-handed
- With hold-open clip installed
- Will accept bumper assembly
- Optional

4040XPT-3038HB
Hold-Open Track with Bumper
- Non-handed
- With hold-open clip and bumper assembly installed
- Optional


**4040XPT Series**

**Accessories**

---

### Installation Accessories

**4040XPT-18**
- **Plate**
- Required for pull side (door mount) installations where top rail is less than 3-3/4” (95 mm)
  - Requires minimum 1-3/4” (44 mm) top rail
- Required for push side (door mount) installations where top rail is less than 5-1/4” (133 mm) measured from the stop
  - Requires minimum 3-1/2” (89 mm) top rail

**4040XPT-18TJ**
- **Plate**
- Required for pull side top jamb installations where head frame is less than 3-7/8” (98 mm)
  - Requires minimum 1-3/4” (44 mm) head frame

**4040XPT-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

**4040XPT-3054**
- **Hold-Open Clip**
  - Mounts in track to provide hold-open function
  - Hold-open point controlled by clip location
  - Consists of clip and mounting screws
  - Requires 4040XPT-3034H Hold-Open Track Roller

**4040XPT-3034**
- **Track Roller**
  - Quiet, low friction roller assembly
  - Shoulder dimension “X” = 1/8” (3 mm)

**4040XPT-3034H**
- **Hold-Open Track Roller**
  - Quiet, low friction roller assembly
  - Shoulder dimension “X” = 1/8” (3 mm)
How-to-order 4040XPT Series closers

1. Select finish
   - Standard Powder Coat
     - Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.

Closer options

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

- Finish
  - Custom Powder Coat (RAL) (handed metal cover required)
  - Plated Finish, US (handed metal cover required)
  - SRI primer (use with powder coat finishes only)

- Track
  - Regular with Bumper (BUMPER)
  - Hold-Open (HO)
  - Hold-Open with Bumper (HBUMPER)

Specific Screw Pack
- TB* w/Self-Reaming and Tapping Screws (TBSRT)
- Wood & Machine Screw (WMS)
- TB*, Wood & Machine Screw (TBWMS)
- TORX Machine Screw (TORX)
- TB* & TORX Machine Screw (TBTORX)
- Specify door thickness if other than 1-3/4”.

Installation Accessories
- Plate, 4040XPT-18
- Plate, 4040XPT-18TJ

Special Template
- ST-_________

Table of sizes

- Non-Sized 4040XPT cylinder is adjustable from sizes 1 thru 4 and is shipped set to size 3

<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>4040XPT</td>
<td>size 2</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.

Reduced opening force 4040XPT 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 effecting 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>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>5.0 lbs.</td>
<td>4040XPT</td>
<td>4040XPT</td>
<td>4040XPT</td>
</tr>
</tbody>
</table>

* Maximum opening force.
The 4050 Series cast aluminum closer is engineered for durability and built tough to excel in the harsh environments of high frequency, high abusive traffic areas. Ideal for commercial building applications and competitive specification situations that demand a combination of quality, reliability and value. The cast aluminum door closer offers premium features like powder coating, full complement bearing, All Weather Fluid and a 25 year warranty.

**Features**

- **Body Construction**
  - Cast Aluminum Body
  - Full Complement Bearings
  - 1-1/2" Diameter Piston
  - 11/16" Diameter Double Heat Treated Pinion Journal

- **Fluid**
  - All Weather Liquid X Fluid

- **Handing**
  - Non-Handed

- **Templating**
  - Peel-n-Stick templates - 2-3/8" x 6-3/4" Mounting Hole Pattern

- **Size**
  - Adjustable spring size 1-6

- **Warranty**
  - 25 years

**Certifications**

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

**Cover**

- Plastic, Standard
- Metal, Optional

**Fasteners**

- Self Reaming and Tapping Screws (SRT)

**Mounting**

- Hinge (Pull Side), Top Jamb (Push Side), Parallel Arm (Push Side)

**Arms**

- Standard 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

**Special Templates**

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

- **MOUNTING**
  - Hinge (Pull Side)
  - Top Jamb (Pull)
  - Parallel Arm
  - Top Face

- **FINISH**
  - Powder Coat
  - Plastic
  - Metal

- **COVER**
  - Plastic
  - Metal

- **CYLINDER**
  - Regular (Double)
  - Standard (Single)
  - Hold Open
  - Passageway
  - Edge Hinge
  - Chain Hinge
  - Round/Box/Double Egress

- ***ARM FUNCTION**
  - 180°
  - 180°
  - 180°
  - 180°
  - 110°
  - 110°

- Close available with less than 5.0 lbs. opening force on 36” door.

  - Maximum opening/hold-open point with standard template.
### 4050 Series

#### Mounting details

**Hinge (Pull Side) Mounting**

<table>
<thead>
<tr>
<th>Component</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>Auxiliary Stop</strong></td>
<td>Recommended at hold-open point or where a door cannot swing beyond templated maximum opening</td>
</tr>
<tr>
<td><strong>Reveal</strong></td>
<td>Should not exceed 3/4˝ (19 mm) for regular arm or hold-open arm</td>
</tr>
</tbody>
</table>
| **Top Rail** | - Less than 3-7/8˝ (98 mm) requires PLATE, 4050-18.  
- Plate requires 1-13/16˝ (44 mm) minimum |
| **Clearance** | 2-13/16˝ (72 mm) behind door required for 90° installation |
| **Delayed Action** | Delays closing from 180°-70°. Delay time adjustable up to approximately 1 minute |
| **Maximum Opening** | - Templating allows up to 180°  
- Hold-open points up to maximum opening with hold-open arm |

**To 100°:**
- A = 6-15/16˝ (176 mm)  
- B = 12-5/8˝ (321 mm)

**100° to 120°:**
- A = 5-15/16˝ (151 mm)  
- B = 11-5/8˝ (295 mm)

**120° to 150°:**
- A = 3-15/16˝ (100 mm)  
- B = 9-5/8˝ (244 mm)

**150° to 180°:**
- A = 3-7/16˝ (87 mm)  
- B = 9-1/8˝ (232 mm)
The 'A' dimension refers to the edge of the closer body to the center line of pivot or hinge. The 'B' dimension refers to the edge of the closer shoe bracket to the center line of pivot or hinge.

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

### Auxiliary Stop
Recommended at hold-open point or where a door cannot swing beyond templated maximum opening

### Reveal

<table>
<thead>
<tr>
<th>Arm Type</th>
<th>Reveal</th>
<th>Max Opening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Arm</td>
<td>4”</td>
<td>Up to 180°</td>
</tr>
<tr>
<td>Long</td>
<td>9”</td>
<td>Up to 150°</td>
</tr>
<tr>
<td>Hold-Open</td>
<td>4”</td>
<td>Up to 170°</td>
</tr>
<tr>
<td>Long Hold-Open Arm</td>
<td>8-3/4”</td>
<td>Up to 155°</td>
</tr>
</tbody>
</table>

### Top Rail
Requires 2” (51 mm) minimum.

### Head Frame
Less than 3-7/8” (98 mm) requires plate.

### Delayed Action
Delay closing from 180° to 70°. Delay time adjustable up to approximately 1 minute.

### Maximum Opening
- Templating allows up to 180°
- Hold-open points up to maximum opening with hold-open arm

To 100°:
- \( A = 6-7/8" \) (175 mm)
- \( B = 12-11/16" \) (322 mm)

100° to 120°:
- \( A = 5-7/8" \) (149 mm)
- \( B = 11-11/16" \) (297 mm)

120° to 150°:
- \( A = 3-7/8" \) (98 mm)
- \( B = 9-11/16" \) (246 mm)

150° to 180°:
- \( A = 3-3/8" \) (86 mm)
- \( B = 9-3/16" \) (233 mm)
Parallel Arm (Push) Side Mounting

Mounting details

4050 Series

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

Auxiliary Stop
- Recommended at hold-open point, where the door cannot swing beyond templated maximum opening, or where CUSH-N-STOP arm is not used

Top Rail
- Less than 5-3/4” (146 mm) measured from the stop requires PLATE, 4050-18PA. Plate requires 2-1/4” (57 mm) minimum from the stop

Clearance
- For 4050-62PA shoe is 4-1/8” (105 mm) from door face

Head Frame
- Flush or rabbedted requires PA SHOE ADAPTER, 4050-419

Stop Width
- Minimum 1-3/16” (30 mm)

Blade Stop
- Clearance requires 1/2” (13 mm) BLADE STOP SPACER, 4050-61

Delayed Action
- Delays closing from 180°-70°. Delay time adjustable up to approximately 1 minute

Auxiliary Shoe
- 4050-62A allows installation of regular arm with overhead holder/stop

Maximum Opening
- To 100°:  
  A = 8-1/16” (205 mm)  
  B = 8-5/8” (219 mm)

- 100° to 130°:  
  A = 6-9/16” (167 mm)  
  B = 7-1/8” (181 mm)

- 130° to 150°:  
  A = 5-9/16” (141 mm)  
  B = 6-1/8” (156 mm)

- 150° to 180°:  
  A = 4-9/16” (116 mm)  
  B = 5-1/8” (130 mm)

- Hold-open points up to maximum opening with hold-open arm

Note:
- Optional mounting requires PA SHOE, 4050-62PA for regular or HOLD-OPEN arms

The ‘A’ dimension refers to the edge of the closer body to the center line of pivot or hinge.
The ‘B’ dimension refers to the edge of the closer shoe bracket to the center line of pivot or hinge.
Mounting details

**EDA mount**

4050-62EDA is 5-11/16” (145mm) from door face. 5-11/16” (145mm) for CUSH

**CUSH mount**

The 'A' dimension refers to the edge of the closer body to the center line of pivot or hinge.
The 'B' dimension refers to the edge of the closer shoe bracket to the center line of pivot or hinge.

**Clearance**

4050-62EDA is 5-11/16” (145mm) from door face. 5-11/16” (145mm) for CUSH

**Head Frame**

Flush or rabbedted requires FLUSH PANEL ADAPTER, 4050-419

**CUSH ARM**

Requires CUSH SHOE SUPPORT, 4050-30 for fifth screw anchorage where reveal is less than 2-11/16” (68 mm)

**Delayed Action**

Delays closing from 180° to approximately 70°. Delay time adjustable up to approximately 1 minute.

**Maximum Opening**

EDA arm can be templated for points at: 100°

<table>
<thead>
<tr>
<th>Angle</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>100°</td>
<td>8-1/16” (205 mm)</td>
<td>8-5/8” (219 mm)</td>
</tr>
<tr>
<td>100° to 130°</td>
<td>6-9/16” (167 mm)</td>
<td>7-1/8” (181 mm)</td>
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<tr>
<td>130° to 150°</td>
<td>5-9/16” (141 mm)</td>
<td>6-1/8” (156 mm)</td>
</tr>
<tr>
<td>150° to 180°</td>
<td>4-9/16” (116 mm)</td>
<td>5-5/8” (130 mm)</td>
</tr>
</tbody>
</table>

CUSH arms can be templated for opening/hold-open point at:

<table>
<thead>
<tr>
<th>Angle</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>85°</td>
<td>9-13/16” (250 mm)</td>
<td>10-1/2” (267 mm)</td>
</tr>
<tr>
<td>90°</td>
<td>8-15/16” (227 mm)</td>
<td>9-5/8” (244 mm)</td>
</tr>
<tr>
<td>95°</td>
<td>8-5/16” (212 mm)</td>
<td>9” (229 mm)</td>
</tr>
<tr>
<td>100°</td>
<td>7-11/16” (196 mm)</td>
<td>8-3/8” (213 mm)</td>
</tr>
<tr>
<td>105°</td>
<td>7-1/4” (184 mm)</td>
<td></td>
</tr>
</tbody>
</table>

Hold-open points up to maximum opening with HEDa arm

<table>
<thead>
<tr>
<th>Angle</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>110°</td>
<td>6-9/16” (167 mm)</td>
<td>7-1/4” (184 mm)</td>
</tr>
</tbody>
</table>

Notes:

- Spring Cush dead stop points are approximately 5° more than templated stop point
- Hold open at templated stop points
- 4050 Series closers ordered with EDA or CUSH arms include 4050-201 FIFTH HOLE SPACER to support the shoe
### Cylinders

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4050-3071</td>
<td>Cast Aluminum Cylinder Assembly</td>
<td>Non-handed, Heavy duty</td>
</tr>
<tr>
<td>4050-3071 DEL</td>
<td>Cast Aluminum Cylinder Assembly</td>
<td>Non-handed, Heavy duty, Cylinder used for delayed action closing</td>
</tr>
</tbody>
</table>

### Covers

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4050-72</td>
<td>Plastic Cover</td>
<td>Non-handed, Standard</td>
</tr>
<tr>
<td>4050-72MC</td>
<td>Metal Cover</td>
<td>Non-handed, Required for plated finishes and custom powder coat finishes, Optional</td>
</tr>
<tr>
<td>4050-72ALT</td>
<td>Alternate Cover</td>
<td>Non-handed, Optional, sold separately (not packed with closer)</td>
</tr>
</tbody>
</table>

### Installation Accessories

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4050-18</td>
<td>Plate</td>
<td>Required for hinge side mount where top rail is less than 3-7/8” (98 mm), Requires minimum 1-3/4” (44 mm) top rail</td>
</tr>
<tr>
<td>4050-18G</td>
<td>Plate</td>
<td>Locates top jamb mounted closer flush with top of head frame face in flush ceiling condition, Contact LCN Product Support for minimum head frame requirement.</td>
</tr>
<tr>
<td>4050-18PA</td>
<td>Plate</td>
<td>Required for parallel arm mounting where top rail is less than 5-3/4” (146 mm), measured from the stop, Requires 2-1/4” (57 mm) minimum top rail</td>
</tr>
<tr>
<td>4050-61</td>
<td>Blade Stop Spacer</td>
<td>Required to lower parallel arm shoe to clear 1/2” (13 mm) blade stop</td>
</tr>
<tr>
<td>4050-419</td>
<td>Flush Panel Adapter</td>
<td>Provides horizontal mounting surface for parallel arm shoe on single rabbed or flush frame</td>
</tr>
<tr>
<td>4050-62A</td>
<td>Auxiliary Shoe</td>
<td>Requires a top rail of 7-13/16” (198 mm), Replaces -62PA for parallel arm mounting of regular arm with overhead holder/stop, Optional</td>
</tr>
<tr>
<td>4050-62PA</td>
<td>PA Shoe</td>
<td>Required for parallel arm mounting</td>
</tr>
</tbody>
</table>
**Arms**

4050-3077 Regular Arm
- Non-handed
- Mounts pull side or top jamb with shallow reveal
- Includes PA SHOE, 4050-62PA required for parallel arm mounting

4050-3077L Long Arm
- Non-handed
- Includes LONG ROD AND SHOE, 4050-79LR for top jamb mount
- Optional

4050-3049 Hold-Open Arm
- Non-handed
- Mounts pull side or top jamb with shallow reveal
- Hold-open adjustable shoe
- 4050 closer includes 4050-62PA shoe required for parallel arm mounting
- Optional

4050-3049L Long Hold-Open Arm
- Non-handed
- Hold-open adjustable shoe
- Includes LONG HEAD AND TUBE, 4050-3048L for top jamb mount
- Optional

4050-3077EDA Extra Duty Arm
- Non-handed
- Features forged, solid steel main and forearm for potentially abusive installations
- Optional

4050-3049EDA Hold-Open Extra Duty Arm
- Handed
- Features forged, solid steel main and forearm for potentially abusive installations
- Hold-open function is adjusted at the shoe

4050-3077EDA/62G Extra Duty Arm With 62G
- Non-handed
- Features forged, solid steel main and forearm for potentially abusive installations
- 62G shoe provides additional blade stop clearance for use with additional door hardware such as an overhead holder

4050-3049EDA/62G Hold-Open Extra Duty Arm With 62G
- Handed
- Features forged, solid steel main and forearm for potentially abusive installations
- 62G shoe provides additional blade stop clearance for use with additional door hardware such as an overhead holder
- Hold-open function is adjusted at the shoe

4050-3077CNS Cush-N-Stop® Arm
- Non-handed
- Features solid forged steel main arm and forearm with stop in soffit shoe
- Optional

4050-3049CNS HCUSH Arm
- Provides hold-open function with templated stop/hold-open points
- Handle controls hold-open function
4050 Series

Accessories

Arms cont.

4050-3077CNS
Spring CUSH Arm
- Non-handed
- For abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe
- Optional

4050-3049CNS
Spring HCUSH Arm
- Non-handed
- For abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe
- Handle controls hold-open function
- Optional
How-to-order 4050 Series closers

1. Select finish
   - Standard Powder Coat __________
     Aluminum, Dark Bronze, Statuary,
     Light Bronze, Black, Brass.

Closer will be shipped with:
- Standard cylinder
- Standard cover
- Tri pack arm (Rw/PA)
- Self-rearming and tapping screws
  unless options listed below are selected.

Cylinder
   - Delayed Action (4050 DEL)

Cover
   - Metal (specify right or left hand) (MC)
   - Alternate Cover (ALT)
     (sold separately from product)

Finish
   - Custom Powder Coat (RAL) __________
     (handed metal cover required)
   - SRI primer (use with powder coat finishes only)

Optional Screw Packs
   - TB* w/Self-Reaming and Tapping (TBSRT)
   - Wood & Machine Screw (WMS)
   - 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, 4050-18
   - Plate, 4050-18G
   - Plate, 4050-18PA
   - CUSH Shoe Support, 4050-30
   - Blade Stop Spacer, 4050-61
   - Auxiliary Shoe, 4050-62A
   - Flush Panel Adapter, 4050-419

Special Template
   - ST: __________

Table of sizes
- 4050 cylinders are adjustable from size 1 through size 6 and is shipped set to size 3
- Closing power of 4050 Series closers may be adjusted 50%

Exterior (and vestibule) door width

<table>
<thead>
<tr>
<th>Size</th>
<th>24” (610mm)</th>
<th>30” (762mm)</th>
<th>36” (914mm)</th>
<th>42” (1067mm)</th>
<th>48” (1219mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*4050</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>size 3</td>
<td>size 4</td>
<td>size 5</td>
<td>size 6</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>24” (610mm)</th>
<th>30” (762mm)</th>
<th>36” (914mm)</th>
<th>42” (1067mm)</th>
<th>48” (1219mm)</th>
<th>54” (1372mm)</th>
<th>60” (1524mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*4050</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>size 2</td>
<td>size 3</td>
<td>size 4</td>
<td>size 5</td>
<td>size 6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Minimum door width

Reduced opening force 4050 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 effecting 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>4050</td>
<td>4050</td>
<td>4050</td>
</tr>
<tr>
<td>5.0 lbs.</td>
<td>4050</td>
<td>4050</td>
<td>4050</td>
</tr>
</tbody>
</table>

* Maximum opening force.
The 4050T cast aluminum heavy duty track closer is designed for rugged high frequency traffic areas. Ideal for commercial building applications and competitive specification situations that demand a combination of quality, reliability and value.

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

**Body Construction**
- Cast Aluminum Body
- Full Complement Bearings
- 1-1/2" Diameter Piston
- 11/16" Diameter Double Heat Treated Pinion Journal

**Fluid**
- All Weather Fluid

**Handing**
- Non-Handed

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

**Warranty**
- 25 years

**Cover**
- Plastic, Standard
- Metal, Optional

**Fasteners**
- Self Reaming and Tapping Screws (SRT)

**Mounting**
- Pull side on door, pull side top jamb, push side on door

**Arms**
- Standard Arm and Track with Roller

**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

**Features**
- 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>MOUNTING</td>
<td>FINISH</td>
<td>COVER</td>
<td>CYLINDER</td>
<td>*ARM FUNCTION</td>
</tr>
<tr>
<td>Hinge/Pull Side</td>
<td>Top Jamb (Pull)</td>
<td>Top Jamb (Push)</td>
<td>Parallel Arm</td>
<td>Stop Face</td>
</tr>
<tr>
<td>Powder Coat</td>
<td>Plastic/Metal</td>
<td>Non-Handed</td>
<td>Non-Speed</td>
<td>Accessibility</td>
</tr>
<tr>
<td>180°</td>
<td>180°</td>
<td>95°</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:**
- Closers available with less than 5.0 lbs. opening force on 36” door (pull side and top jamb only).
- Maximum opening/hold-open point with standard template.
4050T Series

Mounting details

Hinge (Pull Side) Mounting

**4050T**

<table>
<thead>
<tr>
<th>Butt Hinges</th>
<th>Should not exceed 5” (127 mm) in width</th>
</tr>
</thead>
</table>
| Auxiliary Stop | ▪ Recommended at hold-open point or where a door cannot swing 180°  
▪ Optional track bumper assembly assists backcheck in cushioning the opening swing of the door  
▪ It is not intended to replace an auxiliary stop |
| Reveal | Should not exceed 1/8” (3 mm) for standard arm |
| Top Rail | Less than 4-1/8” (104 mm) requires PLATE, 4050T-18. Plate requires 2-1/16” (52mm) minimum |
| Head Frame | Requires 1-1/4” (32 mm) minimum |
| Clearance | 2-13/16” (52 mm) behind door required for 90° installation |
| Maximum Opening | Templating allows 180° |

Notes:
- Many track style door closers are capable of allowing 180° of door swing  
- The majority of track style closers are at their weakest closing force in the 180° – 130° range  
- Consult factory for applications where door must swing 180°
<table>
<thead>
<tr>
<th>Specification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butt Hinges</td>
<td>Should not exceed 5&quot; (127 mm) in width</td>
</tr>
<tr>
<td>Auxiliary Stop</td>
<td>• Recommended at hold-open point or where a door cannot swing 180°</td>
</tr>
<tr>
<td></td>
<td>• Optional track bumper assembly assists backcheck in cushioning the opening</td>
</tr>
<tr>
<td></td>
<td>swing of the door</td>
</tr>
<tr>
<td></td>
<td>• It is not intended to replace an auxiliary stop</td>
</tr>
<tr>
<td>Reveal</td>
<td>Should not exceed 1/8&quot; (3 mm)</td>
</tr>
<tr>
<td>Head Frame</td>
<td>Less than 4-1/2&quot; (114 mm), requires PLATE, 4050T-18G. Plate requires</td>
</tr>
<tr>
<td></td>
<td>2-1/16&quot; (52 mm) minimum</td>
</tr>
<tr>
<td>Clearance</td>
<td>1-1/4&quot; (32 mm) behind door required for 180° installation</td>
</tr>
<tr>
<td>Maximum Opening</td>
<td>• Templating allows 180°</td>
</tr>
</tbody>
</table>

Notes:
- Many track style door closers are capable of allowing 180° of door swing
- The majority of track style closers are at their weakest closing force in the 180° – 130° range
- Consult factory for applications where an exterior or large/heavy door must swing 180°
4050T Series

Stop Face (Push Side) Mounting

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

**Auxiliary Stop**
- Recommended at hold-open point or where a door cannot swing 120°
- Optional track bumper assembly assists backcheck in cushioning the opening swing of the door
- It is not intended to replace an auxiliary stop

**Clearance**
Projects 2-9/16” (65 mm) from face of door

**Top Rail**
- Less than 5-11/16” (144 mm) measured from the stop, requires PLATE, 4050T-18G
- Plate requires 3-5/16” (84 mm) minimum

**Stop Width**
Minimum 1-1/4” (32 mm)

**Maximum Opening**
- Templating allows 120°

**Notes:**
- Many track style door closers are capable of allowing 180° of door swing
- The majority of track style closers are at their weakest closing force in the 180° – 130° range
- Consult factory for applications where door must swing 180°
### Cylinder

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>Non-handed</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>4050T-3071</td>
<td>Cast Aluminum Cylinder Assembly</td>
<td>Non-handed</td>
<td>Standard</td>
</tr>
</tbody>
</table>

### Covers

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>Non-handed</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>4050T-72</td>
<td>Plastic Cover</td>
<td>Non-handed</td>
<td>Standard</td>
</tr>
<tr>
<td>4050T-72MC</td>
<td>Metal Cover</td>
<td>Non-handed</td>
<td>Required for plated finishes and custom powder coat finishes</td>
</tr>
</tbody>
</table>

### Arms

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>Non-handed</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>4050T-3077T</td>
<td>Standard Arm</td>
<td>Non-handed</td>
<td>Arm does not include track roller</td>
</tr>
<tr>
<td>4050T-3077DE</td>
<td>Double Egress Arm</td>
<td>Handed</td>
<td>For double egress doors and frames</td>
</tr>
</tbody>
</table>

### Tracks

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>Non-handed</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>4050T-3038</td>
<td>Standard Track</td>
<td>Non-handed</td>
<td>Non hold-open</td>
</tr>
<tr>
<td>4050T-3038B</td>
<td>Standard Track with Bumper</td>
<td>Non-handed</td>
<td>Non hold-open</td>
</tr>
<tr>
<td>4050T-3038H</td>
<td>Hold-Open Track</td>
<td>Non-handed</td>
<td>With hold-open clip installed</td>
</tr>
<tr>
<td>4050T-3038HB</td>
<td>Hold-Open Track with Bumper</td>
<td>Non-handed</td>
<td>With hold-open clip and bumper assembly installed</td>
</tr>
</tbody>
</table>
Installation Accessories

4050T-18 Plate
- Required for pull side (door mount) installations where top rail is less than 4-1/8”.
  - Requires minimum 2-1/16” top rail

4050T-18G Plate
- Required for pull side top jamb installations where head frame is less than 4-1/2”.
  - Requires minimum 2-1/16” head frame
- Required for push side (door mount) installations where top rail is less than 5-11/16” measured from the stop.
  - Requires minimum 3-5/16” top rail

4050T-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

4050T-3054 Hold-Open Clip
- Mounts in track to provide hold-open function
- Hold-open point controlled by clip location
- Consists of clip and mounting screws
- Requires 4050T-3034H Hold-Open Track Roller

4050T-3034 Track Roller
- Quiet, low friction roller assembly
- Shoulder dimension “X” = 1/8” (3mm)

4050T-3034H Hold-Open Track Roller
- Quiet, low friction roller assembly
- Shoulder dimension “X” = 1/8” (3mm)

4050T-480 Pinion Extender
- Connects pinion to arm
How-to-order 4050T Series closers

1. Select finish
   - Standard Powder Coat
     - Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.

Closer options

Cover
- Metal (MC)

Finish
- Custom Powder Coat (RAL) (handed metal cover required)
- SRI primer (use with powder coat finishes only)

Track
- Regular with Bumper (BUMPER)
- Hold-Open (HO)
- Hold-Open with Bumper (HBUMPER)

Specific Screw Pack
- TB* w/Self-Reaming and Tapping Screws (TBSRT)
- Wood & Machine Screw (WMS)
- TB*, Wood & Machine Screw (TBWMS)
- TORX Machine Screw (TORX)
- TB* & TORX Machine Screw (TBTORX)
* Specify door thickness if other than 1-3/4”.

Installation Accessories
- Plate, 4050T-18
- Plate, 4050T-18G

Special Template
- ST-

Table of sizes
- Non-Sized 4050T cylinder is adjustable from sizes 1 thru 4 and is shipped set to size 3

<table>
<thead>
<tr>
<th>Door Width</th>
<th>36”</th>
<th>42”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interior door width</td>
<td>26” - 660mm</td>
<td>34” - 894mm</td>
<td>38” - 965mm</td>
</tr>
<tr>
<td>4050T</td>
<td>size 2</td>
<td>size 3</td>
<td>size 4</td>
</tr>
</tbody>
</table>

Indicates recommended range of door width for closer size.

Reduced opening force 4050T 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 effecting 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>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>5.0* lbs.</td>
<td>4050T</td>
<td>4050T</td>
<td>4050T</td>
</tr>
</tbody>
</table>

* Maximum opening force. Applies to pull side and top jamb only.
The 4110 is LCN's best performing heavy duty closer designed specifically for institutional and other rugged high traffic applications.

**Certifications**
- Grade 1 - ANSI A156.4, 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
- 11/16” Diameter Double Heat Treated Pinion Journal

**Fluid**
- All Weather Fluid

**Handing**
- Handed

**Templating**
- Peel-n-Stick templates - 2-1/2” x 6” Mounting Hole Pattern

**Size**
- Adjustable Spring Size 1-5, or Sized 6, Includes Patented Green Dial

**Warranty**
- 30 years

---

### Special Templates

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

---

### Features

- **4110 Series**
- **Features**
- **Specifications**
- **Materials**
- **Application**
- **Accessories**
- **Design**
- **Performance**
- **Installation**
- **Maintenance**
- **Quality**

---

**LCN Door Control Catalog**
4110 Series

Mounting details

Parallel Arm (Push Side) Mounting

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

Auxiliary Stop: Recommended at hold-open point, where a door cannot swing 180°, or where CUSH-N-STOP arm is not used

Clearance: EDA, or CUSH shoe is 5-1/2” (140 mm) from door face

Top Rail:
- Less than 5-1/8” (130 mm) measured from stop requires PLATE, 4110-18
- Plate requires 2” (51 mm) minimum measured from the stop

Stop Width: Minimum 1” (25 mm)

Head Frame: Flush or rabbedted requires CUSH FLUSH PANEL ADAPTER, 4110-419

Reveal:
- Less than 2-3/4” (70 mm), use CUSH SHOE SUPPORT, 4110-30 with CUSH arms

Blade Stop Spacer: 4110-61 required to clear 1/2” (13 mm) blade stop

Cush Arm: Requires CUSH SHOE SUPPORT, 4110-30 for fifth screw anchorage where reveal is less than 3-1/16” (78 mm)

Delayed Action:
- Add suffix “DEL” to selected cylinder (eg. 4111 DEL)
- Not available with 4116 cylinder. Delays closing from maximum opening to approximately 70°
- Delay time adjustable up to approximately 1 minute

Advanced Variable Backcheck:
- Cylinder starts backcheck at approximately 45° instead of the normal 75°
- Add suffix “AVB” to selected cylinder

Maximum opening:

<table>
<thead>
<tr>
<th>Angle</th>
<th>EDA or Fusible Link arm</th>
<th>CUSH arm</th>
</tr>
</thead>
<tbody>
<tr>
<td>100°</td>
<td>A = 5-15/16” (151 mm)</td>
<td>A = 8-5/16” (211 mm)</td>
</tr>
<tr>
<td></td>
<td>B = 7-1/4” (184 mm)</td>
<td>B = 9-5/8” (244 mm)</td>
</tr>
<tr>
<td>140°</td>
<td>A = 6-17/16” (112 mm)</td>
<td>A = 7-11/16” (195 mm)</td>
</tr>
<tr>
<td></td>
<td>B = 5-3/4” (146 mm)</td>
<td>B = 9” (229 mm)</td>
</tr>
<tr>
<td>180°</td>
<td>A = 2-15/16” (75 mm)</td>
<td>or 110°</td>
</tr>
<tr>
<td></td>
<td>B = 2-15/16” (75 mm)</td>
<td>A = 5-9/16” (141 mm)</td>
</tr>
</tbody>
</table>

- Hold-open points up to maximum opening with HEDA or Fusible Link arm
- Hold-open point at maximum opening with HCUSH arm
- Spring Cush hold-open points are approximately 5” less than templated stop point
4110 Series
Accessories

Cylinder

4111(6)-3071
Cast Iron Cylinder Assembly
- Handed
- Standard

Covers

4110-72
Plastic Cover
- Non-handed
- Standard

4110-72MC
Metal Cover
- Handed
- Required for plated finishes and custom powder coat finishes
- Optional

Arms

4110-3049EDA
Hold-Open Arm
- Handed
- Optional
- Provides hold-open function, adjustable at shoe

4110-3077CNS
Cush-N-Stop Arm
- Non-handed
- Features solid forged steel main arm and forearm with built-in stop in soffit shoe

4110-3077EDA
Extra Duty Arm
- Non-handed
- Features forged, solid steel main and forearm for potentially abusive installations

4110-3049FL
Fusible Link Arm
- Handed
- Releases hold-open function adjustable at shoe when exposed to temperatures above 165°F
- Optional

NOTE: Check local codes before specifying FL arms. NOT A life safety product!

4110-3077EDA/ 62G
Extra Duty Arm
- Non-handed
- Features forged, solid steel main and forearm for potentially abusive installations
- Optional 4110-62G thick hub shoe for blade stop clearance

4110-3077EDA
Extra Duty Arm
- Non-handed
- Features forged, solid steel main and forearm for potentially abusive installations

4110-62G
Thick Hub Shoe
- Optional

Left hand shown
4110-3049CNS
HCUSH Arm
- Non-handed
- Provides hold-open function with templated stop/hold-open points.
- Handle controls hold-open function

4110-3077CNS
Spring CUSH Arm
- Non-handed
- For abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe
- Optional

4110-3049SCNS
Spring HCUSH Arm
- Non-handed
- For abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe
- Handle controls hold-open function
- Optional

Installation Accessories

4110-18
Plate
- Required for push side mount where top rail is less than 5-1/8” (130 mm), measured from the stop
- Requires minimum 2” (51 mm) minimum top rail

4110-30
CUSH Shoe Support
- Provides anchorage for fifth screw used with CUSH arm, where reveal is less than 3-1/16” (78 mm)

4110-61
Blade Stop Spacer
- Lowers parallel arm shoe to clear 1/2” (13 mm) blade stop

4110-419
PA Flush Panel Adapter
- Provides horizontal mounting surface for CUSH shoe on single rabbed or flush frame
How-to-order 4110 Series closers

1. Specify cylinder size
   - 4111 (adjustable from size 1 to 5)
   - 4116 (DEL, SHCUSH or HCUSH arm not available)

2. Specify hand
   - RH
   - LH

3. Select finish
   - Standard Powder Coat (RAL) (handed metal cover required)
   - Plated Finish, US (handed metal cover required)
   - SRI primer (use with powder coat finishes only)

Closer options

Cylinder
   - Delayed Action (DEL) (not available with 4116)
   - Advanced Variable Backcheck (AVB)

Cover
   - Metal (MC)

Finish
   - Custom Powder Coat (RAL) (handed metal cover required)
   - Plated Finish, US (handed metal cover required)
   - SRI primer (use with powder coat finishes only)

Specify Arm
   - Hold-Open Extra Duty (HEDA)
   - Fusible Link, 165°F (FL)
   - Cush-N-Stop (CUSH)
   - H-Cush-N-Stop (n/a with 4116 cylinder)
   - Spring Cush (SCUSH)
   - Spring H-Cush (n/a with 4116 cylinder)
   - Extra Duty (EDA)
   - H-Extra Duty (HEDA)

Screw Packs
   - TB*: Self-Reaming & Tapping (TBSRT)
   - Wood & Machine Screw (WMS)
   - 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, 4110-18
   - CUSH Shoe Support, 4110-30
   - Blade Stop Spacer, 4110-61
   - PA Flush Panel Adapter, 4110-419

Special Template
   - ST- _________

Table of sizes

- Select closer based on width of door.
- The spring power of non-sized 4111 cylinder is adjustable from size 1 through size 5 and is shipped set to size 3.
- Sized 4116 series cylinders 6.
- Delayed action not available with 4116 cylinder
- H - CUSH and SPRING H-CUSH arm not available with 4116 cylinder.

Reduced opening force 4110 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 AUTOMATIC OPERATORS section for information on systems that meet reduced opening force requirements without effecting 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>4111</td>
<td>4111</td>
<td>4111</td>
</tr>
<tr>
<td>5.0* lbs.</td>
<td>4111</td>
<td>4111</td>
<td>4111</td>
</tr>
</tbody>
</table>

* Maximum opening force.
The 4110T is LCN’s best performing heavy duty track closer designed specifically for interior doors in institutional and other high traffic applications.

**Certifications**
- Grade 1 - ANSI A156.4, 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
- 11/16" Diameter Double Heat Treated Pinion Journal

**Fluid**
- All Weather Fluid

**Handing**
- Handled

**Size**
- Adjustable Spring Size 1-5, or Sized 6.
  - Includes Patented Green Dial

**Warranty**
- 30 years

**Cover**
- Plastic, Standard
- Metal, Optional

**Fasteners**
- Self Reaming and Tapping Screws (SRT)

**Mounting**
- Stop Face (Push Side)

**Arms**
- Standard Arm and Track with Roller

**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**

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

- **Closers available with less than 5.0 lbs. opening force on 36” door.**

- **Maximum opening/hold-open point with standard template.**
4110T
Series
Stop face (Push Side)
Mounting
details

<table>
<thead>
<tr>
<th>Butt Hinges</th>
<th>Should not exceed 5&quot; (127 mm) in width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auxiliary Stop</td>
<td>Recommended at hold-open point or where a door cannot swing 110°.</td>
</tr>
<tr>
<td></td>
<td>Optional track bumper assembly assists backcheck in cushioning the opening swing of the door</td>
</tr>
<tr>
<td></td>
<td>It is not intended to replace an auxiliary stop</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Clearance</th>
<th>Projects 2-1/4&quot; (57 mm) from face of door</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Rail</td>
<td>Less than 5-1/4&quot; (133 mm) measured from the stop, requires PLATE, 4110T-18</td>
</tr>
<tr>
<td></td>
<td>Plate requires 2-1/4&quot; (57 mm) minimum</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stop Width</th>
<th>Minimum 1-1/4&quot; (32 mm)</th>
</tr>
</thead>
</table>

| Maximum Opening      | Templating allows 110° with standard track arm, limited to 100° with optional bumper tracks |
|                      | Variable hold-open angles with infinite options |

Notes:
- Many track style door closers are capable of allowing 180° of door swing
- The majority of track style closers are at their weakest closing force in the 180° – 130° range
- Consult factory for applications where door must swing 180°
### Cylinder

4111(6)T-3071
Cast Iron Cylinder Assembly
- Handed
- Standard

### Covers

4110T-72
Plastic Cover
- Non-handed
- Standard

4110T-72MC
Metal Cover
- Handed
- Required for plated finishes and custom powder coat finishes
- Optional

### Arm

4110T-3077T
Standard
- Handed
- Roller not included with arm

### Tracks

4110T-3038
Standard Track
- Non-handed
- Non hold-open
- Will accept hold-open clip and/or bumper assembly
- Standard

4110T-3038B
Standard Track with Bumper
- Non-handed
- Non hold-open
- With bumper assembly installed
- Will accept hold-open clip
- Optional

4110T-3038H
Hold-Open Track
- Non-handed
- With hold-open clip installed
- Will accept bumper assembly
- Optional

4110T-3038HB
Hold-Open Track with Bumper
- Non-handed
- With hold-open clip and bumper assembly installed
- Optional
4110T-18 Plate
- Required where top rail, when measured from the stop, is less than 5-1/4˝ (133 mm)
- Requires minimum 2-1/4˝ (57 mm) minimum top rail

4110T-169 Track Bumper
- Mounts in track to assist backcheck, not replace auxiliary stop
- Limits maximum opening. Consists of bumper, bumper post, and mounting screw

4110T-3054 Hold-Open Clip
- Mounts in track to provide hold-open function
- Hold-open point controlled by clip location
- Consists of clip and mounting screws
- Requires 4110T-3034H Track Roller

4110T-3034H Track Roller
- Quiet, low friction roller assembly
- Shoulder dimension “X” = 1/16˝ (2 mm)
- Spring-loaded hold-open mechanism

4110T-3034 Track Roller
- Quiet, low friction roller assembly
- Shoulder dimension “X” = 1/16˝ (2 mm)
How-to-order 4110T Series closers

1. Specify cylinder size
   - 4111T (ADA)
   - 4113T
   - 4114T

2. Specify hand
   - RH
   - LH

3. Select finish
   - Standard Powder Coat
   - Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass

Closer options

- Cover
  - Metal (MC)

- Finish
  - Custom Powder Coat (RAL) (handed metal cover required)
  - Plated Finish, US (handed metal cover required)
  - SRI primer (use with powder coat finishes only)

Specify Track
- Standard with Bumper (BUMPER)
- Hold-Open (HO)
- Hold-Open with Bumper (HBUMPER)

Specify Screw Packs
- TB* w/Self-Reaming and Tapping (TBSRT)
- Wood & Machine Screw (WMS)
- TB* Wood & Machine Screw (TBWMS)
- TORX Machine Screw (TORX)
- TB* & TORX Machine Screw (TBTRX)

Installation Accessories
- Plate, 4101T-18

Special Template
- ST-

Table of sizes

- Select closer based on width of door
- Sized 4110T series cylinders available in size 1, 3, or 4
- Closing power of all 4110T Series closers may be increased 15%
- Specify next higher size closer where strong drafts exist

<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>4113T</td>
<td>size 1</td>
<td>size 3</td>
<td>size 4</td>
<td></td>
</tr>
<tr>
<td>4114T</td>
<td></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 4110T 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 effecting 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>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>5.0 lbs.</td>
<td>4111T</td>
<td>4111T</td>
<td>4111T</td>
</tr>
</tbody>
</table>

* Maximum opening force.
The 4000T is a heavy duty closer to reliably control fire and smoke barrier doors with maximum swing of 90°. Designed for use with an SEM 7850 wall magnet.

Certifications
- Grade 1 - ANSI A156.4, 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
- Sized 3 or 4

Warranty
- 30 years

Cover
- Plastic, Standard
- Metal, Optional

Fasteners
- Wood and machine screw pack

Mounting
- In a wall pocket, hinge side

Arms
- Standard Arm and Track with Roller

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

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

* Maximum opening/hold-open point with standard template.
### 4000T Series

#### Mounting details

##### Wall pocket mounting

---

**Butt Hinges**
- Pocket Pivot, Total Door Hinge or Center Pivot are door mounting options
- Should not exceed 5" (127 mm)

**Pocket Depth**
- See above table for distance required between door and closer mounting location
- This dimension is measured from the cylinder mounting surface to the pull side face of the door at 90°

**Wall Magnet**
- SEM 7850 is recommended. Use of other magnets may require special construction to alter the depth of the pocket at the magnet location
- See Fire Life Safety Section

**Dimension 1**
- The distance from the centerline of the closer shaft to the centerline of the hinge or pivot
- For pocket pivot or total door hinge, 9-1/2" (241 mm)
- For butt hinge 8" (203 mm)
- For center pivot 10" (254 mm)

**Dimension 2**
- The distance from the centerline of the pivot or hinge to the cylinder mounting surface
- For pocket pivot 4-1/2" (114 mm)
- For total door hinge 3-7/8" (98mm)
- For butt hinge 2-7/8" (73 mm)
- For center pivot 4-1/2" (114 mm)

**Dimension 3**
- The distance from the centerline of the pivot or hinge to end of the track
- For pocket pivot or total door hinge, 3-7/8" (98mm)
- For butt hinge 2-3/8" (60mm)
- For center pivot 4-5/8" (117mm)

**Maximum Opening**
- Templating allows 90° only
- Hold-open point 90° with magnet

---

Notes:
- Cylinder mounts on wall
- Track mounts on hinge side of door

---

*LCN Door Control Catalog*  
**4000T Series**

**Accessories**

### Cylinder

- **4003(4)T-3071**
  - Cast Iron Cylinder Assembly
  - Non-handed
  - Standard

### Covers

- **4000T-72**
  - Plastic Cover
  - Non-handed
  - Standard

- **4000T-72MC**
  - Metal Cover
  - Handed
  - Required for plated and custom powder coat finishes
  - Optional

### Arm

- **4000T-3077T**
  - Standard Arm
  - Non-handed
  - Roller not included with arm

### Tracks

- **4000T-3038**
  - Standard Track
  - Non-handed
  - Non hold-open
  - Will not accept hold-open clip or bumper assembly
  - Standard

- **4000T-3034**
  - Track Roller
  - Quiet, low friction roller assembly
  - Shoulder Dimension “X” = 1/8” (3 mm)
**How-to-order 4000T Series closers**

1. **Select cylinder size**
   - 4003T
   - 4004T

2. **Select finish**
   - Standard Powder Coat (Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass)

**Closer options**

- **Cover**
  - Metal (MC)

- **Finish**
  - Custom Powder Coat (RAL) (handed metal cover required)
  - Plated Finish, US (handed metal cover required)
  - SRI primer (use with powder coat finishes only)

**Specify Screw Packs**

- 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**

- Select closer based on width of door
- 4000T Series cylinders available in size 3 or 4
- Closing power of 4000T Series closers is not adjustable

**Interior door width**

<table>
<thead>
<tr>
<th>28”</th>
<th>34”</th>
<th>38”</th>
<th>42”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td>711mm</td>
<td>864mm</td>
<td>965mm</td>
<td>1067mm</td>
<td>1219mm</td>
</tr>
</tbody>
</table>

4003T  
4004T

- Indicates recommended range of door width for closer size.
Product selection guide

Surface mounted 1000 Series LCN closers feature a modern slim line design for easy installation on narrow head frames and top rails. This guide is based on the desired mounting of the closer. NOTE: For parallel mounts order “P” version to also receive PA Shoe.

Product comparison

This chart shows a basic comparison of LCN 1000 Series closers. Refer to the specific closer chapter for complete details.

<table>
<thead>
<tr>
<th>1250</th>
<th>1260</th>
<th>1450</th>
<th>1460</th>
<th>1460T</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUSH SIDE MOUNTED</td>
<td>PUSH SIDE MOUNTED</td>
<td>PULL SIDE MOUNTED</td>
<td>PULL SIDE MOUNTED</td>
<td></td>
</tr>
<tr>
<td>DOUBLE LEVER ARM</td>
<td>SINGLE LEVER ARM</td>
<td>DOUBLE LEVER ARM</td>
<td>SINGLE LEVER ARM</td>
<td></td>
</tr>
<tr>
<td>1250</td>
<td>1260</td>
<td>1450</td>
<td>1460</td>
<td>1250</td>
</tr>
<tr>
<td>EXTERIOR DOOR</td>
<td>INTERIOR DOOR</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

D = For designer series only.
APPLICATIONS
- For aluminum, hollow metal, or wood swinging doors and frames.
- Can be used with hinge or pivot mounted door.
- Mounts on 1-3/4" transom without adapter plates.
- Adapter plates and other installation accessories available for unusual conditions.

FEATURES COMMON TO 1000 SERIES
- 1000 series closers mount three ways. Closers with regular or hold-open arm mount hinge side or top jamb. Parallel arm, closers include - 62PA SHOE required for parallel arm mount. 1460T mounts hinge side, top jamb (pull side) and stop face.
- Non-handed for right and left swinging doors.
- 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.
- Reversible shoe to boost latching power on 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
- 30 year limited warranty (1460 Series) and 20 year limited warranty (1260 Series) on cast iron closers.
- 15 year limited warranty (1250 series) and 25 year limited warranty (1450 series) on cast aluminum closers.
See General Information Section for complete warranty details.

SPECIFICATIONS
Refer to “SPECIFICATIONS” section for suggested architectural specifications.

MATERIALS
- High strength cast iron (1260, 1460, 1460T) or cast aluminum (1250, 1450) cylinder.
- Forged steel main arm for all EDA, Cush, 1460HD and 1460T Arms.
- One piece forged steel piston.
- Heat treated pinion.
- LCN's standard all weather fluid performs to temperature ranges from 120°F (49°C) to -30°F (-35°C).
- 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 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 finish surpasses 100 hours of salt spray which is over four times the ANSI standard for corrosion resistance.
- Painted finishes on cast aluminum closers (1250, 1450).
- For installations where a higher level of corrosion resistance is required, LCN offers an optional special rust inhibiting (SRI) pre-treatment (cast iron). 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 for the 1460 Series closers.

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 grade one. 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
1260, 1460, 1460T series closers are shipped with: A standard SELF-REAMING and TAPPING SCREW (SRT) pack that contains Phillips head SRT screws to install the closer. 1250 and 1450 series closers are shipped with: A universal screw pack to include self reaming and tapping screws (SRT), machine screws and wood screws. Standard LCN thru bolts (TB) can be installed on 1-3/4" (44 mm) thick doors with 1/4-20 machine screws. Optional thru bolt (TB) sizes are available for 1-5/8” (41 mm) or 1-3/8” (35 mm) door thickness, but this must be specified when ordering.

Notes:
1. For Thru Bolts, specify door thickness if other than 1-3/4” (44 mm). Represented in diagram as dimension “X”.
2. Phillips head, metric machine screws are available, please specify.
3. LCN recommends the use of wood screws in wood door applications.

MAINTENANCE
Closers mounted according to LCN installation instructions require no periodic maintenance or adjustments.
The 1250 Series cast aluminum closer is designed for low-frequency and low abusive traffic areas. This cast aluminum closer is ideal for aluminum storefronts, interior offices and many other applications. Combining dependable operation, low maintenance and a patented stylish look - with or without the optional slim line cover. And with the most common hole pattern in the industry, the 1250 Series is the perfect choice for easy aftermarket replacement.

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

### Body Construction
- Cast Aluminum Body
- Full Complement Bearing
- 1-3/8” Diameter Piston
- 5/8” Diameter Single Heat Treated Pinion Journal

### Fluid
- All Weather Fluid

### Handing
- Non-Handed

### Templating
- Peel-n-Stick templates - 3/4” x 9-1/16” Mounting Hole Pattern

### Size
- Adjustable Spring Size 1-5

### Warranty
- 15 years

### Cover
- Slim Line Cover, Optional

### Fasteners
- Universal Screw Pack (UNIV)

### Mounting
- Hinge (Pull Side), Top Jamb (Push Side), Parallel Arm (Push Side)

### Arms
- Tripack includes Regular, Top Jamb, and Parallel Arm (Rw/PA)

### 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

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

*ARM FUNCTION
- Closer available with less than 5.0 lbs. opening force on 36” door.
- Maximum opening/hold-open point with standard template.
### Mounting details

#### Hinge (Pull) Side Mounting

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</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>Auxiliary Stop</strong></td>
<td>Recommended at hold-open point or where a door cannot swing 180°</td>
</tr>
<tr>
<td><strong>Reveal</strong></td>
<td>Should not exceed 3/4” (19 mm) for regular arm or 1/2” (13 mm) for hold-open arm</td>
</tr>
<tr>
<td><strong>Top Rail</strong></td>
<td>Less than 2-3/8” (60 mm) requires PLATE, 1250-18</td>
</tr>
<tr>
<td><strong>Clearance</strong></td>
<td>3-1/16” (78 mm) behind door required for installation.</td>
</tr>
<tr>
<td><strong>Maximum opening</strong></td>
<td></td>
</tr>
</tbody>
</table>
| 100°               | A = 6-11/16” (170 mm)  
                    | B = 12-7/16” (316 mm)  |
| 101° to 120°       | A = 5-11/16” (144 mm)  
                    | B = 11-7/16” (291 mm)  |
| or *121° to 180°   | A = 3-1/16” (78 mm)  
                    | B = 8-15/16” (227 mm)  |

*Hold-open points up to maximum opening with hold-open arm

*Frame and trim permitting.*
**Butt Hinges**
Should not exceed 5” (127 mm) in width

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

<table>
<thead>
<tr>
<th>Reveal</th>
<th>Arm Type</th>
<th>Maximum Reveal</th>
<th>Opening</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regular Arm</td>
<td>0” to 5”</td>
<td>180°</td>
</tr>
<tr>
<td></td>
<td>Long Arm</td>
<td>4” to 8”</td>
<td>165°</td>
</tr>
<tr>
<td></td>
<td>Hold-Open Arm</td>
<td>0” to 2-3/4”</td>
<td>180°</td>
</tr>
<tr>
<td></td>
<td>Long Hold-Open Arm</td>
<td>2” to 6-1/2”</td>
<td>180°</td>
</tr>
</tbody>
</table>

**Top Rail**
Requires 1-3/4” (44 mm) minimum, 2-1/2” (64 mm) minimum with closer on PLATE, 1250-18

**Head Frame**
Less than 1-3/4” (44 mm) requires PLATE, 1250-18. For flush ceiling condition with 2” (51 mm) head frame, use PLATE, 1250-18. (Plate requires 1-3/8” (35 mm) minimum.)

**Maximum opening**
100°:
- A = 7-3/16” (183 mm)
- B = 12-15/16” (329 mm)
101° to 120°:
- A = 5-11/16” (144 mm)
- B = 11-7/16” (291 mm)
or *121° to 180°:
- A = 3-1/16” (78 mm)
- B = 8-15/16” (227 mm)

Hold-open points up to maximum opening with hold-open arm

*Frame and trim permitting.
**1250 Series**

**Mounting details**

**Parallel Arm (Push Side) Mounting**

The 'A' dimension refers to the edge of the closer body to the center line of pivot or hinge.
The 'B' dimension refers to the edge of the closer shoe bracket to the center line of pivot or hinge.

<table>
<thead>
<tr>
<th><strong>Butt Hinges</strong></th>
<th>Should not exceed 5” (127 mm) in width</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Auxiliary Stop</strong></td>
<td>Recommended at hold-open point, where a door cannot swing 180°, or where CUSH-N-STOP arm is not used</td>
</tr>
<tr>
<td><strong>Top Rail</strong></td>
<td>Less than 4-1/2” (114 mm) measured from the stop requires PLATE, 1250-18PA</td>
</tr>
<tr>
<td><strong>Clearance</strong></td>
<td>1250-62PA shoe projects 4-1/8” (105 mm) from door face</td>
</tr>
<tr>
<td><strong>Stop Width</strong></td>
<td>Minimum 1” (25 mm)</td>
</tr>
<tr>
<td><strong>Blade Stop</strong></td>
<td>Clearance, requires 1/2” (13 mm) BLADE STOP SPACER, 1250-61</td>
</tr>
<tr>
<td><strong>Auxiliary Shoe</strong></td>
<td>1250-62A allows installation of regular arm with overhead holder/stop</td>
</tr>
</tbody>
</table>
| **Maximum opening** | Regular or hold-open arm can be templated to 100°:  
A = 7-5/16” (186 mm)  
B = 8-5/8” (219 mm)  
or 101° to 130°:  
A = 5-13/16” (148 mm)  
B = 7-1/8” (181 mm)  
or *131° to 180°:  
A = 3-13/16” (97 mm)  
B = 5-1/8” (130 mm)  
Hold-open points up to maximum opening with hold-open arm.  
*Frame and trim permitting. |

**Note:**
- 1250 Parallel arm closer includes 1250-201 FIFTH HOLE SPACER to support PA SHOE.
**EDA mount**

The 'A' dimension refers to the edge of the closer body to the center line of pivot or hinge.
The 'B' dimension refers to the edge of the closer shoe bracket to the center line of pivot or hinge.

**CUSH/SCUSH mount**

**Clearance**
1250-62EDA or CUSH shoe projects 5-11/16” (144mm) from door face

**Head Frame**
Flush or rabbeted requires CUSH FLUSH PANEL ADAPTER, 1250-419

**EDA or CUSH ARM**
Requires soffit SHOE SUPPORT, 1250-30 for fifth screw anchorage where reveal is less than 2-3/4” (70mm)

**Spring CUSH**
Dead stop points are approximately 5° more than templated stop point.

**Maximum opening**
EDA template allows 180°. Hold-open point up to maximum opening

<table>
<thead>
<tr>
<th>Angle</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>100°</td>
<td>7-5/16” (186mm)</td>
<td>9” (229 mm)</td>
</tr>
<tr>
<td>or 130°</td>
<td>5-13/16” (148 mm)</td>
<td>7-1/2” (191 mm)</td>
</tr>
<tr>
<td>or 180°</td>
<td>3-13/16” (97 mm)</td>
<td>5-1/2” (140 mm)</td>
</tr>
</tbody>
</table>

CUSH arms can be templated for maximum opening/hold-open point at 85°

<table>
<thead>
<tr>
<th>Angle</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>85°</td>
<td>8-13/16” (224 mm)</td>
<td>10-1/2” (267 mm)</td>
</tr>
<tr>
<td>90°</td>
<td>8-1/16” (205 mm)</td>
<td>9-3/4” (248 mm)</td>
</tr>
<tr>
<td>100°</td>
<td>6-11/16” (170 mm)</td>
<td>8-3/8” (213 mm)</td>
</tr>
<tr>
<td>105°</td>
<td>6-1/16” (154 mm)</td>
<td>7-3/4” (197 mm)</td>
</tr>
<tr>
<td>110°</td>
<td>5-7/16” (138 mm)</td>
<td>7-1/8” (181 mm)</td>
</tr>
</tbody>
</table>

**Note:**
- 1250 closers ordered with EDA, CUSH or SPRING CUSH arms include 1250-201 FIFTH HOLE SPACER to support the shoe
**1250 Series**

**Cylinders**

1250-3071
Cast Aluminum Cylinder Assembly
- Non-handed
- Standard

**Installation Accessories**

1250-18
Plate
- Required for hinge side mount where top rail is less than 2-3/8” (60mm)
- Required for top jamb mounting where head frame is less than 1-3/4” (44 mm) or flush ceiling condition exists
- Requires minimum 1-1/2” (38 mm) minimum top rail or 1-1/4” (32 mm) head frame

1250-18PA
Plate
- Required for parallel arm mounting where top rail is less than 4-1/2” (114mm), measured from the stop
- Requires 1-3/4” (44 mm) minimum top rail

1250-62A
Auxiliary Shoe
- Requires a top rail of 7-1/8” (181mm). Optional shoe replaces -62PA for parallel arm mounting of regular arm with overhead holder/stop

1250-419
PA Flush Panel Adapter
- Provides horizontal mounting surface for PA, EDA or CUSH shoe on single rabbeted or flush frame

1250-62PA
PA Shoe
- Required for parallel arm mounting

**Covers**

1250-72
Slim Line Plastic Cover
- Non-handed
- Optional

1250-30
CUSH Shoe Support
- Provide anchorage for fifth screw used with CUSH arms where reveal is less than 2-3/4” (70mm)

1250-61
Blade Stop Spacer
- Lowers parallel arm shoe to clear 1/2” (13 mm) blade stop
Arms

1250-3077
Regular Arm w/ PA
- Non-handed
- Mounts hinge side or top jamb
- Parallel Arm includes PA SHOE, 1250-62PA required for parallel arm mounting

1250-3077L
Long Arm
- Non-handed
- Includes LONG ROD AND SHOE, 1250-79LR for top jamb mount with deep reveals
- Optional

1250-3049
Hold-Open Arm w/ PA
- Non-handed
- Mounts hinge side, top jamb or parallel arm (62PA required)
- Hold-open adjustable at shoe
- Optional

1250-3049L
Long Hold-Open Arm
- Non-handed
- Includes LONG HEAD AND TUBE, 1250-3048L for top jamb mount with deep reveals
- Optional

1250-3077EDA
Extra Duty Arm
- Non-handed
- Features solid forged steel main and forearm for potentially abusive installations
- Optional

1250-3049EDA
Hold-Open Extra Duty Arm
- Handed
- Provides hold-open function adjustable at shoe
- Optional

1250-3077CNS
Cush-n-Stop® Arm
- Non-handed
- Features solid forged steel main arm and forearm with stop in soffit shoe
- Optional

1250-3049CNS
HCUSH Arm
- Non-handed
- Provides hold-open function with templated stop/hold-open points.
- Handle controls hold-open function
- Optional

1250-3077SCNS
Spring CUSH Arm
- Non-handed
- For abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe
- Optional

1250-3049SCNS
Spring HCUSH Arm
- Non-handed
- For abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe
- Handle controls hold-open function
- Optional
How-to-order 1250 Series closers

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

Closer options

Cover
- Slim line cover (SLIM)

Finish
- Custom Powder Coat (RAL)
- SRI primer

Arm
- Regular w/62PA (Rw/PA)
- Long (LONG)
- Regular w/62A (R/62A)
- Hold-Open w/62PA (Hw/PA)
- Long Hold-Open (HLONG)
- Extra Duty (EDA)
- Hold-Open Extra Duty (HEDA) - specify handing
- Cush-N-Stop (CUSH)
- HCush (HCUSH)
- Spring CUSH (SCUSH)
- Spring HCUSH (SHCUSH)

Optional screw packs
- TORX Machine Screw (TORX)
- TB* & TORX Machine Screw (TBTORX)
  * Specify door thickness if other than 1-3/4”

Installation accessories
- Plate, 1250-18
- Plate, 1250-18PA
- CUSH Shoe Support, 1250-30
- Blade Stop Spacer, 1250-61
- Auxiliary Shoe, 1250-62A
- PA Flush Panel Adapter, 1250-419

Special template
- ST-

Meets Buy American Act
- BAA

Closer will be shipped with:
- Standard cylinder
- Tri pack arm (Rw/PA)
- Universal screw pack
  unless options listed below are selected.

Table of sizes

- Select closer based on width of door.
- The spring power of a 1250 cylinder is field adjustable from size 1 through size 5 and is shipped adjusted to size 3.

<table>
<thead>
<tr>
<th>Exterior (and Vestibule) door width</th>
<th>24” 610mm</th>
<th>30” 762mm</th>
<th>36” 914mm</th>
<th>42” 1067mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>*1250</td>
<td>size 3</td>
<td>size 4</td>
<td>size 5</td>
<td></td>
</tr>
</tbody>
</table>

Indicates recommended range of door width for closer size.
* Adjustable Size 1 thru 5.

<table>
<thead>
<tr>
<th>Interior door width</th>
<th>24” 610mm</th>
<th>34” 864mm</th>
<th>36” 914mm</th>
<th>48” 1219mm</th>
<th>54” 1372mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>*1250</td>
<td>size 2</td>
<td>size 3</td>
<td>size 4</td>
<td>size 5</td>
<td></td>
</tr>
</tbody>
</table>

Minimum door width

Reduced opening force 1250 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>1250</td>
<td>1250</td>
<td>1250</td>
</tr>
<tr>
<td>5.0* lbs.</td>
<td>1250</td>
<td>1250</td>
<td>1250</td>
</tr>
</tbody>
</table>
The 1260 is a light to medium duty cast iron closer designed to fit into the most common commercial foot print. The 1260 is adjustable for spring sizes 1-5. The 1260 also features a complete line of regular and extra duty arms, LCN’s peel-n-stick installation templates, a convenient spring adjust pointer, and an optional Quick Fix™ bracket kit.

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

**Body Construction**
- Cast Iron Body
- Full Complement Bearing
- 1-3/8” Diameter Piston
- 5/8” Diameter Single Heat Treated Pinion Journal

**Fluid**
- All Weather Fluid

**Handing**
- Non-Handed

** Templating**
- Peel-n-Stick templates - 3/4” x 9-1/16” Mounting Hole Pattern

**Size**
- Adjustable Spring Size 1-5

**Warranty**
- 20 years

**Cover**
- Slim Line Cover, Optional

**Fasteners**
- Self Reaming and Tapping Screws (SRT)

**Mounting**
- Hinge (Pull Side), Top Jamb (Push Side), Parallel Arm (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

---

**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>Hinge/Pull Side</td>
<td>Plastic/Metal</td>
<td>Designer Series</td>
<td>Standard/Delayed Action</td>
<td>Regular/Delayed Action</td>
</tr>
<tr>
<td>Top Jamb (Pull)</td>
<td>Powder Coated</td>
<td>Accessory Kit</td>
<td>Heavy Duty Hold Open</td>
<td>Cusack/Finish</td>
</tr>
<tr>
<td>Top Jamb (Push)</td>
<td>Plated</td>
<td>Optional SRI Primer</td>
<td>Standard Single</td>
<td>Metallic Finish</td>
</tr>
<tr>
<td>Parallel Arm</td>
<td>Stop Face</td>
<td>Optional SRI Primer</td>
<td>Heavy Duty Hold Open</td>
<td>Non-Handed</td>
</tr>
</tbody>
</table>

- Close available with less than 5.0 lbs. opening force on 36” door.
- Maximum opening/hold-open point with standard template.
### Butt Hinges
Should not exceed 5” (127 mm) in width

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

### Reveal
Should not exceed 3/4” (19 mm) for regular arm or 1/2” (13 mm) for hold-open arm

### Top Rail
Less than 2-1/2” (64 mm) requires PLATE, 1260-18

### Clearance
2-7/8” (73 mm) behind door required for installation

### Maximum opening

<table>
<thead>
<tr>
<th>Angle</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>110°</td>
<td>6-9/16” (167 mm)</td>
<td>12-7/16” (316 mm)</td>
</tr>
<tr>
<td>101° to 120°</td>
<td>5-9/16” (141 mm)</td>
<td>11-7/16” (291 mm)</td>
</tr>
<tr>
<td>or *121° to 180°</td>
<td>3-1/16” (78 mm)</td>
<td>8-15/16” (227 mm)</td>
</tr>
</tbody>
</table>

*Frame and trim permitting.

Hold-open points up to maximum opening with hold-open arm
## 1260 Series

### Mounting details

#### Top Jamb (Push Side) 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>Recommended at hold-open point or where a door cannot swing 180°</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reveal</th>
<th>Arm Type</th>
<th>Maximum Reveal</th>
<th>Opening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Arm</td>
<td>3-1/2˝</td>
<td>Up to 120°</td>
<td></td>
</tr>
<tr>
<td>Regular Arm</td>
<td>2-1/4˝</td>
<td>121° to 180°</td>
<td></td>
</tr>
<tr>
<td>Long Arm</td>
<td>7-1/2˝</td>
<td>Up to 120°</td>
<td></td>
</tr>
<tr>
<td>Long Arm</td>
<td>3-1/2˝</td>
<td>121° to 180°</td>
<td></td>
</tr>
<tr>
<td>Hold-Open Arm</td>
<td>2˝</td>
<td>Up to 120°</td>
<td></td>
</tr>
<tr>
<td>Hold-Open Arm</td>
<td>2-1/4˝</td>
<td>121° to 180°</td>
<td></td>
</tr>
<tr>
<td>Long Hold-Open Arm</td>
<td>4-1/2˝</td>
<td>Up to 120°</td>
<td></td>
</tr>
<tr>
<td>Long Hold-Open Arm</td>
<td>4-1/2˝</td>
<td>121° to 160°</td>
<td></td>
</tr>
</tbody>
</table>

#### Top Rail

1-3/4˝ (44 mm) minimum, 2-1/2˝ (64 mm) minimum with closer on PLATE, 1260-18

#### Head Frame

Less than 1-3/4˝ (44 mm) requires PLATE, 1260-18. For flush ceiling condition with 2˝ (51 mm) head frame, use PLATE, 1260-18. (Plate requires 1-3/8˝ (35 mm) minimum.)

<table>
<thead>
<tr>
<th>Maximum opening</th>
<th>110°: A = 7-1/16˝ (179 mm) B = 12-15/16˝ (329 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>101° to 120°:</td>
<td>A = 5-9/16˝ (141 mm) B = 11-7/16˝ (291 mm)</td>
</tr>
<tr>
<td>or *121° to 180°: A = 3-1/16˝ (78 mm) B = 8-15/16˝ (227 mm)</td>
<td></td>
</tr>
</tbody>
</table>

*Frame and trim permitting.*

---

LCN Door Control Catalog
1260 Series

Mounting details

Parallel Arm (Push Side) 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>Recommended at hold-open point, where a door cannot swing 180°, or where CUSH-N-STOP arm is not used</td>
</tr>
<tr>
<td>Top Rail</td>
<td>Less than 4-3/8” (111 mm) measured from the stop requires PLATE, 1260-18PA</td>
</tr>
<tr>
<td>Clearance</td>
<td>1260-62PA shoe projects 4” (102 mm) from door face</td>
</tr>
<tr>
<td>Stop Width</td>
<td>Minimum 1” (25 mm)</td>
</tr>
<tr>
<td>Blade Stop</td>
<td>Clearance, requires 1/2” (13 mm) BLADE STOP SPACER, 1260-61</td>
</tr>
<tr>
<td>Auxiliary Shoe</td>
<td>1260-62A allows installation of regular arm with overhead holder/stop. Special templating required</td>
</tr>
<tr>
<td>Maximum opening</td>
<td>Regular or hold-open arm can be templated to 100°: A = 7-3/16” (183 mm)  B = 8-5/8” (219 mm)  or 101° to 130°: A = 5-11/16” (144 mm)  B = 7-1/8” (181 mm)  or *131° to 180°: A = 3-11/16” (94 mm)  B = 5-1/8” (130 mm)</td>
</tr>
<tr>
<td>Hold-open points up to maximum opening with hold-open arm.</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
- Optional mounting requires PA SHOE, 1260-62PA for REGULAR or HOLD-OPEN arms
- 1260 Parallel arm closer includes 1260-201 FIFTH HOLE SPACER to support PA SHOE
### Clearing

1260-62EDA or CUSH shoe projects 5-1/2” (140 mm) from door face.

### Head Frame

Flush or rabbeted requires CUSH FLUSH PANEL ADAPTER, 1260-419.

### EDA or CUSH ARM

Requires SHOE SUPPORT, 1260-30 for fifth screw anchorage where reveal is less than 3-1/16” (78 mm).

### Maximum Opening

<table>
<thead>
<tr>
<th>EDA Template</th>
<th>CUSH Arms can be templated for maximum opening/hold-open point at</th>
</tr>
</thead>
<tbody>
<tr>
<td>90°: A = 4-13/16” (122 mm) B = 9-1/2” (241 mm)</td>
<td>85°: A = 5-5/16” (135 mm) B = 10” (254 mm)</td>
</tr>
<tr>
<td>or 120°: A = 3-5/16” (84 mm) B = 8” (203 mm)</td>
<td>90°: A = 4-11/16” (119 mm) B = 9-3/8” (238 mm)</td>
</tr>
<tr>
<td>Hold-open points up to maximum opening with LEDA arm</td>
<td>100°: A = 3-9/16” (90 mm) B = 8-1/4” (210 mm)</td>
</tr>
<tr>
<td>110°: A = 2-13/16” (71 mm) B = 7-1/2” (191 mm)</td>
<td></td>
</tr>
</tbody>
</table>

### Note:

- 1260 closers ordered with EDA, CUSH or SPRING CUSH arms include 1260-201 FIFTH HOLE SPACER to support the shoe.
# 1260 Series

## Accessories

### Installation Accessories

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1260-18</td>
<td>Plate, required for hinge side mount where top rail is less than 2-1/2” (64 mm)</td>
</tr>
<tr>
<td></td>
<td>Required for top jamb mounting where head frame is less than 1-3/4” (44 mm) or flush ceiling</td>
</tr>
<tr>
<td></td>
<td>condition exists</td>
</tr>
<tr>
<td></td>
<td>Requires minimum 1-1/2” (38 mm) minimum top rail or 1-1/4” (32 mm) head frame</td>
</tr>
<tr>
<td>1260-18PA</td>
<td>Plate, required for parallel arm mounting where top rail is less than 4-3/8” (111 mm), measured</td>
</tr>
<tr>
<td></td>
<td>from the stop</td>
</tr>
<tr>
<td></td>
<td>Requires 1-3/4” (44 mm) minimum top rail</td>
</tr>
<tr>
<td>1260-18QF</td>
<td>Quick Fix™ Bracket Kit, optional kit includes retro-fit mounting plates for 1371 closer</td>
</tr>
<tr>
<td></td>
<td>cylinder and shoe</td>
</tr>
<tr>
<td></td>
<td>Useful in applications when previously drilled holes are damaged</td>
</tr>
<tr>
<td>1260-30</td>
<td>CUSH Shoe Support, provide anchorage for fifth screw used with CUSH arms where reveal is</td>
</tr>
<tr>
<td></td>
<td>less than 3-1/16” (78 mm)</td>
</tr>
<tr>
<td>1260-61</td>
<td>Blade Stop Spacer, lowers parallel arm shoe to clear 1/2” (13 mm) blade stop</td>
</tr>
<tr>
<td>1260-62A</td>
<td>Auxiliary Shoe, requires a top rail of 7” (178 mm), optional shoe replaces 62PA for parallel</td>
</tr>
<tr>
<td></td>
<td>arm mounting of regular arm with overhead holder/stop</td>
</tr>
<tr>
<td>1260-419</td>
<td>PA Flush Panel Adapter, provides horizontal mounting surface for PA, EDA or CUSH shoe on</td>
</tr>
<tr>
<td></td>
<td>single rabbeted or flush frame</td>
</tr>
<tr>
<td>1260-62PA</td>
<td>PA Shoe, required for parallel arm mounting</td>
</tr>
</tbody>
</table>

### Cylinders

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1260(2)(3)(4)(5)-3071</td>
<td>Cast Iron Cylinder Assembly, non-handed</td>
</tr>
<tr>
<td></td>
<td>Standard, standard</td>
</tr>
</tbody>
</table>

### Covers

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1260-72</td>
<td>Slim Line Plastic Cover, non-handed</td>
</tr>
<tr>
<td></td>
<td>Optional, optional</td>
</tr>
</tbody>
</table>

---

*LCN Door Control Catalog*

Arms

1260-3077
Regular Arm
- Non-handed
- Mounts hinge side or top jamb
- Parallel Arm includes PA SHOE, 1260-62PA required for parallel arm mounting

1260-3077L
Long Arm
- Non-handed
- Includes LONG ROD AND SHOE, 1260-79LR for top jamb mount with deep reveals
- Optional

1260-3049
Hold-open Arm
- Non-handed
- Mounts hinge side, top jamb or parallel arm (62PA required)
- Hold-open adjustable at shoe
- Optional

1260-3049L
Long Hold-open Arm
- Non-handed
- Includes LONG HEAD AND TUBE, 1260-3048L for top jamb mount with deep reveals
- Optional

1260-3077EDA
Extra Duty Arm
- Non-handed
- Features solid forged steel main and forearm for potentially abusive installations
- Optional 1260-3077EDA/G for blade stop clearance

1260-3049EDA
Hold-Open Extra Duty Arm
- Handed arm
- Provides hold-open function adjustable at shoe
- Optional

1260-3077CNS
Cush-n-Stop® Arm
- Non-handed
- Features solid forged steel main arm and forearm with stop in soffit shoe
- Optional

1260-3049CNS
HCUSH Arm
- Non-handed
- Provides hold-open function with templated stop/hold-open points.
- Handle controls hold-open function
- Optional
How-to-order 1260 Series closers

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

Closer options

Cover
- Slim line cover (SLIM)

Finish
- Custom Powder Coat (RAL)
- SRI primer (for use with powder coat finishes only)

Arm
- Regular w/62PA (Rw/PA)
- Long (LONG)
- Regular w/62A (R/62A)
- Hold-Open (H)
- Hold-Open w/62PA (Hw/PA)
- Extra Duty (EDA) (optional -62G)
- Hold-Open Extra Duty (HEDA) - specify handing (optional -62G)
- Cush-N-Stop (CUSH)
- HCush (HCUSH)

Optional screw packs
- TB* w/Self-Reaming and Tapping Screws (TBSRT)
- Wood & Machine Screw (WMS)
- TB*, Wood & Machine Screw (TBWMS)
- TORX Machine Screw (TORX)
- TB* & TORX Machine Screw (TBTORX)
  * Specify door thickness if other than 1-3/4”

Installation accessories
- Plate, 1260-18
- Plate, 1260-18PA
- CUSH Shoe Support, 1260-30
- Blade Stop Spacer, 1260-61
- Auxiliary Shoe, 1260-62A
- PA Flush Panel Adapter, 1260-419
- Quick Fix™ Bracket Kit, 1260-18QF

Special template
- ST-________

Table of sizes
- Select closer based on width of door.
- The spring power of a 1261 cylinder is field adjustable from size 1 through size 5 and is shipped adjusted to size 3.

### Exterior (and Vestibule) door width

<table>
<thead>
<tr>
<th>Size</th>
<th>24”</th>
<th>30”</th>
<th>36”</th>
<th>42”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
<td>610mm</td>
<td>762mm</td>
<td>914mm</td>
<td>1067mm</td>
</tr>
<tr>
<td>1261</td>
<td>size 3</td>
<td>size 4</td>
<td>size 5</td>
<td>size 5</td>
</tr>
</tbody>
</table>

Minimum door width

Indicates recommended range of door width for closer size.

* Adjustable Size 1 thru 5.

### Interior door width

<table>
<thead>
<tr>
<th>Size</th>
<th>24”</th>
<th>34”</th>
<th>38”</th>
<th>48”</th>
<th>54”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
<td>610mm</td>
<td>864mm</td>
<td>965mm</td>
<td>1219mm</td>
<td>1372mm</td>
</tr>
<tr>
<td>1261</td>
<td>size 2</td>
<td>size 3</td>
<td>size 4</td>
<td>size 5</td>
<td>size 5</td>
</tr>
</tbody>
</table>

Minimum door width

Reduced opening force 1260 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>1261</td>
<td>1261</td>
<td>1261</td>
</tr>
<tr>
<td>5.0 lbs.</td>
<td>1261</td>
<td>1261</td>
<td>1261</td>
</tr>
</tbody>
</table>

* Maximum opening force.
The 1450 Series cast aluminum closer was specially designed to deliver consistent, dependable, long-term performance in frequently-used, low-abusive traffic areas. The patented design, featuring the industry's most common hole pattern, is an excellent choice for a range of applications - from aftermarket replacement to aluminum store fronts, to new construction projects - anywhere quality, reliability and value are important.

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

### Body Construction
- Cast Aluminum Body
- Full Complement Bearing
- 1-1/4” Diameter Piston
- 5/8” Diameter Single Heat Treated Pinion Journal

### Fluid
- All Weather Fluid

### Handing
- Non-Handed

### Templating
- Peel-n-Stick templates - 3/4” x 12” Mounting Hole Pattern

### Size
- Adjustable Spring Size 1-6

### Warranty
- 25 years

### Cover
- Slim Line Plastic, Standard
- Full Plastic and Metal, Optional

### Fasteners
- Universal Screw Pack (UNIV)

### Mounting
- Hinge (Pull Side), Top Jamb (Push Side), Parallel Arm (Push Side)

### Arms
- Standard regular pull side, and top jamb

### 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

### 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.
D = For designer series only.
### 1450 Series

#### Mounting details

**Hinge (Pull) Side 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°

Reveal
- Should not exceed 3/4" (19 mm) for regular arm or 1/2" (13 mm) for hold-open arm

Top Rail
- Less than 2-1/2" (64 mm) requires PLATE, 1450-18
- With Full cover, use PLATE, 1450-18FC. Plate requires 1-1/2" (38 mm) minimum

Clearance
- 2-3/8" (60 mm) behind door required for installation

<table>
<thead>
<tr>
<th>Maximum opening</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>100°</td>
<td>7&quot; (102 mm)</td>
<td>12-3/8&quot; (314 mm)</td>
</tr>
<tr>
<td>101° to 130°</td>
<td>5-1/2&quot; (140 mm)</td>
<td>10-7/8&quot; (276 mm)</td>
</tr>
<tr>
<td>131° to 180°</td>
<td>4&quot; (140 mm)</td>
<td>9-3/8&quot; (238 mm)</td>
</tr>
</tbody>
</table>

Hold-open points up to maximum opening with hold-open arm

*Frame and trim permitting.*

---

The ‘A’ dimension refers to the edge of the closer body to the center line of pivot or hinge.

The ‘B’ dimension refers to the edge of the closer shoe bracket to the center line of pivot or hinge.
### 1450 Series

#### Top Jamb (Push Side) 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°.

<table>
<thead>
<tr>
<th>Reveal</th>
<th>Arm Type</th>
<th>Reveals</th>
<th>Max Opening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Arm</td>
<td>5”</td>
<td>5-3/4”</td>
<td>Up to 170°</td>
</tr>
<tr>
<td>Regular Arm</td>
<td>3-3/4”</td>
<td>3-3/4”</td>
<td>Up to 180°</td>
</tr>
<tr>
<td>Long Arm</td>
<td>8”</td>
<td>8”</td>
<td>Up to 155°</td>
</tr>
<tr>
<td>Hold-Open Arm</td>
<td>2-3/4”</td>
<td>2-3/4”</td>
<td>Up to 180°</td>
</tr>
<tr>
<td>Long Hold-Open Arm</td>
<td>4-7/8”</td>
<td>4-7/8”</td>
<td>Up to 140°</td>
</tr>
</tbody>
</table>

**Top Rail**
Requires 2-1/8” (54 mm) minimum. 3-3/8” (86 mm) minimum with closer on PLATE, 1450-1B.

**Head Frame**
Less than 1-3/4” (44 mm) requires PLATE, 1450-1B. For flush ceiling condition with 1-3/4” (45 mm) head frame, use PLATE, 1450-1B.

**Maximum opening**

| 100° | A = 7” (102 mm) | B = 12-3/8” (314 mm) |
| 101° to 130° | A = 5-1/2” (140 mm) | B = 10-7/8” (276 mm) |
| 131° to 180° | A = 4” (102 mm) | B = 9-3/8” (238 mm) |

Hold-open points up to maximum opening with hold-open arm.

*Frame and trim permitting.*

---

![Diagram showing dimensions and notes](image-url)
**1450 Series**

**Mounting details**

**Parallel Arm (Push Side) Mounting**

| **Butt Hinges** | Should not exceed 5” (127 mm) in width |
| **Auxiliary Stop** | Recommended at hold-open point, where a door cannot swing 180°, or where CUSH-N-STOP arm is not used |
| **Top Rail** | - Less than 5-1/4” (133 mm) measured from the soffit requires  |
| | - Plate requires 1-1/4” (32 mm) minimum. |

<table>
<thead>
<tr>
<th>Cover</th>
<th>Minimum Top Rail (measured from soffit)</th>
<th>Plate Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastic</td>
<td>3-1/2” (89 mm)</td>
<td>1450-18</td>
</tr>
<tr>
<td></td>
<td>2-1/4” (57 mm)</td>
<td>1450-18PA</td>
</tr>
<tr>
<td>Metal</td>
<td>3-1/2” (89 mm)</td>
<td>1450-18FC</td>
</tr>
<tr>
<td></td>
<td>2-1/4” (57 mm)</td>
<td>1450-18PAFC</td>
</tr>
</tbody>
</table>

**Clearance**: 1450-62PA shoe projects 4-1/8” (105 mm) from door face

**Head Frame**: Flush or single rabbeted requires PA SHOE ADAPTER, 1450-418

**Stop Width**: Minimum 1” (25 mm)

**Blade Stop**: Clearance, requires 1/2” (13 mm) BLADE STOP SPACER, 1450-61

**Auxiliary Shoe**: 1450-62A allows installation of regular arm with overhead holder/stop

**Maximum opening**: Regular or hold-open arm can be templated to
- 120°: $A = 3-3/16”$ (81 mm)  
  $B = 8-7/8”$ (225 mm)
- 121° to 180°: $A = 11/16”$ (17 mm)  
  $B = 6-3/8”$ (162 mm)

Hold-open points up to maximum opening with hold-open arm.

**Notes:**
- PA shoe is included with Rw/PA Arm
- 1450 closer includes 1450-201 FIFTH HOLE SPACER to support PA SHOE
EDA/HEDA mount

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-3/16” (68 mm)</td>
<td>20-13/16” (528 mm)</td>
</tr>
<tr>
<td>4” (102 mm)</td>
<td>5-11/16” (145 mm)</td>
</tr>
</tbody>
</table>

CUSH/HCUSH/SCUSH/SHCUSH mount

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-3/16” (68 mm)</td>
<td>20-13/16” (528 mm)</td>
</tr>
<tr>
<td>4” (102 mm)</td>
<td>5-11/16” (145 mm)</td>
</tr>
</tbody>
</table>

The 'A' dimension refers to the edge of the closer body to the center line of pivot or hinge.
The 'B' dimension refers to the edge of the closer shoe bracket to the center line of pivot or hinge.

<table>
<thead>
<tr>
<th>Clearance</th>
<th>1450-62EDA or CUSH shoe projects 5-11/16” (144mm) from door face</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head Frame</td>
<td>Flush or rabbeted requires CUSH FLUSH PANEL ADAPTER, 1450-419</td>
</tr>
<tr>
<td>EDA or CUSH ARM</td>
<td>Requires soffit SHOE SUPPORT, 1450-30 for fifth screw anchorage where reveal is less than 3-1/16” (78 mm)</td>
</tr>
<tr>
<td>Spring CUSH</td>
<td>Dead stop points are approximately 5° more than templated stop points</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maximum opening</th>
<th>EDA template allows 110°. Hold-open point up to maximum opening</th>
</tr>
</thead>
</table>
| 120°:                | A = 8-7/8” (225 mm)  
                      | B = 3-3/16” (81 mm)                                                |
| over 120°:           | A = 6-3/8” (162 mm)  
                      | B = 11/16” (17 mm)                                                 |
| 85°:                 | A = 10-3/8” (279 mm)  
                      | B = 4-15/16” (140 mm)                                              |
| 90°:                 | A = 9-5/8” (244 mm)  
                      | B = 4-3/16” (106 mm)                                               |
| 95°:                 | A = 8-7/8” (225 mm)  
                      | B = 3-7/16” (87 mm)                                                |
| 100°:                | A = 8-1/4” (210 mm)  
                      | B = 2-13/16” (71 mm)                                               |
| 105°:                | A = 7-5/8” (194 mm)  
                      | B = 2-3/16” (56 mm)                                                |
| 110°:                | A = 7” (178 mm)      
                      | B = 1-9/16” (40 mm)                                                |

Note:
- 1450 closers ordered with EDA, CUSH or SPRING CUSH arms include 1450-201 FIFTH HOLE SPACER to support the shoe.
### Cylinders

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1450-3071</td>
<td>Cast Aluminum Cylinder Assembly</td>
<td>Non-handed, Standard</td>
</tr>
</tbody>
</table>

### Covers

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1450-72</td>
<td>Slim Line Plastic Cover</td>
<td>Non-handed, Standard</td>
</tr>
<tr>
<td>1450-72MC</td>
<td>Metal Cover</td>
<td>Handed, Optional</td>
</tr>
<tr>
<td>1450-72FC</td>
<td>Full Plastic Cover</td>
<td>Non-handed, Optional</td>
</tr>
</tbody>
</table>

### Alternate Cover

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1450-72ALT</td>
<td>Alternate Cover</td>
<td>Non-handed, Optional</td>
</tr>
</tbody>
</table>

### Installation Accessories

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1450-18 / 1450-18FC</td>
<td>Plate</td>
<td>Required for hinge side mount where top rail is less than 2-1/2” (64 mm) or flush ceiling condition exists&lt;br&gt;Required for top jamb mounting where head frame is less than 1-3/4” (44 mm) head frame&lt;br&gt;Requires minimum 1-1/2” (38 mm) minimum top rail or 1-1/4” (32 mm) head frame&lt;br&gt;With full cover, use PLATE, 1450-18FC</td>
</tr>
<tr>
<td>1450-18PA / 1450-18PAFC</td>
<td>Plate</td>
<td>Required for parallel arm mounting where top rail is less than 4-3/8” (111 mm) measured from stop&lt;br&gt;Requires 1-3/4” (44 mm) minimum top rail&lt;br&gt;With full cover, use PLATE, 1450-18FC</td>
</tr>
<tr>
<td>1450-30</td>
<td>CUSH Shoe Support</td>
<td>Provide anchorage for fifth screw used with CUSH arms where reveal is less than 3-1/16” (78 mm)</td>
</tr>
<tr>
<td>1450-61</td>
<td>Blade Stop Spacer</td>
<td>Lowers parallel arm shoe to clear 1/2” (13 mm) blade stop</td>
</tr>
<tr>
<td>1450-62PA</td>
<td>PA Shoe</td>
<td>Required for parallel arm mounting</td>
</tr>
<tr>
<td>1450-62A</td>
<td>Auxiliary Shoe</td>
<td>Requires a top rail of 7” (178 mm). Optional shoe replaces -62PA for parallel arm mounting of regular arm with overhead holder/stop</td>
</tr>
<tr>
<td>1450-419</td>
<td>PA Flush Panel Adapter</td>
<td>Provides horizontal mounting surface for PA, EDA or CUSH shoe on single rabbeted or flush frame</td>
</tr>
</tbody>
</table>
**Arms**

**1450-3077**
- Regular Arm w/ PA
- Non-handed
- Mounts hinge side or top jamb
- Includes PA SHOE, 1450-62PA required for parallel arm mounting

**1450-3077L**
- Long Arm
- Non-handed
- Includes LONG ROD AND SHOE, 1450-79LR for top jamb mount with deep reveals
- Optional

**1450-3049**
- Hold-Open Arm w/ PA
- Non-handed
- Mounts hinge side, top jamb or parallel arm (62PA required)
- Hold-open adjustable at shoe
- Optional

**1450-3049L**
- Long Hold-Open Arm
- Non-handed
- Includes LONG HEAD AND TUBE, 1450-3048L for top jamb mount with deep reveals
- Optional

**1450-3077EDA**
- Extra Duty Arm
- Non-handed
- Features solid forged steel main and forearm for potentially abusive installations
- Optional 1450-3077EDA/G for blade stop clearance

**1450-3077EDA/62G**
- Extra Duty Arm w/ 62G
- Non-handed
- Features solid forged steel main and forearm for potentially abusive installations
- Optional 1450-3077EDA/62G for blade stop clearance

**1450-3049EDA**
- Hold-Open Extra Duty Arm
- Handed arm
- Provides hold-open function adjustable at shoe
- Optional

**1450-3077CNS**
- Cush-n-Stop® Arm
- Non-handed
- Features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe
- Optional

**1450-3049CNS**
- HCUSH Arm
- Non-handed
- Provides hold-open function with templated stop/hold-open points
- Handle controls hold-open function
- Optional

**1450-3077SCNS**
- Spring CUSH Arm
- Non-handed
- For abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe
- Optional

**1450-3049SCNS**
- Spring HCUSH Arm
- Non-handed
- For abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe
- Handle controls hold-open function
- Optional
How-to-order 1450 Series closers

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

Closer will be shipped with:
- Standard cylinder
- Standard cover
- Tri pack arm (Rw/PA)
- Universal screw pack
  unless options listed below are selected.

Cover
- Full Plastic (FC)
- Metal (specify right or left hand) (MC)
- Alternate Cover (ALT) (sold separately from product)

Finish
- Custom Powder Coat (RAL)
  - Metal cover required
- SRI primer

Arm
- Regular w/62PA (Rw/PA)
- Long (LONG)
- Regular w/62A (Rw/62A)
- Hold-Open w/62PA (Hw/PA)
- Long Hold-Open (HLONG)
- Extra Duty (EDA) (optional - 62G)
- Hold-Open Extra Duty (HEDA) - specify handing
- Cush-N-Stop (CUSH)
- HCush (HCUSH)
- Spring Cush (SCUSH)
- Spring HCush (SHCUSH)

Optional screw packs
- TORX Machine Screw (TORX)
- TB* & TORX Machine Screw (TBTORX)
  * Specify door thickness if other than 1-3/4”

Installation accessories
- Plate, 1450-18
- Plate, 1450-18FC
- Plate, 1450-18PA
- Plate, 1450-18PAFC
- CUSH Shoe Support, 1450-30
- Blade Stop Spacer, 1450-61
- Auxiliary Shoe, 1450-62A
- PA Flush Panel Adapter, 1450-419

Special template
- ST- __________

Meets Buy American Act
- BAA

Cover options

Table of sizes

- Select closer based on width of door.
- The spring power of a 1450 cylinder is field adjustable from size 1 through size 6 and is shipped adjusted to size 3.

<table>
<thead>
<tr>
<th>Exterior (and Vestibu le) door width</th>
<th>*1450</th>
</tr>
</thead>
<tbody>
<tr>
<td>24” 610mm</td>
<td>size 3</td>
</tr>
<tr>
<td>30” 762mm</td>
<td>size 4</td>
</tr>
<tr>
<td>36” 914mm</td>
<td>size 5</td>
</tr>
<tr>
<td>42” 1067mm</td>
<td>size 6</td>
</tr>
<tr>
<td>48” 1219mm</td>
<td></td>
</tr>
</tbody>
</table>

Minimum door width

Indicates recommended range of door width for closer size.

* Adjustable Size 1 thru 6.

<table>
<thead>
<tr>
<th>Interior door width</th>
<th>*1450</th>
</tr>
</thead>
<tbody>
<tr>
<td>24” 610mm</td>
<td>size 2</td>
</tr>
<tr>
<td>34” 864mm</td>
<td>size 3</td>
</tr>
<tr>
<td>38” 965mm</td>
<td>size 4</td>
</tr>
<tr>
<td>48” 1219mm</td>
<td>size 5</td>
</tr>
<tr>
<td>54” 1372mm</td>
<td>size 6</td>
</tr>
<tr>
<td>60” 1524mm</td>
<td></td>
</tr>
</tbody>
</table>

Minimum door width

Indicated opening force 1450 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>1450</td>
<td>1450</td>
<td>1450</td>
</tr>
<tr>
<td>5.0 lbs.</td>
<td>1450</td>
<td>1450</td>
<td>1450</td>
</tr>
</tbody>
</table>
Designed for maximum versatility, the 1460, available with multiple cover options, can be used for both commercial and institutional applications. This fully universal closer offers a wide variety of options and fast and accurate installation.

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

### Body Construction
- Cast Iron Body
- Full Complement Bearing
- 1-1/4˝ Diameter Piston
- 3/4˝ Diameter Single Heat Treated Pinion Journal

### Fluid
- All Weather Fluid

### Handing
- Non-Handed

### Templating
- Peel-n-Stick templates - 1” x 7-1/2” Mounting Hole Pattern

### Size
- Adjustable Spring Size 1-6. Includes Patented Green Dial

### Warranty
- 30 years

### Cover
- Slim Line Plastic, Standard
- Full Plastic and Metal Designer Series, Optional

### Fasteners
- Self Reaming and Tapping Screws (SRT)

### Mounting
- Hinge (Pull Side), Top Jamb (Push Side), Parallel Arm (Push Side)

### Arms
- Standard regular pull side, and top jamb

### 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**
  - COVER
    - DESIGNER SERIES
  - CYLINDER
    - POWDER COAT
    - PLATED
  - MOUNTING
    - HINGE (PULL SIDE)
    - TOP JAMB (PULL)
    - TOP JAMB (PUSH)
    - PARALLEL ARM
    - STOP FACE
  - ARM FUNCTION

- **D** = For designer series only.
- **C** = Closer available with less than 5.0 lbs. opening force on 36” door.
- **Maximum opening/hold-open point with standard template.**

LCN Door Control Catalog  

LCN®
### 1460 Series

#### Mounting details

**Hinge (Pull) Side 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°

**Reveal**
- Should not exceed 3/4” (19 mm) for regular arm or 1/2” (13 mm) for hold-open arm

**Top Rail**
- Less than 2-1/2” (64 mm) requires PLATE, 1460-18
- With Full cover, use PLATE, 1460-18FC. Plate requires 1-1/2” (38 mm) minimum
- With Designer Series metal cover, use PLATE, 1460-18DS1

**Clearance**
- 2-3/8” (60 mm) behind door required for installation

**Delayed Action**
- Add suffix “DEL” to selected cylinder (eg. 1461 DEL)
- Delays closing from:
  - 110° to 65° (using 110° template)
  - 160° to 75° (using 180° template)
- Delay time adjustable up to approximately 1 minute

**Maximum opening**
- 110°:
  - A = 5-7/8” (149 mm)
  - B = 10-7/8” (276 mm)
- or *180°:
  - A = 2-7/8” (73 mm)
  - B = 7-7/8” (200 mm)

Hold-open points up to maximum opening with hold-open arm

*Frame and trim permitting.
### But Hinges
Should not exceed 5” (127 mm) in width

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

<table>
<thead>
<tr>
<th>Reveal</th>
<th>Arm Type</th>
<th>Reveal</th>
<th>Max Opening</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regular Arm</td>
<td>4-7/8”</td>
<td>Up to 140°</td>
</tr>
<tr>
<td></td>
<td>Regular Arm</td>
<td>3-1/2”</td>
<td>Up to 180°</td>
</tr>
<tr>
<td></td>
<td>Long Arm</td>
<td>7”</td>
<td>Up to 140°</td>
</tr>
<tr>
<td></td>
<td>Hold-Open Arm</td>
<td>2-1/2”</td>
<td>Up to 180°</td>
</tr>
<tr>
<td></td>
<td>Long Hold-Open Arm</td>
<td>4-7/8”</td>
<td>Up to 140°</td>
</tr>
</tbody>
</table>

**Top Rail**
Requires 1-7/8” (48 mm) minimum. 2-3/4” (70 mm) minimum with closer on PLATE, 1460-18

**Head Frame**
Less than 1-3/4” (44 mm) requires PLATE, 1460-18. For flush ceiling condition with 2” (51 mm) head frame, use PLATE, 1460-18

**Delayed Action**
- Add suffix “DEL” to selected cylinder (eg. 1460 DEL).
- Delays closing:
  - 110° to 75° (using 110° template)
  - 180° to 95° (using 180° template)
- Delay time adjustable up to approximately 1 minute.

**Maximum opening**

- **110°:**
  - A = 6-3/4” (169 mm)
  - B = 11-1/4” (286 mm)

- **180° to 120°:**
  - A = 3” (76 mm)
  - B = 7-1/2” (191 mm)

Hold-open points up to maximum opening with hold-open arm.

*Frame and trim permitting.*
### 1460 Series

#### Mounting details

**Parallel Arm (Push Side) Mounting**

<table>
<thead>
<tr>
<th>Component</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>Auxiliary Stop</strong></td>
<td>Recommended at hold-open point, where a door cannot swing 180°, or where CUSH-N-STOP arm is not used</td>
</tr>
<tr>
<td><strong>Top Rail</strong></td>
<td>- Less than 4-3/8” (111 mm) measured from the stop requires PLATE, 1460-18PA. With Full cover, use PLATE, 1460-18PAFC</td>
</tr>
<tr>
<td></td>
<td>- Plate requires 1-3/4” (44 mm) minimum. Plate requires 1-1/4” (32 mm) minimum</td>
</tr>
<tr>
<td></td>
<td>- With Designer Series metal cover, use PLATE, 1460-18PADS1</td>
</tr>
<tr>
<td><strong>Clearance</strong></td>
<td>1460-62PA shoe projects 4” (102 mm) from door face</td>
</tr>
<tr>
<td><strong>Head Frame</strong></td>
<td>Flush or single rabbeted requires PA SHOE ADAPTER, 1460-419</td>
</tr>
<tr>
<td><strong>Stop Width</strong></td>
<td>Minimum 1” (25 mm)</td>
</tr>
<tr>
<td><strong>Blade Stop</strong></td>
<td>Clearance, requires 1/2” (13 mm) BLADE STOP SPACER, 1460-61</td>
</tr>
<tr>
<td><strong>Auxiliary Shoe</strong></td>
<td>1460-62A allows installation of regular arm with overhead holder/stop</td>
</tr>
<tr>
<td></td>
<td>- Special templating required</td>
</tr>
<tr>
<td><strong>Delayed Action</strong></td>
<td>- Add suffix “DEL” to selected cylinder (eg. P1460 DEL)</td>
</tr>
<tr>
<td></td>
<td>- Delays closing from maximum opening to approximately 75°</td>
</tr>
<tr>
<td></td>
<td>- Delay time adjustable up to approximately 1 minute</td>
</tr>
<tr>
<td><strong>Maximum opening</strong></td>
<td>Regular or hold-open arm can be templated to</td>
</tr>
<tr>
<td></td>
<td>100°: A = 4-1/4” (108 mm)</td>
</tr>
<tr>
<td></td>
<td>B = 9-1/4” (235 mm)</td>
</tr>
<tr>
<td></td>
<td>or 180°: A = 1-3/4” (44 mm)</td>
</tr>
<tr>
<td></td>
<td>B = 6-3/4” (171 mm)</td>
</tr>
<tr>
<td></td>
<td>Hold-open points up to maximum opening with hold-open arm.</td>
</tr>
</tbody>
</table>

**Notes:**
- Optional mounting requires PA SHOE, 1460-62PA for REGULAR or HOLD-OPEN arms. Add prefix “P” to closer description (eg. P1460)
- P1460 closer includes 1460-201 FIFTH HOLE SPACER to support PA SHOE.
**EDA mount**

![Diagram of EDA mount]

**CUSH mount**

![Diagram of CUSH mount]

**Spring CUSH**

Hold open points are approximately 5° less than dead stop point

**Clearance**

1460-62EDA or CUSH shoe projects 5-1/2” (140 mm) from door face

**Head Frame**

Flush or rabbeted requires PA FLUSH PANEL ADAPTER, 1460-419

**EDA or CUSH ARM**

Requires SHOE SUPPORT, 1460-30 for fifth screw anchorage where reveal is less than 3-1/16” (78 mm)

**Maximum opening**

EDA template allows 110° Hold-open point up to maximum opening

CUSH arms can be templated for maximum opening/hold-open point at

<table>
<thead>
<tr>
<th>Angle</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>85°</td>
<td>2-3/8” (60 mm)</td>
<td>9-9/16” (243 mm)</td>
</tr>
<tr>
<td>90°</td>
<td>1-5/8” (41 mm)</td>
<td>9-1/16” (230 mm)</td>
</tr>
<tr>
<td>100°</td>
<td>5/8” (16 mm)</td>
<td>8-1/16” (205 mm)</td>
</tr>
</tbody>
</table>

**Note:**

- 1460 closers ordered with EDA, CUSH or SPRING CUSH arms include 1460-201 FIFTH HOLE SPACER to support the shoe
## 1460 Series

### Accessory Catalog

**Cylinders**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1461-3071</td>
<td>Cast Iron Cylinder Assembly</td>
<td></td>
</tr>
<tr>
<td>1460-72</td>
<td>Slim Line Plastic Cover</td>
<td></td>
</tr>
<tr>
<td>1460-72FC</td>
<td>Full Cover</td>
<td></td>
</tr>
<tr>
<td>1460-72DS</td>
<td>Designer Series Metal Cover</td>
<td></td>
</tr>
</tbody>
</table>

**Installation Accessories**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1460-18</td>
<td>Plate</td>
<td></td>
</tr>
<tr>
<td>1460-18DS1</td>
<td>Plate</td>
<td></td>
</tr>
<tr>
<td>1460-18FC</td>
<td>Plate</td>
<td></td>
</tr>
</tbody>
</table>

The following details pertain to the above plates:

- Required for hinge side mount where top rail is less than 2-1/2” (64 mm)
- Required for top jamb mounting where head frame is less than 1-3/4” (44 mm) or flush ceiling condition exists
- Requires minimum 1-1/2” (38 mm) minimum top rail or 1-1/4” (32 mm) head frame
- With full cover, use PLATE, 1460-18FC
- With Designer Series metal cover, use PLATE, 1460-18DS1

*Note: 18FC and 18DS will not work in top jamb application.*

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1460-18PA</td>
<td>Plate</td>
<td></td>
</tr>
<tr>
<td>1460-18PADS1</td>
<td>Plate</td>
<td></td>
</tr>
<tr>
<td>1460-18PAFC</td>
<td>Plate</td>
<td></td>
</tr>
</tbody>
</table>

The following details pertain to the above plates:

- Required for parallel arm mounting where top rail is less than 4-3/8” (111 mm), measured from the stop
- Requires 1-3/4” (44 mm) minimum top rail
- With full cover, use PLATE, 1460-18PAFC
- With Designer Series metal cover, use PLATE, 1460-18PADS1

**Covers**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1460-30</td>
<td>Cush Shoe Support</td>
<td></td>
</tr>
<tr>
<td>1460-30A</td>
<td>Mounting Bracket</td>
<td></td>
</tr>
<tr>
<td>1460-61</td>
<td>Blade Stop Spacer</td>
<td></td>
</tr>
<tr>
<td>1460-62A</td>
<td>Auxiliary Shoe</td>
<td></td>
</tr>
<tr>
<td>1460-419</td>
<td>PA Flush Panel Adapter</td>
<td></td>
</tr>
<tr>
<td>1460-62PA</td>
<td>PA Shoe</td>
<td></td>
</tr>
</tbody>
</table>

**Cylinders**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1460-30</td>
<td>Cush Shoe Support</td>
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</tr>
<tr>
<td>1460-30A</td>
<td>Mounting Bracket</td>
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</tr>
<tr>
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<td>Blade Stop Spacer</td>
<td></td>
</tr>
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<td>Auxiliary Shoe</td>
<td></td>
</tr>
<tr>
<td>1460-419</td>
<td>PA Flush Panel Adapter</td>
<td></td>
</tr>
<tr>
<td>1460-62PA</td>
<td>PA Shoe</td>
<td></td>
</tr>
</tbody>
</table>

**Accessories**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
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</thead>
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<td>1460-30</td>
<td>Cush Shoe Support</td>
<td></td>
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<tr>
<td>1460-30A</td>
<td>Mounting Bracket</td>
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</tr>
<tr>
<td>1460-61</td>
<td>Blade Stop Spacer</td>
<td></td>
</tr>
<tr>
<td>1460-62A</td>
<td>Auxiliary Shoe</td>
<td></td>
</tr>
<tr>
<td>1460-419</td>
<td>PA Flush Panel Adapter</td>
<td></td>
</tr>
<tr>
<td>1460-62PA</td>
<td>PA Shoe</td>
<td></td>
</tr>
</tbody>
</table>
**Arms**

**1460-3077**
- **Regular Arm**
  - Non-handed
  - Mounts hinge side or top jamb
  - P1460 closer includes PA SHOE, 1460-62PA required for parallel arm mounting

**1460-3077L**
- **Long Arm**
  - Non-handed
  - Includes LONG ROD AND SHOE, 1460-79LR for top jamb mount with deep reveals
  - Optional

**1460-3077HD**
- **Heavy Duty Regular Arm**
  - Non-handed
  - Mounts hinge side, top jamb or parallel arm
  - Optional

**1460-3077HDL**
- **Heavy Duty Long Arm**
  - Non-handed
  - Includes long rod and shoe, 1460-79LR for top jamb mounts with deep reveals
  - Optional

**1460-3077EDA**
- **Extra Duty Arm**
  - Non-handed
  - Features solid forged steel main and forearm for potentially abusive installations
  - Optional 1460-3077EDA/62G for blade stop clearance

**1460-3077EDA/62G**
- **Extra Duty Arm w/ 62G**
  - Non-handed
  - Features solid forged steel main and forearm for potentially abusive installations

**1460-3049**
- **Hold-Open Arm**
  - Non-handed
  - Mounts hinge side, top jamb or parallel arm (62PA required)
  - Hold-open adjustable at shoe
  - Optional

**1460-3049L**
- **Long Hold-Open Arm**
  - Non-handed
  - Includes LONG HEAD AND TUBE, 1460-3048L for top jamb mount with deep reveals
  - Optional

**1460-3049CNS**
- **HCUSH Arm**
  - Non-handed
  - Provides hold-open function with templated stop/hold-open points
  - Handle controls hold-open function
  - Optional

**1460-3049SHCNS**
- **Spring HCUSH Arm**
  - Non-handed
  - For abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe. Handle controls hold-open function
  - Optional

**1460-3049EDA**
- **Hold-Open Extra Duty Arm**
  - Non-handed
  - Provides hold-open function adjustable at shoe
  - Optional

**1460-3049L**
- **Long Hold-Open Arm**
  - Non-handed
  - Includes LONG HEAD AND TUBE, 1460-3048L for top jamb mount with deep reveals
  - Optional

**1460-3077CNS**
- **Cush-N-Stop® Arm**
  - Non-handed
  - Features solid forged steel main arm and forearm with stop in soffit shoe
  - Optional
**How-to-order 1460 Series closers**

### Closer options

<table>
<thead>
<tr>
<th>Cylinder</th>
<th></th>
<th>Cover</th>
<th></th>
<th>Finish</th>
<th></th>
<th>Arm</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>□ Delayed Action (DEL)</td>
<td>□ Full cover (FC)</td>
<td>□ Designer series cover (DS)</td>
<td>□ Custom Powder Coat (RAL) (DS cover required)</td>
<td>□ Plated Finish, US (DS cover required)</td>
<td>□ SRi primer (for use with powder coat finishes only)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Full cover (FC)</td>
<td>□ Designer series cover (DS)</td>
<td></td>
<td>□ Plated Finish, US (DS cover required)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Optional screw packs**

- □ TB* w/Self-Reaming and Tapping Screws (TBSRT)
- □ Wood & Machine Screw (WMS)
- □ TB*, Wood & Machine Screw (TBWMS)
- □ TORX Machine Screw (TORX)
- □ TB* & TORX Machine Screw (TBTORX)
  * Specify door thickness if other than 1-3/4”

**Installation accessories**

- □ Plate, 1460-18
- □ Plate, 1460-18DS
- □ Plate, 1460-18FC
- □ Plate, 1460-18PA
- □ Plate, 1460-18PA
- □ Plate, 1460-18PADS
- □ Plate, 1460-18PA
- □ Plate, 1460-18PA
- □ CUSH Shoe Support, 1460-30
- □ Blade Stop Spacer, 1460-61
- □ Auxiliary Shoe, 1460-62A
- □ PA Flush Panel Adapter, 1460-419

**Special template**

- □ ST-________

### Table of sizes

- Select closer based on width of door
- The spring power of a 1461 cylinder is field adjustable from size 1 through size 6 and is shipped adjusted to size 3

#### Exterior (and Vestibule) door width

<table>
<thead>
<tr>
<th>Size</th>
<th>Door Width</th>
<th>Minimum Door Width</th>
<th>Size 2</th>
<th>Size 3</th>
<th>Size 4</th>
<th>Size 5</th>
<th>Size 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>24”</td>
<td>610mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30”</td>
<td>762mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36”</td>
<td>914mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42”</td>
<td>1067mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48”</td>
<td>1219mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1461

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

### Interior door width

<table>
<thead>
<tr>
<th>Size</th>
<th>Door Width</th>
<th>Minimum Door Width</th>
<th>Size 2</th>
<th>Size 3</th>
<th>Size 4</th>
<th>Size 5</th>
<th>Size 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>24”</td>
<td>610mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34”</td>
<td>864mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38”</td>
<td>965mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48”</td>
<td>1219mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>54”</td>
<td>1372mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>54”</td>
<td>1524mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1461

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

### Reduced opening force 1460 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>1461</td>
<td>1461</td>
<td>1461</td>
</tr>
<tr>
<td>5.0 lbs.</td>
<td>1461</td>
<td>1461</td>
<td>1461</td>
</tr>
</tbody>
</table>
The 1460T is a fully universal slim line, single lever (track) arm closer designed for interior use on narrow head frames and top rails. The modern styling and small projection make it an excellent choice for interior doors.

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

**Body Construction**
- Cast Iron Body
- Full Complement Bearing
- 1-1/4” Diameter Piston
- 5/8” Diameter Single Heat Treated Pinion Journal

**Fluid**
- All Weather Fluid

**Handing**
- Non-Handed

**Templating**
- Peel-n-Stick templates - 1” x 7-1/2” Mounting Hole Pattern

**Size**
- 1460T adjustable size 2-4
- 1461T adjustable size 1-2

**Warranty**
- 30 years

**Cover**
- Slim Line, Standard
- Full Plastic or Full Metal Designers Series, Optional

**Fasteners**
- Self Reaming and Tapping Screws (SRT)

**Mounting**
- Hinge pull side, top jamb, pull stop face

**Arms**
- Single level with track roller

**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.
### 1460T Series

#### Mounting details

**Hinge (Pull) Side 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.
- It is not intended to replace an auxiliary stop

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

**Top Rail**
- Less than 2-1/2" (64 mm) requires PLATE, 1460T-18
- Plate requires 1-1/2" (38 mm) minimum
- With Full cover, use PLATE, 1460T-18FC
- With Designer Series metal cover, use PLATE, 1460T-18DS

**Clearance**
- 2-3/8" (60 mm) behind door required for installation

**Maximum opening**
- Templating allows up to 180°, trim and frame permitting, limited to 115° when optional bumper is installed
- Consult factory if door will be held open at 180°
- Hold-open points at 85°, 90°, 95°, 100°, 110° or 115° with hold-open tracks
- 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 an exterior or large/heavy door must swing 180°
### 1460T Series

**Top Jamb (Pull Side)**

**Mounting details**

**Top Rail**
- Minimum 1-1/4” (32 mm)

**Head Frame**
- Less than 2-3/4” (70 mm) requires PLATE, 1460T-18
- Plate requires 1-3/4” (44 mm) minimum
- With full cover, use PLATE, 1460T-18FC
- With Designer Series metal cover, use PLATE, 1460T-18DS

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

**Maximum opening**
- Templating allows up to 180°, limited to 115° when optional bumper is installed
- Consult factory if door will be held open at 180°
- Hold-open points at 85°, 90°, 95°, 100°, 110° or 115° with hold-open tracks
- 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 an exterior or large

---

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

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

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

---

**Optional**

*Non-handed Designer Series Metal Cover*

- 12-1/2” (318 mm)
- 12-3/8” (314 mm)
- 3” (76 mm)
1460T Series

Mounting details

Stop Face (Push Side) Mounting

Butt Hinges

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

Auxiliary Stop

- Recommended where a door cannot swing 110°
- Track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop

Top Rail

- Less than 4” (102 mm) measured from the stop face requires PLATE, 1460T-18PA.
  Plate requires 1-1/2” (38 mm) minimum
- With Full cover, use PLATE, 1460T-18PAFC
- With Designer Series metal cover, use PLATE, 1460T-18PADS

Clearance

- 1460T projects 2-3/8” (60 mm) from door face

Stop Width

- Minimum 1-1/4” (32 mm)

Maximum opening

- Templating allows 110°, limited to 100° when optional bumper is installed
- Variable hold-open angles with infinite options
### Cylinders

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>1460T(1)T-3071</td>
<td>Cast Iron Cylinder Assembly</td>
<td>Non-handed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1461T adjustable 1-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1460T adjustable 2-4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Standard</td>
</tr>
</tbody>
</table>

### Arm

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>1460T-3077T</td>
<td>Single Lever Standard Arm</td>
<td>Non-handed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mounts hinge side, top jamb, or stop face</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Track roller not included with arm</td>
</tr>
</tbody>
</table>

### Covers

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>1460T-72</td>
<td>Slim Line Plastic Cover</td>
<td>Non-handed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Standard</td>
</tr>
<tr>
<td>1460T-72FC</td>
<td>Full Plastic Cover</td>
<td>Non-handed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Optional</td>
</tr>
<tr>
<td>1460T-72DS</td>
<td>Designer Series Metal Cover</td>
<td>Non-handed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Required for plating option and custom powder coat finishes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Optional</td>
</tr>
</tbody>
</table>

### Tracks

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>1460T-3038</td>
<td>Track</td>
<td>Non-handed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non hold-open</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mounts on either side of the door</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Will accept hold-open clip and/or bumper assembly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Standard</td>
</tr>
<tr>
<td>1460T-3038B</td>
<td>Track with Bumper</td>
<td>Non-handed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non hold-open</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mounts on either side of the door</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Will accept hold-open clip</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Optional</td>
</tr>
<tr>
<td>1460T-3038H</td>
<td>Track with Hold-Open</td>
<td>Non-handed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hold-open</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mounts on either side of the door</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Will accept bumper assembly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Optional</td>
</tr>
<tr>
<td>1460T-3038HB</td>
<td>Hold-Open Track with Bumper</td>
<td>Non-handed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hold-open</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mounts on either side of the door</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Optional</td>
</tr>
</tbody>
</table>
1460T Series

Installation Accessories

1460T-18
Plate
The following details pertain to the above plates:
- Required for hinge side mount where top rail is less than 2-1/2” (64 mm)
- Required for top jamb mount when head frame is less than 2-3/4” (70 mm)
- Requires minimum 1-1/2” (38 mm) top rail or 1-3/4” (44 mm) head frame minimum
- With Full cover, use PLATE, 1460T-18FC
- With Designer Series metal cover, use PLATE, 1460T-18DS1

1460T-18DA
Plate
The following details pertain to the above plates:
- Required for thing side mount where top rail is less than 2-1/2” (64 mm)
- Required for top jamb mount when head frame is less than 2-3/4” (70 mm)
- Requires minimum 1-1/2” (38 mm) top rail or 1-3/4” (44 mm) head frame minimum
- With Full cover, use PLATE, 1460T-18FC
- With Designer Series metal cover, use PLATE, 1460T-18DS1

1460T-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

1460T-3054
Hold-Open Clip
- Mounts in track to provide hold-open function
- Hold-open point controlled by clip location

1460T-3034
Track Roller
- Quiet, low friction roller assembly
- Shoulder dimension “X” = 1/8” (3 mm)
- Spring-loaded hold-open mechanism

1460T-3034H
Hold-Open Track Roller
- Hold-open roller
- Quiet, low friction roller assembly
- Shoulder dimension “X” = 1/8” (3 mm)
- Spring-loaded hold-open mechanism
**How-to-order 1460T Series closers**

1. **Select cylinder size**
   - 1461T (adjustable from size 1 to 2)
   - 1460T (adjustable from size 2 to 4)

2. **Select finish**
   - Standard Powder Coat
     - Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass

**Closer will be shipped with:**
- Standard cover
- Standard arm
- Standard track
- Track roller
- Self-reaming and tapping screws unless options listed below are selected.

**Cover options**
- Full cover (FC)
- Designer Series metal cover (DS)

**Finish options**
- Standard Powder Coat (RAL)
  - DS cover required
- Plated Finish, US
  - DS cover required
- SRI primer (for use with powder coat finishes only)

**Track options**
- Standard with Bumper (BUMPER)
- Hold-Open (H)
- Hold-Open with Bumper (HBUMPER)

**Optional screw packs**
- TB* w/Self-Reaming and Tapping Screws (TBSRT)
- Wood & Machine Screw (WMS)
- 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, 1460T-18
- Plate, 1460T-18DS1
- Plate, 1460T-18FC
- Plate, 1460T-18PA
- Plate, 1460T-18PADS1
- Plate, 1460T-18PAFC

**Special template**
- ST- __________

**Table of sizes**
- Select closer based on width of door. The spring power of a 1460T cylinder is adjustable from size 2 to size 4 and is shipped adjusted to size 3
- The closing power of 1460T series cylinders may be increased 50%
- The spring power of a 1461T cylinder is adjustable from size 1 to size 2 and is shipped adjusted to size 1

**Reduced opening force 1460T 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 lb.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>5.0 lb.</td>
<td>1461T</td>
<td>1461T</td>
<td>1461T</td>
</tr>
</tbody>
</table>

*Indicates recommended range of door width for closer size.

*Adjustable Size 2 thru 4

*Adjustable Size 1 thru 2
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.

**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.
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: Philip 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

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

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.
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
## 2010 Series

### Installation Accessories

- **2010-420** Fire Shield
  - Handed
  - Track roller not included with arm

- **2010-169** Track Bumper
  - Mounts in track to assist backcheck
  - Limits maximum opening
  - Consists of bumper, bumper post, and mounting screw

  NOTE: Track bumper does not replace auxiliary stop.

### Tracks

- **2010-3038** Standard Track
  - Non-handed
  - Will accept hold-open clip
  - Standard

- **2010-3038B** Standard Track with Bumper
  - Non-handed
  - Will accept hold-open clip
  - Optional

- **2010-3038H** Hold-Open Track
  - Non-handed
  - Will accept bumper assembly
  - Optional

- **2010-3034** Track Roller
  - Quiet, low friction roller assembly
  - Shoulder dimension “X” = 1/16” (2mm)

- **2010-3034H** Hold-Open Track Roller
  - Quiet, low friction roller assembly
  - Shoulder dimension “X” = 1/16” (2mm)

### Cylinders

- **2011(3)(4)(5)(6)-3071** Cast Iron Cylinder Assembly
  - Handed
  - With mounting plate
  - Standard

- **2010-3077T** Standard Arm
  - Handed

- **2010-3038** Standard Track
  - Non-handed
  - Will accept hold-open clip
  - Standard

### Arm

- **2010-3038B** Standard Track with Bumper
  - Non-handed
  - Will accept hold-open clip
  - Optional
How-to-order 2010 Series closers

Select cylinder size
- 2011
- 2013
- 2014
- 2015
- 2016

Select hand
- RH
- LH

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

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

Closer options

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

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

Screw pack
- TORX Machine Screw (TORX)

Installation accessories
- Fire Shield, 2010-420

Special template
- ST-

Exterior (and Vestibule) door width

<table>
<thead>
<tr>
<th>28”</th>
<th>30”</th>
<th>36”</th>
<th>42”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td>71mm</td>
<td>762mm</td>
<td>914mm</td>
<td>1067mm</td>
<td>1219mm</td>
</tr>
</tbody>
</table>

Minimum door width

Indicates recommended range of door width for closer size.

Reduced opening force 2010 Series closers

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

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

* Maximum opening force.
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

### Fluid
- All Weather Fluid

### Handing
- Handed

### Size
- Sized 1-5

### Warranty
- 15 years

### Fasteners
- Wood and Machine Screw Pack

### Mounting
- Concealed (in tube); aluminum frame requires minimum 1-3/4˝ (44 mm) 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.

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CONCEALED MOUNTING
- IN FRAME
- IN 1-3/4˝ TUBE
- IN DOOR

FINISH
- POWDER COAT
- PLATED

HANDED
- SIZED

CYLINDER
- ACCESSIBILITY
- DELAYED ACTION
- CONCEALED EXPOSED

ARM
- STANDARD SINGLE
- REGULAR DOUBLE
- HOLD OPEN

ARM FUNCTION
- 180°
- 110°

AVAIL.  NOT AVAIL.

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 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
**2030 Series**

**Accessories**

### 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
2030 Series

Installation Accessories

2030-420
Fire Shield
- 22 gauge steel liner mounts in the track mortise of the door’s top rail for 20 minute labeled wood doors

2030-416
Wood Mounting Clip Set
- Simplifies mounting center pivoted 2030 closer in wood frame
- Includes latch stile clip, hinge stile clip, and cover
- For use with Ives Series center pivots
- Consult factory for special template

2030-417
Wood Mounting Clip Set
- Simplifies mounting offset pivoted or butt hung 2030 closer in wood frame
- Includes two clips
- For use with offset pivots
- Consult factory for special template

2030-169
Track Bumper
- Mounts in track to assist backcheck. Limits maximum opening.
- Consists of bumper, bumper post, and mounting screw

NOTE: Track bumper does not replace auxiliary stop

2030-3054
Hold-Open Clip
- Mounts in track to provide hold-open function
- Hold-open point controlled by clip location
- Requires 2030-3034H Hold-Open Track Roller

2030-3034
Track Roller
- Quiet, low friction roller assembly
- Shoulder dimension “X” = 1/16” (2mm)

2030-3034H
Hold-Open Track Roller
- Quiet, low friction roller assembly
- Shoulder dimension “X” = 1/16” (2mm)
How-to-order 2030 Series closers

Select cylinder size
- 2031
- 2032
- 2033
- 2034
- 2035

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

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

Select hand
- RH
- LH

Closer options

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

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

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

Screw pack
- TORX Machine Screw (TORX)

Special template
- ST-

Table of sizes

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

Exterior (and Vestibule) door width

<table>
<thead>
<tr>
<th>Size</th>
<th>28” 711mm</th>
<th>30” 762mm</th>
<th>36” 914mm</th>
<th>42” 1067mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>2033</td>
<td>size 3</td>
<td>size 4</td>
<td>size 5</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.

Reduced opening force 2030 Series closers

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

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

* Maximum opening force.

<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/</td>
<td>- Aluminum (689)</td>
</tr>
<tr>
<td>Powder Coat</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.

- **CONCEALED MOUNTING**: In Frame, In 1-3/4˝ Tube, In Door
- **FINISH**: Powder Coat, Plated
- **CYLINDER**: Handled, Sized
- **ARM**: Accessible Delayed Action, Concealed Exposed
- **ARM FUNCTION**: Standard (SINGLE), Regular (DOUBLE), Hold Open

* 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)  $B = 8-1/4"$ (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
3030 Series

**Cylinder**

- **3031(2)(3)(4)-3071**
  - Cast Iron Cylinder Assembly
  - Handed
  - With mounting plate
  - Standard

**Arms**

- **3030-3077**
  - Regular arm
  - Non-handed

- **3030-3049**
  - Hold-open arm
  - Handed
  - Provides hold-open function, adjustable at elbow
  - Optional
**How-to-order 3030 Series closers**

Select cylinder size
- 3031
- 3032
- 3033
- 3034

Select hand
- RH
- LH

Specify finish
- Standard Powder Coat
- Custom Powder Coat (RAL)
- Plated Finish, US
- SRI primer (use with powder coat finishes only)

Closer will be shipped with:
- Standard cylinder with mounting bracket
- Regular arm
- Wood and machine screw pack

**Closer options**

**Arm**
- Hold-open (H)

**Screw pack**
- TORX Machine Screw (TORX)

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

**Special template**
- ST-

**Table of sizes**

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

**Interior door width**

<table>
<thead>
<tr>
<th>24” 610mm</th>
<th>34” 864mm</th>
<th>38” 965mm</th>
<th>48” 1219mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>3032</td>
<td>size 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3033</td>
<td></td>
<td>size 3</td>
<td></td>
</tr>
<tr>
<td>3034</td>
<td></td>
<td></td>
<td>size 4</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.

* 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>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>
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>
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<tr>
<td></td>
<td>Full Complement Bearing</td>
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<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>
<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>
</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.

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

- **FINISH**
  - Powder Coat
  - Plated

- **CYLINDER**
  - Handled
  - Size

- **ARM**
  - Standard Angle
  - Regular Angle

- **ARM FUNCTION**
  - Regular Hold-Open
  - 40°
  - 100°

* 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.
### 3130 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 140°
- Optional track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop

**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 3130 Series door closer in a 1-3/4˝ thick wood door

**Door Width**  
2’2˝ (660 mm) minimum

**Maximum opening**  
- Templating allows 140°, trim permitting, 100° with optional bumper installed
- Adjustable hold-open points from 85° to 100°, with hold-open track

### 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
**3130 Series**

**Accessories**

---

### 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)

Screw pack
- TORX Machine Screw (TORX)

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

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

Reduced opening force 3130 Series closers

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

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

<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>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>5.0 lbs.</td>
<td>3131</td>
<td>3131</td>
<td>3132</td>
</tr>
</tbody>
</table>

* 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.

### 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
- 1-1/8” 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 Screws and Torx Security Screws (optional)

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

### 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

---

**Special Templates**

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

---

**Features**

- **Powder Coat**
- **Plated**
- **Concealed Mounting**
- **In Frame**
- **1-1/4” Tube**
- **In Door**
- **Handed**
- **Sized**
- **Accessibility**
- **Delayed Action**
- **Concealed Exposed**
- **Standard (Single)**
- **Regular Double**
- **180°/100°**
- **Hold Open**

- Closer available with less than 5.0 lbs. opening force on 36” door.
- Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.
### 5010 Series

#### Mounting details

**Concealed Mounting**

<table>
<thead>
<tr>
<th>Component</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Butt Hinges</strong></td>
<td>Should not exceed 6˝ (152 mm) in width</td>
</tr>
<tr>
<td><strong>Auxiliary Stop</strong></td>
<td>Recommended at hold-open point or where a door cannot swing 180°</td>
</tr>
<tr>
<td><strong>Top Rail</strong></td>
<td>Minimum 2-1/8˝ (54 mm) required</td>
</tr>
</tbody>
</table>
| **Delay Action**  | - Add suffix “DEL” to selected cylinder (e.g., 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
5010 Series

Accessories

Cylinder

5011(2)(3)(4)(5)(6)-3071
Cast iron Cylinder Assembly
- Handed
- With mounting plate
- Standard

Arms

5010-3077
Regular Arm
- Non-handed

5010-3049
Hold-Open Arm
- Handed
- Provides hold-open function for 100° Template, adjustment at elbow
- Optional
How-to-order 5010 Series closers

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

Select hand
- RH
- LH

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

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

Closer options

Cylinder function
- Delayed Action (DEL)

Arm
- Hold-Open (H)

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

Screw pack
- TORX Machine Screw (TORX)

Special template
- ST

Table of sizes

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

Reduced opening force 5010 Series closers

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

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

* Maximum opening force.

### Exterior (and Vestibule) door width

<table>
<thead>
<tr>
<th>Door width</th>
<th>Size 3</th>
<th>Size 4</th>
<th>Size 5</th>
<th>Size 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>24” (610mm)</td>
<td>5013</td>
<td>5014</td>
<td>5015</td>
<td>5016</td>
</tr>
<tr>
<td>30” (762mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36” (914mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42” (1067mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48” (1219mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Interior door width

<table>
<thead>
<tr>
<th>Door width</th>
<th>Size 2</th>
<th>Size 3</th>
<th>Size 4</th>
<th>Size 5</th>
<th>Size 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>24” (610mm)</td>
<td>5012</td>
<td>5013</td>
<td>5014</td>
<td>5015</td>
<td>5016</td>
</tr>
<tr>
<td>34” (864mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38” (953mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48” (1219mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>54” (1372mm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60” (1524mm)</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.
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.

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
- 1-1/8˝ Diameter Piston
- 11/16˝ Diameter Double Heat Treated Pinion Journal

Fluid
All Weather Fluid

Handing
Handed

Size
Sized 1; 3-6

Warranty
15 years

Fasteners
Wood Screws and Torx Security Screws (optional)

Mounting
Concealed (in tube); aluminum frame requires minimum 1-3/4˝ (44 mm) x 4-1/2˝ (114 mm) tube

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

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

Features
POWDER COAT
PLATED
CONCEALED MOUNTING
IN FRAME
IN 1-3/4˝ TUBE
IN DOOR
FINISH
POWDER COAT PLATED
HANDED
SIZED
ACCESSIBILITY
DELAYED ACTION
CYLINDER
CONCEALED EXPOSED
ARM
STANDARD (SINGLE)
REGULAR (DOUBLE)
ARM FUNCTION
HOLD OPEN
180°
100°

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

**Butt Hinges**

Should not exceed 6" (152 mm) in width

**Auxiliary Stop**

Recommended at hold-open point or where the door cannot swing 180°

**Wood Frame**

- Installation simplified by WOOD MOUNTING CLIP SET 5030-416 for center pivoted or 5030-417 for offset pivoted and butt hung installations
- Consult factory for preparation details

**Top Rail**

Minimum 2-1/8" (54 mm) required

**Door Thickness**

Maximum 1-3/4” (44 mm), for doors thicker than 1-3/4” consult factory

**Maximum opening**

Butt hung doors can be templated for

- 100°:
  - A = 5-13/16” (148 mm)
  - B = 11-13/16” (300 mm)

- 180°:
  - A = 2-1/16” (52 mm)
  - B = 8-1/16” (205 mm)

- Trim permitting
  - Hold-open points up to 100° only with hold-open arm
  - Center pivot mounting restricts opening to 120°. Hold-open up to 120° with hold-open arm
  - Offset pivot mounting allows up to 115°, trim permitting. Hold-open up to 115° with hold-open arm

**Notes:**

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

### Cylinder

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
</table>
| 5031(3)(4)(5)(6)-3071 | Cast Iron Cylinder Assembly  
  - Handed  
  - With mounting plate  
  - Standard |

### Arms

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
</table>
| 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

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
</table>
| 5030-416    | Wood Mounting Clip Set  
  - Simplifies mounting center pivoted 5030 closer in wood frame  
  - Includes latch stile clip, hinge stile clip, and cover.  
  - For use with Ives Series center pivots  
  - Consult factory for special template |
| 5030-417    | Wood Mounting Clip Set  
  - Simplifies mounting offset pivoted or butt hung 5030 closer in wood frame.  
  - Includes two clips.  
  - For use with offset pivots.  
  - Consult factory for special template |
How-to-order 5030 Series closers

Select cylinder size
- 5031
- 5033
- 5034
- 5035
- 5036

Select hand
- RH
- LH

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

Closer options

Arm
- Hold-Open (H)

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

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

Screw pack
- TORX Machine Screw (TORX)

Special template
- ST

Installation accessories

Screw pack
- TORX Machine Screw (TORX)

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

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.
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).

---

**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
- 1-1/8” Diameter Piston
- 11/16” Diameter Double Heat Treated Pinion Journal

**Fluid**
- All Weather Fluid

**Handing**
- Non-Handed

**Size**
- Sized 1-5

**Warranty**
- 15 years

**Fasteners**
- Wood Screws and Torx Security Screws (optional)

**Mounting**
- Concealed (in tube); double acting

**Arms**
- Standard arm with track

**Finishes/Colors/}
- 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**
- POWDER COAT
- PLATED
- CONCEALED MOUNTING
- CONCEALED EXPOSED
- ACCESSIBILITY
- CYLINDER
- ARM
- ARM FUNCTION

- 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.
### 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

- **6031(2)(3)(4)(5)-3071**
  - Cast Iron Cylinder Assembly
  - Non-handed
  - With mounting plate
  - Standard

### Arm

- **6030-3077T**
  - Standard Arm
  - Non-handed
  - 5/16˝ (8 mm) thick arm
  - Track roller not included with arm

### Tracks

- **6030-3038B**
  - Standard Track with Bumper
  - Non-handed
  - Non hold-open
  - Will accept hold-open clip
  - Standard

- **6030-3038HB**
  - Hold-Open Track with Bumper
  - Non-handed
  - Optional

### Installation Accessories

- **6030-416**
  - Wood Mounting Clip Set
  - Simplifies mounting closer in wood frame
  - Includes latch stile clip, hinge stile clip, and cover
  - For use with Ives Series center pivots
  - Consult factory for special template

- **6030-169**
  - Track Bumper
  - Mounts in track to assist backcheck
  - Limits maximum opening
  - Consists of bumper, bumper post, and mounting screw
  - FOR IES CENTER PIVOTS
  - NOTE: Track bumper does not replace auxiliary stop.

- **6030-3054**
  - Hold-Open Clip
  - Mounts in track to provide hold-open function
  - Hold-open point controlled by clip location
  - Requires 6030-3034H Hold-Open Track Roller

- **6030-3034**
  - Track Roller
  - Quiet, low friction roller assembly includes eccentric
  - with 3/4˝ (19 mm) adjustment to center 36˝ (914 mm) door

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

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.

Installation accessories
- Wood Clip Set, 6030-416

Closer options

Track
- Hold-open with Bumper (HBUMPER)

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

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: Exterior (and Vestibule) door width

<table>
<thead>
<tr>
<th>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></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>864mm</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>944mm</td>
<td></td>
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</tr>
<tr>
<td>1067mm</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Closer Size</th>
<th>6033</th>
<th>6034</th>
<th>6035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum door width</td>
<td>size 3</td>
<td>size 4</td>
<td>size 5</td>
</tr>
</tbody>
</table>

Table: Interior door width

<table>
<thead>
<tr>
<th>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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</thead>
<tbody>
<tr>
<td>762mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>864mm</td>
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<tr>
<td>965mm</td>
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<tr>
<td>1209mm</td>
<td></td>
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<tr>
<td>1372mm</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Closer Size</th>
<th>6032</th>
<th>6033</th>
<th>6034</th>
<th>6035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum door width</td>
<td>size 2</td>
<td>size 3</td>
<td>size 4</td>
<td>size 5</td>
</tr>
</tbody>
</table>

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></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6033</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6034</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6035</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.0 lbs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6031</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6032</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6033</td>
<td></td>
<td></td>
<td></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.

** See SEH section (cylinder not included).

*** SEM 7800 Series are die cast.

Product comparison

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

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

SINGLE POINT HOLD-OPEN (SE)
SE Series offers adjustable single point hold-open function controlled by solenoid assembly located in the SE track.

MULTI-POINT HOLD-OPEN (ME)
ME Series offers infinitely adjustable, multi-point hold-open function controlled by solenoid on the cylinder assembly.

HOLDER SCANNER ACTIVATED (HSA)
Electronically controlled closer/holder designed to provide easy passage for groups of pedestrians through high traffic doors. Best suited for high traffic emergency exit doors.

MAGNETS (SEM) - ELECTROMAGNETIC DOOR HOLDERS
SEM Series magnets work with manual door closers to provide single point hold-open. Now available in new tri-voltage with 35 lbs. of holding force.

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

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

LISTINGS AND APPROVALS
Sentronic closer/holders are listed by Underwriters Laboratories, Inc. in the following product categories under FIRE DOORS (GSNV), Combination Door Closers and Holders (GTIS) file R7050. SEM 7800 Series magnets are listed under Door Holders (GTPR) file R8327.
Consult the factory for other listings, such as; cUL, Department of Labor and Industry of the Commonwealth of Pennsylvania, The Board of Standards and Appeals of the City of New York, Fire and Panic Safety Standards of the California State Fire Marshal.

HOLDING SOLENOIDS CURRENT DRAW
SE/ME
24V AC/DC (+10% -15%) @ 90 mA max.
120V AC/DC (+10% -15%) @ 30 mA max.

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

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

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

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

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

ME (2310) WIRING DIAGRAM

WIRING DIAGRAM
Input voltage 24V AC/DC
or 120V AC/DC
(usually from alarm panel or detector)
HSA WIRING
HSA “On/Off” switch assembly includes trim pot to adjust hold-open time and fuse to protect solenoid.

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

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

SPECIFICATIONS
Refer to “SPECIFICATIONS” section for suggested architectural specifications.

DESIGN ASSISTANCE
LCN has been providing reliable solutions to unique door control problems since 1925.
Contact LCN for assistance or technical information at 877-671-7011 or FAX 800-248-1460 (order entry). Fax 815-879-1495 for Application Engineering.

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

FINISHES
- Available in six standard or a wide selection of optional custom powder coat finishes to blend with door and frame.
- LCN’s powder coat finishes surpass 100 hours of salt spray which is over four times the ANSI standard for corrosion resistance.
- Plated finishes are available as an option to accent door and frame.

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

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

FASTENERS
Standard WOOD and MACHINE SCREW (WMS) pack contains phillips head wood and machine screws to install the closer. Thru Bolts and/or TORK® 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 TORK 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

**Features and mounting details**

**Magnets**

#### 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.
**Voltage input**

**Electrical schematic**

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

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

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

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

Accessories

**Magnets**

- SEM7820-516
  - Floor Magnet
  - Magnet coil
  - Standard

- SEM7830-516
  - SEM7840-516
  - SEM7850-516
  - Wall Magnet
  - Magnet coil
  - Standard

**Armatures**

- SEM7820-825
  - SEM7830-825
  - SEM7840-825
  - Door Armature
  - Die cast low profile armature
  - Standard

- SEM7850-828
  - Door Armature
  - Die cast armature
  - Standard

**Cover**

- SEM7830-72
  - SEM7840-72
  - SEM7850-72
  - Standard Cover
  - Die cast cover
  - Standard

**Box**

- SEM7830-268
  - Wall Box
  - Die cast surface wall mount box
  - Standard
**Extensions**

**SEM7810-514**  
Coupler Assembly Kit  
- Required for each door needing extension(s)  
- Kit includes coupler link and ball pivot (alone serves as a 1-1/2” extension)

**SEM7810-E050**  
Extension - 1/2”  
- Metal  
- Standard

**SEM7810-E075**  
Extension - 3/4”  
- Metal  
- Standard

**Extension, SEM7810-E100**  
Extension - 1”  
- Metal  
- Standard

**SEM7810-E200**  
Extension - 2”  
- Metal  
- Standard

**Extension, SEM7810-E400**  
Extension - 4”  
- Metal  
- Standard

**SEM7810-517**  
Extension kit  
- Extension kit includes:  
  - 10..............7810SEM-E050  
  - 10..............7810SEM-E075  
  - 10..............7810SEM-E100  
  - 5..............7810SEM-E200  
  - 20.............7810SEM-514

*Note: Using just the Coupler Assembly Kit (SEM7810-514) will create a 1-1/2” link.  
Extension Links are available in different lengths and can be combined together to achieve the desired length. Max. recommended length = 12”*
## SEM7800 Series

### Ordering Information

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

<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**

- Plastic/Metal Hinge (Pull)
- Top Arm (Push)
- Stop Foot (Push)
- Concealed (Pull)
- Concealed (Doorknob)
- Powder Coat
- Plastic/Plastic
- Plastic/Metal

**Finish**

- Powder Coat
- Plated

**Cover**

- Non-Sized
- Sized

**Cylinder**

- Standard (Double)
- Standard (Single)
- Inswing
- Outswing

**Arm Function**

- Single Point Hold-Open
- Multi-Point Hold-Open
- Bypass 80/140
- 110°

* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.
**3130SE Series**

**Mounting details**

**Concealed Mounting**

---

**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 8310-824 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

---

**Legend**

- To either terminal
- Green ground
- Terminal

---

LCN Door Control Catalog
3130SE Series

Cylinder

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

Arms

3130SE-3077T
Standard Arm
- Handed
- Adjustable to select hold-open point
- Standard

3130SEL-3077T
Long Arm
- Handed
- Provides hold-open point from 110° to 130°, determined by track templating
- Used with SEL TRACK 3130SEL-3038 only
- Optional

Tracks

3130SE-3038
SE Track
- Non-handed
- Circuitry accepts either AC or DC input
- 24V holding solenoid (24) or 120V holding solenoid (120), please specify
- Standard

3130SEL-3038
SEL Long Track
- Non-handed
- Used with LONG ARM, 3130SEL-3077T, only
- Provides hold open point from 110° to 130°, determined by templating. Circuitry accepts either AC or DC input
- 24V holding solenoid (24) or 120V holding solenoid (120), please specify
- Optional

Installation Accessories

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

3130SE-3034SE
Track Roller & Track Slider
- Quiet, low friction roller assembly
- Shoulder dimension “X” = 1/8” (3 mm)
- Alloy metal slider for use in SE series tracks only

Switch

3130SE-3436
Test Switch

3130SE-4040
Transformer
- Reduces line voltage from 120V to 24V AC
- Mounted on plate for 4” (102 mm) x 4” x 2-1/8” (54 mm) junction box (by others)
How-to-order 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

Screw pack

☐ TORX Machine Screw (TORX)

Special template

☐ ST- _______

Table of sizes

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

Interior door width

<table>
<thead>
<tr>
<th>Interior door width</th>
<th>28”</th>
<th>34”</th>
<th>38”</th>
<th>48”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>71mm</td>
<td>864mm</td>
<td>965mm</td>
<td>1219mm</td>
</tr>
<tr>
<td>3133SE</td>
<td></td>
<td></td>
<td>size 3</td>
<td></td>
</tr>
<tr>
<td>3134SE</td>
<td></td>
<td></td>
<td></td>
<td>size 4</td>
</tr>
</tbody>
</table>

Minimum door width

Indicates recommended range of door width for closer size.

NOTE: For SE, minimum door width 28” (711mm)
For SEL, minimum door width 32” (813mm)
The 4040SE SENTRONIC® 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

### 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 8310-824 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
**4040SE Series**

### Mounting details

**Stop Face (Push Side) Mounting**

<table>
<thead>
<tr>
<th>Stop Face (Push Side) Mounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1/4&quot; (32 mm)</td>
</tr>
<tr>
<td>3-7/8&quot; (98 mm)</td>
</tr>
<tr>
<td>5-3/16&quot; (132 mm)</td>
</tr>
<tr>
<td>12-1/4&quot; (311 mm)</td>
</tr>
</tbody>
</table>

- **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

**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
## 4040SE Series

### Accessories

#### Cylinder

**4040SE-3071**  
Cylinder Assembly  
- Non-handed  
- Cast iron  
- Standard

#### Covers

**4040SE-72**  
Plastic Cover  
- Non-handed  
- Clip-on  
- Standard

**4040SE-72MC**  
Metal Cover  
- Handed  
- Required for plated finishes and custom powder coat finishes  
- Optional

#### Arms

**4040SE-3077T**  
Standard Arm  
- Non-handed  
- Adjustable to select hold-open point

**4040SE-3077DE**  
Double Egress Arm  
- Handed  
- For pull side installations on double egress doors and frames  
- Not required for push side mounting on double egress frames  
- Optional

#### Tracks

**4040SE-3038**  
SE Track  
- Non-handed  
- For SE closers. Mounts on either head frame or stop  
- 24V or 120V AC/DC input for holding solenoid, please specify.  
- Includes test switch assembly with fuse  
- Standard

**4040SEL-3038**  
SEL Long Track  
- Non-handed  
- Mounts on either head frame or stop  
- 24V or 120V AC/DC input standard for holding solenoid, please specify  
- Includes test switch assembly with fuse  
- Optional
Switch

4040SE-3436
Test Switch

Installation Accessories

4040SE-18
Plate
- Required where top rail is less than 3-1/2˝ (89 mm)
- Requires minimum 2˝ (51 mm) top rail
- Installations require a SPECIAL TEMPLATE

4040SE-18PA
Plate
- Required where top rail is less than 5-3/4˝ (146 mm)
- Requires minimum 2˝ (51 mm) top rail
- Installations require a SPECIAL TEMPLATE

4040SE-81
Conduit Quick-Connector
- Two piece connector for use with 1/2˝ conduit

4040SE-3034SE
Track Roller & Track Slider
- Quiet, low friction roller assembly
- Shoulder dimension “X” = 1/8˝ (3 mm)
- Alloy metal slider for use in SE series tracks only

4040SE-3210
Transformer
- Reduces line voltage from 120V to 24V AC
- Mounted on cover for 4˝ (102 mm) x 4˝ x 2-1/8˝ (54 mm) junction box (by others)
How-to-order 4040SE Series closers

Select cylinder size
- SE
- SEL

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

Specify finish
- Standard Powder Coat
- Custom Powder Coat (RAL) (handed metal cover required)
- Plated Finish, US

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)

Closer will be shipped with:
- Standard cylinder
- Standard clip-on cover
- Standard arm
- Standard track
- Wood & machine screw pack

unless options listed below are selected.

Closer options

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

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

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

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

* Specify door thickness if other than 1-3/4”

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

Special template
- ST-

Table of sizes

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

Interior door width

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

4040SE

 Minimum door width

size 3 size 4

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.

Indicates recommended range of door width for closer size.
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.

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**Features**

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**2310ME Series**

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**Features**

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**LCN Door Control Catalog**
### Mounting details

#### Concealed Mounting

**2310ME Series**

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

**Top Rail**
- 1-3/8” (35 mm) mortise required
- 5/16” (8 mm) cutout required at top of door, stop face only

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

**Door Width**
- 2’ 4” (711 mm) minimum

**Hollow Metal Frame**
- Requires minimum 4” (102 mm) x 4” frame
- Consult factory or template for preparation details

**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 180° with hold-open points up to 160°

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

### 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
### 2310ME Series
### Accessories

#### Cylinders

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>2310ME-3971</td>
<td>ME Cylinder Assembly</td>
<td>Handed, Cast iron, Specify 24V or 120V, Standard</td>
</tr>
<tr>
<td>2310ME-3071</td>
<td>ME Cylinder/Plate Assembly</td>
<td>Handed, “On/Off” switch assembly controls hold-open function, Circuitry accepts AC or DC input, Specify 24V or 120V, Standard</td>
</tr>
</tbody>
</table>

#### Arm

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>2310ME-3077T</td>
<td>Standard Arm</td>
<td>Handed</td>
</tr>
</tbody>
</table>

#### Track

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>2310ME-3038</td>
<td>Standard Track</td>
<td>Non-handed, Standard</td>
</tr>
</tbody>
</table>

#### Switch

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>2310ME-3351</td>
<td>Switch</td>
<td>“On/Off” switch assembly provides continuous hold-open function, 24V or 120V, please specify</td>
</tr>
</tbody>
</table>

#### Installation Accessories

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>2310ME-420</td>
<td>Fire Shield</td>
<td>22 gauge steel liner mounts in track mortise of door’s top rail for 20 minute labeled wood doors with hollow metal frames</td>
</tr>
<tr>
<td>2310ME-3210</td>
<td>Transformer</td>
<td>Reduces line voltage from 120V to 24V AC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mounted on plate for 4” (102 mm) x 4” x 2-1/8” (54 mm) junction box (by others)</td>
</tr>
<tr>
<td>2310ME-3034</td>
<td>Track Roller</td>
<td>Quiet, low friction roller assembly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shoulder dimension “X” = 1/16” (2 mm)</td>
</tr>
</tbody>
</table>
How-to-order 2310ME 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

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>Size (&quot; or mm)</th>
<th>28&quot;</th>
<th>34&quot;</th>
<th>38&quot;</th>
<th>48&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>711mm</td>
<td>864mm</td>
<td>965mm</td>
<td>1219mm</td>
</tr>
<tr>
<td>Minimum door width</td>
<td>size 4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

---

- **AVAILABLE**
- **NOT AVAILABLE**

* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.
**4310ME Series**

**Hinge (Pull) Side Mounting**

**Mounting details**

**4310ME Series**

**Hinge (Pull) Side Mounting**

**2-9/16"** (65 mm)

**1-1/4"** (32 mm)

**3-1/2"** (89 mm)

**1/2"** (13 mm)

**1-1/4"** (32 mm)

**3-7/8"** (98 mm)

**1-1/16"** (27 mm)

**22-3/4"** (578 mm)

**19"** (483 mm)

**1-1/11/16"** (68 mm)

**3-7/8"** (98 mm)

**19"** (483 mm)

**1-1/16"** (27 mm)

**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

**4310ME Series**

**Hinge (Pull) Side Mounting**

**4310ME Series**

**Hinge (Pull) Side Mounting**

**2-9/16"** (65 mm)

**1-1/4"** (32 mm)

**3-1/2"** (89 mm)

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**3-7/8"** (98 mm)

**19"** (483 mm)

**1-1/16"** (27 mm)

**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

**4310ME Series**

**Hinge (Pull) Side Mounting**

**2-9/16"** (65 mm)

**1-1/4"** (32 mm)

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**3-7/8"** (98 mm)

**19"** (483 mm)

**1-1/16"** (27 mm)

**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

**4310ME Series**

**Hinge (Pull) Side Mounting**

**2-9/16"** (65 mm)

**1-1/4"** (32 mm)

**3-1/2"** (89 mm)

**1/2"** (13 mm)

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**3-7/8"** (98 mm)

**19"** (483 mm)

**1-1/16"** (27 mm)

**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

**4310ME Series**

**Hinge (Pull) Side Mounting**

**2-9/16"** (65 mm)

**1-1/4"** (32 mm)

**3-1/2"** (89 mm)

**1/2"** (13 mm)

**1-1/4"** (32 mm)

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**1-1/16"** (27 mm)

**22-3/4"** (578 mm)

**19"** (483 mm)

**1-1/11/16"** (68 mm)

**3-7/8"** (98 mm)

**19"** (483 mm)

**1-1/16"** (27 mm)

**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

**4310ME Series**

**Hinge (Pull) Side Mounting**

**2-9/16"** (65 mm)

**1-1/4"** (32 mm)

**3-1/2"** (89 mm)

**1/2"** (13 mm)

**1-1/4"** (32 mm)

**3-7/8"** (98 mm)

**1-1/16"** (27 mm)

**22-3/4"** (578 mm)

**19"** (483 mm)

**1-1/11/16"** (68 mm)

**3-7/8"** (98 mm)

**19"** (483 mm)

**1-1/16"** (27 mm)

**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

**4310ME Series**

**Hinge (Pull) Side Mounting**

**2-9/16"** (65 mm)

**1-1/4"** (32 mm)

**3-1/2"** (89 mm)

**1/2"** (13 mm)

**1-1/4"** (32 mm)

**3-7/8"** (98 mm)

**1-1/16"** (27 mm)

**22-3/4"** (578 mm)

**19"** (483 mm)

**1-1/11/16"** (68 mm)

**3-7/8"** (98 mm)

**19"** (483 mm)

**1-1/16"** (27 mm)

**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

**4310ME Series**

**Hinge (Pull) Side Mounting**

**2-9/16"** (65 mm)

**1-1/4"** (32 mm)

**3-1/2"** (89 mm)

**1/2"** (13 mm)

**1-1/4"** (32 mm)

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**19"** (483 mm)

**1-1/11/16"** (68 mm)

**3-7/8"** (98 mm)

**19"** (483 mm)

**1-1/16"** (27 mm)

**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

**4310ME Series**

**Hinge (Pull) Side Mounting**

**2-9/16"** (65 mm)

**1-1/4"** (32 mm)

**3-1/2"** (89 mm)

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**19"** (483 mm)

**1-1/11/16"** (68 mm)

**3-7/8"** (98 mm)

**19"** (483 mm)

**1-1/16"** (27 mm)

**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
# 4310ME Series

## Accessories

### Cylinder

<table>
<thead>
<tr>
<th>4310ME-3971</th>
<th>ME Cylinder Assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handed</td>
<td></td>
</tr>
<tr>
<td>Cast iron</td>
<td></td>
</tr>
<tr>
<td>Specify 24V or 120V</td>
<td></td>
</tr>
<tr>
<td>Standard</td>
<td></td>
</tr>
</tbody>
</table>

### Cover

<table>
<thead>
<tr>
<th>4310ME-72MC</th>
<th>Metal Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handed</td>
<td></td>
</tr>
<tr>
<td>Standard</td>
<td></td>
</tr>
</tbody>
</table>

### Arms

<table>
<thead>
<tr>
<th>4310ME-3077SF</th>
<th>Swing-Free Arm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handed</td>
<td></td>
</tr>
<tr>
<td>After door is placed in hold-open, secondary pivot point allows up to 160° swing without door closer resistance</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4310ME-3077DE</th>
<th>Double Egress Arm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handed</td>
<td></td>
</tr>
<tr>
<td>For double egress doors and frames</td>
<td></td>
</tr>
<tr>
<td>2-11/16&quot; (68 mm) maximum reveal</td>
<td></td>
</tr>
<tr>
<td>Optional</td>
<td></td>
</tr>
</tbody>
</table>

### Track

<table>
<thead>
<tr>
<th>4310ME-3038</th>
<th>Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-handed</td>
<td></td>
</tr>
<tr>
<td>Standard</td>
<td></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” (102 mm) x 4” x 2-1/8” (54mm) junction box (by others)

**4310ME-3354** ME Wiring Harness
- Three wire harness with 6” (152 mm) leads for field wiring connections
How-to-order 4310ME Series closers

Select hand
- RH
- LH

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

Specify finish
- Standard Powder Coat
- Custom Powder Coat (RAL)
- Plated Finish, US
- Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.

Closer options

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

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 size 4</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 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/
- 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>
<thead>
<tr>
<th>MOUNTING</th>
<th>FINISH</th>
<th>COVER</th>
<th>CYLINDER</th>
<th>*ARM FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastic</td>
<td>Powder Coated</td>
<td>Handled</td>
<td>Regular</td>
<td>Single Point Hold-Open</td>
</tr>
<tr>
<td>Metal</td>
<td>Plated</td>
<td>Not Showed</td>
<td>Single</td>
<td>Multi-Point Hold-Open</td>
</tr>
</tbody>
</table>

- **AVAILABLE**
- **NOT AVAILABLE**

* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.
**Top Jamb (Push Side) Mounting**

<table>
<thead>
<tr>
<th><strong>Butt Hinges</strong></th>
<th>Should not exceed 4-1/2” (114 mm) in width</th>
</tr>
</thead>
</table>
| **Top Rail** | 1-3/4” (44 mm) minimum  
3-3/4” (95mm) 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**
- **Rectifier**
- **Capacitor (24V Only)**
- **Earth Ground (Green)**
- **On/Off Switch**
- **Solenoid Power Plug**
- **Solenoid Holding Force Adjustment Potentiometer (24V Only)**
**Cylinders**

- **4414ME-3971**
  - ME Cylinder Assembly
  - Handed
  - Cast iron
  - Specify 24V or 120V
  - Standard

**Cover**

- **4414ME-3071**
  - ME Cylinder/Plate Assembly
  - Handed
  - “On/Off” switch assembly controls hold-open function
  - Circuitry accepts either AC or DC input
  - Please specify 24V or 120V
  - Standard

**Arms**

- **4410ME-3077**
  - Regular Arm
  - Non-handed
  - 3-7/8” (98 mm) maximum reveal

- **4410ME-3077L**
  - Long Arm
  - For increasing opening to 180°
  - 3-7/8” (98 mm) maximum reveal
  - Optional
4410ME Series

Switch

24V shown

4410ME-3351 Switch Assembly
- Provides continuous hold-open function
- Available as 24V or 120V, please specify

Installation Accessories

4410ME-18 Mounting Plate
- Standard

4410ME-18G Mounting Plate
- Substituted for standard plate on flush ceiling installations
- Optional

4410ME - 3210 Transformer
- Reduces line voltage from 120V to 24V AC
- Mounted on cover for 4” (102 mm) x 4” x 2-1/8” (54 mm) junction box (by others)

4410ME-3354 ME Wiring Harness
- Three wire harness with 6” (152 mm) leads for field wiring connections
How-to-order 4410ME Series closers

Select hand
- RH
- LH

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

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

Closer 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 size 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Minimum door width

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 I56.15, 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

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

### Features
- 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

### Maximum Opening/Hold-open Point
- Standard: 160°
- Optional: 95°
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

Connect Green Wire to Earth Ground

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

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

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4311HSA-3971</td>
<td>HSA Cylinder Assembly</td>
</tr>
<tr>
<td></td>
<td>* Handed</td>
</tr>
<tr>
<td></td>
<td>* Cast Iron</td>
</tr>
<tr>
<td></td>
<td>* 24V AC/DC input only for holding solenoid</td>
</tr>
<tr>
<td></td>
<td>* Standard</td>
</tr>
<tr>
<td>4311HSA-3071</td>
<td>HSA Cylinder/Plate Assembly</td>
</tr>
<tr>
<td></td>
<td>* Handed</td>
</tr>
<tr>
<td></td>
<td>* Includes scanner module and system timer module</td>
</tr>
<tr>
<td></td>
<td>* “On/Off” switch assembly provides continuous hold-open function</td>
</tr>
<tr>
<td></td>
<td>* 24V AC/DC input only for holding solenoid and electronics modules</td>
</tr>
<tr>
<td></td>
<td>* Standard</td>
</tr>
</tbody>
</table>

### Arms

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4310HSA-3077T</td>
<td>Standard Arm</td>
</tr>
<tr>
<td></td>
<td>* Handed</td>
</tr>
<tr>
<td>4310HSA-3077DE</td>
<td>Double Egress Arm</td>
</tr>
<tr>
<td></td>
<td>* Handed</td>
</tr>
<tr>
<td></td>
<td>* For double egress doors and frames</td>
</tr>
<tr>
<td></td>
<td>* 2 11/16˝ (67 mm) maximum reveal</td>
</tr>
<tr>
<td></td>
<td>* Optional</td>
</tr>
</tbody>
</table>

### Installation Accessories

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4310HSA-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” = 1/8˝ (3 mm)</td>
</tr>
<tr>
<td>4310HSA-3210</td>
<td>Transformer</td>
</tr>
<tr>
<td></td>
<td>* Reduces line voltage from 120V to 24V AC</td>
</tr>
<tr>
<td></td>
<td>* Mounted on plate for 4˝ (102 mm) x 4˝ x 2-1/8˝ (54 mm) junction box (by others)</td>
</tr>
</tbody>
</table>

### Cover

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4310HSA-72MC</td>
<td>Metal Cover</td>
</tr>
<tr>
<td></td>
<td>* Handed</td>
</tr>
<tr>
<td></td>
<td>* Standard</td>
</tr>
</tbody>
</table>

### Track

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4310HSA-3038</td>
<td>Track</td>
</tr>
<tr>
<td></td>
<td>* Non-handed</td>
</tr>
<tr>
<td></td>
<td>* Standard</td>
</tr>
</tbody>
</table>

### Switch

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4310HSA-3448</td>
<td>Switch Assembly</td>
</tr>
<tr>
<td></td>
<td>* Provides continuous hold-open function</td>
</tr>
<tr>
<td></td>
<td>* Available in 24V only</td>
</tr>
</tbody>
</table>

### Scanner

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4310HSA-3428</td>
<td>Scanner Module</td>
</tr>
</tbody>
</table>

---

**WIRING DIAGRAM**

**INPUT VOLTAGE**

24V AC/DC

OR 120V AC/DC

(USUALLY FROM ALARM PANEL OR DETECT OR)
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

<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>
</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.

Features
- Special Templates
- Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.
4410 HSA Series

Mounting details

Top Jamb (Push) Side Mounting

4410 HSA - Hold open any point 80° to 160°
4410 HSAL - Hold open any point 80° to 170°

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

- **4412HSA-3971**
  - Handed
  - Cast iron
  - 24V AC/DC input only for holding solenoid
  - Standard

- **4412HSA-3071**
  - HSA Cylinder / Plate Assembly
  - Handed
  - Includes scanner module and system timer module
  - “On/Off” switch assembly provides continuous hold-open function
  - 24V AC/DC input only for holding solenoid and electronics modules
  - Standard

### Arms

- **4410HSA-3077**
  - Regular Arm
  - Non-handed
  - 3-7/8” (98 mm) maximum reveal

- **4410HSA-3077L**
  - Long Arm
  - For increased opening
  - 3-7/8” (98 mm) maximum reveal
  - Optional

### Cover

- **4410HSA-72MC**
  - Metal Cover
  - Handed
  - Standard

### Switch

- **4410HSA-3448**
  - Switch Assembly
  - Provides continuous hold-open function
  - Available in 24V only

### Scanner

- **4410HSA-3428**
  - Scanner Module

### Installation Accessories

- **4410HSA-18**
  - Mounting Plate
  - Standard

- **4410HSA-18G**
  - Transformer Mounting Plate
  - Substituted on flush ceiling installations
  - Optional

- **4410HSA-3210**
  - Transformer
  - Reduces line voltage from 120V to 24V AC
  - Mounted on plate for 4” (102 mm) x 4” x 2-1/8” (54 mm) junction box (by others)
4410 HSA Series

Ordering Information

How-to-order 4410 HSA Series closers

Select hand
- RH
- LH

Voltage
- 24V AC/DC

Specify finish
- Standard Powder Coat
  - Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.
- Custom Powder Coat (RAL)
- Plated Finish, US

Closer options

Arm
- Long Arm (LONG)

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

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

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

Special template
- ST- ______ (if required)

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

Interior door width

<table>
<thead>
<tr>
<th>Size</th>
<th>Minimum</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>24”</td>
<td>610mm</td>
<td>560mm - 685mm</td>
</tr>
<tr>
<td>34”</td>
<td>864mm</td>
<td>810mm - 915mm</td>
</tr>
<tr>
<td>38”</td>
<td>965mm</td>
<td>910mm - 1015mm</td>
</tr>
<tr>
<td>48”</td>
<td>1219mm</td>
<td>1165mm - 1315mm</td>
</tr>
</tbody>
</table>

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

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

**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

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

**Stop Width**
- 1-1/4’’ (32 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 SEH
- 4’ 8’’ (1422 mm) minimum for paired doors with SEH

**Maximum Opening**
- Templating allows 100°
- Hold-open points between 80° and 100° in approximately 3° increments

**SEH Electrical Options**
- These track assemblies require a single power circuit for the holding solenoid
- SEH holding solenoid is either 24V or 120V input, please specify
- An optional 4D405E-3210 TRANSFORMER or 8310-824 reduces 120V AC line voltage to 24V AC. Circuitry accepts either AC or DC input

**Options**
- 24V or 120V volt input for SEH, please specify

**Wiring Diagram**
- See “FIRE/LIFE SAFETY” section page 19 for typical wiring and electrical diagram

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

**SEH-3077T**
Holder Arm
- Non-handed
- Can be combined with any 4040SE Series track to provide an electrically controlled hold-open function on either side of the door
- All SEH type holders require a separate closer for fire or smoke barrier door applications

**Track**

**SEH-3038**
SEH Track
- Non-handed
- Mounts on either head frame or stop
- 24V or 120V AC/DC input for holding solenoid, please specify
- Includes test switch assembly with fuse
- Standard

**Switch**

**SEH-3436**
Test Switch

**Installation Accessories**

**SEH-81**
Conduit Quick-Connector
- Two piece connector for use with 1/2” conduit

**SEH-3034SE**
Track Roller & Track Slider
- Quiet, low friction roller assembly
- Shoulder dimension “X” = 1/4” (6 mm)
- Alloy metal slider for use in SE series tracks only

**4040SEH-3210**
Transformer
- Reduces line voltage from 120V to 24V AC
- Mounted on cover for 4” (102 mm) x 4” x 2-1/8” (54 mm) junction box (by others)
### How-to-order SEH Series closers

**Voltage**
- [ ] 24V AC/DC
- [ ] 120V AC/DC

**Specify finish**
- [ ] Standard Powder Coat _______
  - Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.

**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
High Security LCN closers feature a vandal resistant design engineered for each application, easy installation, and superior performance. This guide is based on the desired mounting of the closer.

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

* Door position switch.

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** Maximum opening with standard template. See individual closer series for degrees of opening per installation.
*** Advanced Variable Backcheck.
APPLICATIONS
- For any concealed or surface mounted installation subject to potential abuse or vandalism.
- For correctional, aluminum, hollow metal, or wood doors and frames.
- Can be used with hinge or pivot mounted door.
- Adapter plates and other installation accessories available for unusual conditions.

FEATURES COMMON TO HIGH SECURITY CLOSERS
- Each closer is a vandal resistant design for a specific mounting; hinge side, parallel arm, stop face, or concealed.
- All high security closers are based on a cylinder certified to exceed 10,000,000 cycles in independent testing.
- Handed for right or left swinging doors.
- Closers to meet ADA reduced opening force requirements.
- All closers furnished with TORX tamper resistant machine screws.
- All surface mount closers include a heavy gauge steel cover with four attachment points.
- All closer adjustments are protected when installation is complete.
- All track closers use a jam resistant track and tamper resistant arm/roller assembly.
- Adjustable hydraulic backcheck cushions opening swing prior to 90°.
- Advanced variable backcheck (AVB) is available on all high security closers.
- Separate regulation of general closing speed and latching speed.

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 Technical Support.

WARRANTY
High Security Series closers carry a 15 year limited warranty, except for the 2210DPS Series closer that carries a 2 year limited warranty. See General Information Section for complete warranty details.

MATERIALS
- High strength cast iron cylinder.
- Forged steel main arms and forearm.
- One piece forged steel piston.
- LCN’s all weather “Liquid X” fluid 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.
- Double heat treated pinions.
- Tamper resistant regulating screws.
- Full rack and pinion hydraulic action.
- 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.
- 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.

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; ULC, 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
TORX MACHINE SCREW (TORX) pack contains tamper resistant machine screws to install the closer. Thru Bolts for TORX machine screws are available for all high security closers, except 2210 series. LCN thru bolts (TB) can be installed on 1-3/4” thick doors with the 1/4-20 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” (44mm).
Special driver bits are required for installation or removal of TORX machine screws with a security pin as supplied with LCN High Security closers. All bits fit a 1/4” hex drive socket. For 1/4-20 screws use T-27, for #12 machine screws use T-25, for #10 machine screws use T-20, for #8 (and undercut #10) machine screws use T-15, and for #6 machine screws use T-10. The specific bits required for installation are listed on the “HOW TO ORDER” page for each closer. Sold separately.

FASTENERS
TORX MACHINE SCREW (TORX) pack contains tamper resistant machine screws to install the closer. Thru Bolts for TORX machine screws are available for all high security closers, except 2210 series.

SPECIFICATIONS
Refer to “SPECIFICATIONS” section for suggested architectural specifications.
The concealed 2210 Series, heavy duty, high security track closer features complete concealment with special components to minimize tampering and vandalism. Forged steel, single lever arm and heavy steel mounting plate are designed for correctional, vandal prone, institutional, and other high traffic applications. A choice of finishes and cylinder functions meet correctional and vandal resistant requirements.

**Certifications**
- Grade 1 - ANSI A156.4, 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
- 11/16” Diameter Double Heat Treated Pinion Journal

**Fluid**
- All Weather Liquid X Fluid

**Handling**
- Handed

**Size**
- Sized, interior, exterior and vestibule 3-5 (refer to chart)

**Warranty**
- 15 years (2210); 2 years (2210DPS)

**Cover**
- Metal, standard

**Fasteners**
- TORX machine screw pack

**Mounting**
- Concealed, single acting cylinder in head frame
- Concealed, arm and track in top rail of door

**Arms**
- Standard security arm and security 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

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

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**Features**
- Special Templates
  - Customized installation templates or products may be available to solve unusual applications.
  - Contact LCN Product Support for assistance.
### 2210 Series

#### Mounting details

**Concealed Mounting**

| **Butt Hinges** | Should not exceed 4-1/2” (114 mm) in width |
| **Auxiliary Stop** | Recommended where a door cannot swing 180° |
| **Top Rail** | 1-1/4” (32 mm) mortise required. 3/8” (10 mm) cutout required at top of door, stop face only |
| **Door Thickness** | 1-3/4” (44 mm) minimum |
| **Door Width** | 28” (711 mm) minimum |
| **Head Frame** | 5-3/4” (146 mm) wide and 4’’ (102 mm) high with 2-3/16” (56 mm) rabbet required |
| **Steel Mounting Plate** | Thickness 3/8” (10 mm) |
| **Door Position Switch** | Optional, newly redesigned, field adjustable switch can interface with security and monitoring systems |
| **Advanced Variable Backcheck** | Cylinder starts backcheck at approximately 45° instead of the normal 75° |
| **Maximum Opening** | Templatting allows 180° |

#### Notes
- **Track style closers are at their weakest closing force at 180°. Consult factory for applications where door must swing 180°.**
- **Consult factory if any dimension is less.**
- **Consult factory if door will be held open at 180°.**
- **Older style track style are capable of allowing 180°. Consult factory for applications where door must swing 180°.**

### Options
- Advanced Variable Backcheck Cylinder
- Door Position Switch
### Cylinder

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Material</th>
<th>Style</th>
</tr>
</thead>
<tbody>
<tr>
<td>2213(4)(5)-3071</td>
<td>Cylinder Assembly</td>
<td>Handed, Cast Iron, Standard</td>
<td></td>
</tr>
<tr>
<td>2210DPS-3071</td>
<td>Cylinder Assembly</td>
<td>Handed, Cast Iron</td>
<td></td>
</tr>
</tbody>
</table>

### Arms

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2210-3077T</td>
<td>Standard Security Arm</td>
<td>Handed, Solid forged steel and large cross section for potentially abusive installations, Special threaded attachment of track roller for extra security, Double slab arm/pinion attachment for maximum strength</td>
</tr>
<tr>
<td>2210DPS-3077T</td>
<td>Can only be used with high security track roller, 2210-3034 or 2210DPS-3034, Roller is included with arm when either the 2210-3077T or 2210DPS-3077T are ordered separately</td>
<td></td>
</tr>
</tbody>
</table>

### Tracks

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2210-3038</td>
<td>Security Track</td>
<td>Non-handed, Hold-open function not available, Designed to eject foreign objects placed in track during either opening or closing motion, Requires track roller, 2210-3034</td>
</tr>
<tr>
<td>2210DPS-3038</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Finish Plates

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2210-11</td>
<td>Long Plate</td>
<td>Heavy gauge metal plate, Required for complete enclosure, Six point TORX® mounting screws for extra security, Closer adjustments not accessible with finish plates installed</td>
</tr>
<tr>
<td>2210-12</td>
<td>Short Plate</td>
<td>Heavy gauge metal plate, Required for complete enclosure, Four point TORX® mounting screws for extra security, Closer adjustments not accessible with finish plates installed</td>
</tr>
</tbody>
</table>

### Installation Accessories

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2210-3034</td>
<td>Security Track Roller</td>
<td>Low friction track roller threads into 2210-3077T arm for extra strength and security, Can not be removed without disconnecting arm from closer</td>
</tr>
<tr>
<td>2210-493</td>
<td>Test Kit</td>
<td>Battery operated designed to verify switch signal response point, Can be used directly at door location (used for 2210 DPS only)</td>
</tr>
</tbody>
</table>
How-to-order 2210 Series closers

Select cylinder size
- 2213
- 2213 DPS
- 2214
- 2214 DPS
- 2215
- 2215 DPS

Select hand
- RH
- LH

Specify finish
- Standard Powder Coat
- Finish plate
- Standard security arm
- Security track roller
- Security track
- TORX machine screw pack, unless options listed below are selected.

Closer options

Cylinder
- Advanced Variable Backcheck (AVB)

Finishes
- Custom Powder Coat (RAL)
- Plated Finish, US
- SRI primer (excludes DPS) (use with powder coat finishes only)

Special template
- ST-

Table of sizes

- Select closer based on width of door
- 2210 Series cylinders available in size 3, 4, or 5
- Spring power is set at the factory for size 3, 4, or 5, but is field adjustable (may be increased 50%)

Exterior (and Vestibule) door width

<table>
<thead>
<tr>
<th></th>
<th>28”</th>
<th>30”</th>
<th>36”</th>
<th>42”</th>
</tr>
</thead>
<tbody>
<tr>
<td>2213(DPS)</td>
<td>size 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2214(DPS)</td>
<td></td>
<td>size 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2215(DPS)</td>
<td></td>
<td></td>
<td>size 5</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></th>
<th>28”</th>
<th>34”</th>
<th>38”</th>
<th>48”</th>
<th>54”</th>
</tr>
</thead>
<tbody>
<tr>
<td>2213(DPS)</td>
<td>size 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2214(DPS)</td>
<td></td>
<td>size 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2215(DPS)</td>
<td></td>
<td></td>
<td>size 5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Minimum door width

Note: Minimum door width 28” (711mm).
The 4210 SMOOTHEE® Series is a heavy duty, high security closer with special components to minimize tampering and vandalism. Forged steel parallel arms and heavy gauge metal security covers are designed for correctional, vandal prone, institutional and other high traffic applications. The closer has passed 10 million cycles in independent testing. A choice of finishes and cylinder functions meet correctional and vandal resistant requirements.

### Certifications
- Grade 1 - ANSI A156.4, UL 10C, ADA*
- 100 Hour Salt Spray, Meets BAA - Buy American Act
- *4211 cylinder meets ADA

### 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
- Adjustable Exterior and Vestibule, Size 3-5 or size 6
- Adjustable, Interior, Size 2-5; or size 6

### Warranty
- 15 years

### Cover
- Metal Security

### Fasteners
- TORX machine screw pack

### Mounting
- Parallel (Push Side)

### Arms
- Extra duty, non hold-open

### 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 (cover only)

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

### Features
- Special Templates
- PLASTICMETAL
- POWDER COAT
- PLATED
- METAL
- HANDLED
- NON-SIZED
- ACCESSIBILITY
- DELAYED ACTION
- OPS SWITCH
- STANDARD DINGED
- EDN
- CUSH/CUSH

- AVAILABLE
- NOT AVAILABLE

- Closer available with less than 5.0 lbs. opening force on 36” door.
- Maximum opening with standard template. See individual closer series for degrees of opening per installation.
- Advanced Variable Backcheck
<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>4210-18</td>
<td>3-1/2&quot; Butt Hinges</td>
<td>3-1/2&quot; x 102 mm</td>
</tr>
<tr>
<td>4210-18 A</td>
<td>Auxiliary Stop</td>
<td>Recommended where the door cannot swing 180° or where CUSH arms not used</td>
</tr>
<tr>
<td>4210-18 B</td>
<td>Clearance</td>
<td>For EDA or CUSH is 5-1/2&quot; from push side of door</td>
</tr>
<tr>
<td>4210-18 C</td>
<td>Stop Width</td>
<td>Less than 2-3/4&quot; (70 mm) recommended. Less than 1&quot; (25 mm), consult factory</td>
</tr>
</tbody>
</table>

**Delay Action**
- Add suffix "DEL" to selected cylinder (e.g., 4211DEL)
- Not available with 4215 or 4216 cylinder
- Delays closing from maximum opening to approximately 70°
- Delays time adjustable up to approximately 1 minute

**Advanced Variable Backcheck**
- Cylinder starts backcheck at approximately 45° instead of the normal 75°
- Add suffix "AVB" to selected cylinder (e.g., 4211AVB)

**Maximum Opening**
- EDA arm can be templated for maximum opening at:
  - 100°: A = 5-15/16" (151 mm), B = 7-1/4" (184 mm)
  - 85°: A = 8-5/16" (211 mm), B = 9-5/8" (244 mm)
  - 140°: A = 4-7/16" (113 mm), B = 5-3/4" (146 mm)
  - 90°: A = 7-11/16" (195 mm), B = 9" (229 mm)
  - 180°: A = 2-15/6" (75 mm), B = 4-1/4" (108 mm)
  - 100°: A = 6-7/6" (164 mm), B = 7-3/4" (197 mm)
  - 110°: A = 5-9/6" (141 mm), B = 6-7/8" (175 mm)

**Hold-open point at maximum opening with H-CUSH arm.**
4210 Series Accessories

4211(6)-3071 Cylinder Assembly
- Handed
- Cast iron
- Standard

4210-3077EDA Extra Duty Arm
- Non-handed
- Parallel arm features solid forged steel main arm and forearm for potentially abusive installations
- Double slab arm/pinion attachment for maximum strength

4210-18, 4210-18CUSH Plate
- Required for push side mount where top trail is less than 5-1/8˝ (130 mm), measured from the stop
- Requires 2˝ (51 mm) minimum top rail measured from the stop.
- Also used with CUSH arm installations

4210-61 Blade Stop Spacer
- Lowers parallel arm shoe to clear 1/2˝ (13 mm) blade stop

4210-419 PA Flush Panel Adapter
- Provides horizontal mounting surface for EDA or CUSH shoe on single batten or flush frame

4210-3049CNS HCUSH Arm
- Non-handed
- Parallel arm provides hold-open function with templated stop/hold-open points
- Handle controls hold-open function with thumb turn
- HCUSH arm not available with 4216 cylinder
- Double slab arm/pinion attachment for maximum strength

4210-72MC Metal Security Cover
- Handed
- Four point mounting for extra security
- Closer adjustments not accessible with cover installed
- Standard
### 4210T Series

#### Stop Face (Push Side) Mounting

**Mounting details**

**4210T-18 Butt Hinges**
- Should not exceed 5” (127 mm) in width

**Auxiliary Stop**
- Recommended where the door cannot swing 110°

**Clearance**
- 2-1/4” (57 mm) from door

**Top Rail**
- Less than 5-1/4” (133 mm) measured from stop, requires PLATE 4210T-18
- Plate requires 2-1/4” (57 mm) minimum measured from the stop

**Stop Width**
- Minimum 1-3/8” (35 mm)

**Advanced Variable Backcheck**
- Cylinder starts backcheck at approximately 45° instead of the normal 75°
- Add suffix “AVB” to selected cylinder (e.g. 4213T AVB)

**Maximum opening**
- Templating allows 110°

**Options**
- Advanced Variable Backcheck cylinder
### Cylinder

<table>
<thead>
<tr>
<th>4210T-3071</th>
<th>Cylinder Assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handed</td>
<td>Cast iron</td>
</tr>
<tr>
<td>For various applications see “Table of Sizes” on 4210T Series page 14</td>
<td></td>
</tr>
<tr>
<td>Standard</td>
<td></td>
</tr>
</tbody>
</table>

### Cover

<table>
<thead>
<tr>
<th>4210T-72MC</th>
<th>Metal Security Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handed</td>
<td></td>
</tr>
<tr>
<td>Must have four point TORX mounting for extra security</td>
<td></td>
</tr>
<tr>
<td>Closer adjustments not accessible with cover installed</td>
<td></td>
</tr>
</tbody>
</table>

### Arms

<table>
<thead>
<tr>
<th>4210T-3077T</th>
<th>Standard Security Arm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handed</td>
<td></td>
</tr>
<tr>
<td>Solid forged steel, large cross section arm</td>
<td></td>
</tr>
<tr>
<td>Special threaded attachment of track roller for extra security</td>
<td></td>
</tr>
<tr>
<td>Double slab arm/pinion attachment for maximum strength</td>
<td></td>
</tr>
<tr>
<td>Can only be used with high security track roller, 4210T-3034</td>
<td></td>
</tr>
</tbody>
</table>

### Track

<table>
<thead>
<tr>
<th>4210T-3038</th>
<th>Security Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-handed</td>
<td></td>
</tr>
<tr>
<td>Designed to eject foreign objects placed in track during either opening or closing motion</td>
<td></td>
</tr>
<tr>
<td>Requires track roller, 4210T-3034</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4210T-3034</th>
<th>Security Track Roller</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low friction track roller threads into 4210T-3077T arm for extra strength and security</td>
<td></td>
</tr>
<tr>
<td>Can not be removed without disconnecting arm from closer</td>
<td></td>
</tr>
</tbody>
</table>

### Installation Accessories

<table>
<thead>
<tr>
<th>4210T-18</th>
<th>Plate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required where top rail, when measured from the stop, is less than 5-1/4” (133 mm)</td>
<td></td>
</tr>
<tr>
<td>Requires 2-1/4” (57 mm) minimum top rail measured from the stop</td>
<td></td>
</tr>
</tbody>
</table>
4210T Series

Ordering Information

How-to-order 4210T Series

Select cylinder size
☐ 4211T (ADA)
☐ 4213T
☐ 4214T

Select hand
☐ RH
☐ LH

Specify finish
☐ Standard Powder Coat

- Aluminum
- Dark Bronze
- Statuary
- Light Bronze
- Black
- Brass

Closer options

Cylinder
☐ Advanced Variable Backcheck (AVB)

Finishes
☐ Custom Powder Coat (RAL)
☐ Plated Finish, US
☐ SRI primer (excludes DPS) (use with powder coat finishes only)

Screw pack
☐ TB* and TORX Machine Screw (TBTRX)
* Specify door thickness if other than 1-3/4”.

Installation accessories
☐ PLATE, 4210T-18

Special template
☐ ST-

Table of sizes

- Select closer based on width of door
- 4210T series cylinders available in size 1, 3 or 4
- Closing power of all 4210T Series closers may be increased 15%

Indicates recommended range of door width for closer size.

Note: Minimum door width 30” (762mm).

Reduced opening force 4210T 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>4213T</td>
<td>4213T</td>
<td>4213T</td>
</tr>
<tr>
<td>5.0 lbs.</td>
<td>4211T</td>
<td>4211T</td>
<td>4211T</td>
</tr>
</tbody>
</table>

* Maximum opening force.
The 4510 SMOOTHEE® Series is a heavy duty, high security closer with special components to minimize tampering and vandalism. Forged steel double lever arms and heavy gauge metal security covers are designed for correctional, vandal prone, institutional and other high traffic applications. The closer has passed 10 million cycles in independent testing. A choice of finishes and cylinder functions meet correctional and vandal resistant requirements.

**Certifications**

<table>
<thead>
<tr>
<th>Grade</th>
<th>ANSI A156.4, UL 10C, ADA*, 100 Hour Salt Spray, Meets BAA - Buy American Act</th>
</tr>
</thead>
</table>

*4510 cylinder meets ADA requirements

**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**

- Exterior and Vestibule, Adjustable Size 1-5
- Interior, Adjustable Size 1-5

**Warranty**

- 15 years

**Cover**

- Metal Security

**Fasteners**

- TORX machine screw pack

**Mounting**

- Hinge (Pull Side)

**Arms**

- Extra heavy duty, non-hold open

**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 with standard template.
** Advanced Variable Backcheck.
### 4510 Series

#### Mounting details

#### Hinge (Pull Side) Mounting

<table>
<thead>
<tr>
<th>Spec</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4510</strong> Series Hinge (Pull Side) Mounting details</td>
<td></td>
</tr>
<tr>
<td><strong>Butt Hinges</strong></td>
<td>Should not exceed 5” (127 mm) in width</td>
</tr>
<tr>
<td><strong>Auxiliary Stop</strong></td>
<td>Recommended where a door cannot swing 140°</td>
</tr>
<tr>
<td><strong>Reveal</strong></td>
<td>Should not exceed 1/8” (3 mm)</td>
</tr>
<tr>
<td><strong>Top Rail</strong></td>
<td></td>
</tr>
</tbody>
</table>
- Less than 3-1/2” (89 mm), requires PLATE 4510-18  
- Plate requires 2” (51 mm) minimum top rail |
| **Head Frame** | Less than 1” (25 mm), consult factory |
| **Clearance** | 2-1/4” (57 mm) behind door required for installation |
| **Arm Clearance** | Above door 1-1/8” (29 mm) required |
| **Delay Action** |  
- Add suffix “DEL” to selected cylinder.  
- Not available with 4516 cylinder.  
- Delays closing from maximum opening to approximately 70°.  
- Delay time adjustable up to approximately 1 minute. |
| **Advanced Variable Backcheck** |  
- Cylinder starts backcheck at approximately 45° instead of the normal 75°  
- Add suffix “AVB” to selected cylinder |
| **Maximum opening** | Can be templated for  
140°:  
- A = 4-3/16” (106 mm)  
- B = 9-7/8” (251 mm) |
| **Options** |  
- Delayed action or Advanced Variable Backcheck cylinder |
### Cylinder

<table>
<thead>
<tr>
<th>4511(6)-3071 Cylinder Assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handed</td>
</tr>
<tr>
<td>Cast iron</td>
</tr>
<tr>
<td>Standard</td>
</tr>
</tbody>
</table>

### Cover

<table>
<thead>
<tr>
<th>4510-72MC Metal Security Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handed</td>
</tr>
<tr>
<td>Four point mounting for extra security</td>
</tr>
<tr>
<td>Closer adjustments not accessible with cover installed</td>
</tr>
<tr>
<td>Standard</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4510-3077EDA Extra Duty Arm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-handed</td>
</tr>
<tr>
<td>Solid forged steel main arm and forearm for potentially abusive installations</td>
</tr>
<tr>
<td>Double slab arm/pinion attachment for maximum strength</td>
</tr>
<tr>
<td>Standard</td>
</tr>
</tbody>
</table>

### Installation Accessories

<table>
<thead>
<tr>
<th>4510-18 Plate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required where top rail is less than 3-1/2” (89 mm)</td>
</tr>
<tr>
<td>Requires minimum 2” (51 mm) top rail</td>
</tr>
</tbody>
</table>
How-to-order 4510 Series

Select cylinder size
- 4511 (adjustable from size 1 to 5)
- 4516 (DEL not available)

Select hand
- RH
- LH

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

Closer options

Cylinder
- Delayed Action (DEL)
- Advanced Variable Backcheck (AVB)

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

Screw pack
- TB* and TORX Machine Screw (TBTRX)
  * Specify door thickness if other than 1-3/4”.

Installation accessories
- PLATE, 4510-18
- Special template
  - ST—

Installation accessories
  - PLATE, 4510-18
  - Special template
    - ST—

NOTE: Installation of this closer requires T-27 and T-25 driver bits for TORX machine screws with a security pin. Sold separately.

Installation accessories
  - PLATE, 4510-18
  - Special template
    - ST—

NOTE: Installation of this closer requires T-27 and T-25 driver bits for TORX machine screws with a security pin. Sold separately.

Installable accessories

Installation accessories
  - PLATE, 4510-18
  - Special template
    - ST—

NOTE: Installation of this closer requires T-27 and T-25 driver bits for TORX machine screws with a security pin. Sold separately.

How-to-order 4510 Series

Reduced opening force 4510 Series closers

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

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

* Maximum opening force.

Door width

<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>4511</td>
<td>4511</td>
<td>4511</td>
</tr>
<tr>
<td>5.0 lbs.</td>
<td>4511</td>
<td>4511</td>
<td>4511</td>
</tr>
</tbody>
</table>

* Maximum opening force.

Indicates recommended range of door width for closer size.

* Adjustable Size 1 thru 5
The 4510T SMOOTHIEE® Series is a heavy duty, high security track closer with special components to minimize tampering and vandalism. Forged steel single lever arm and heavy gauge metal security cover are designed for correctional, vandal prone, institutional and other high traffic interior applications. The closer has passed 10 million cycles in independent testing. A choice of finishes and cylinder functions meet correctional and vandal resistant requirements.

<table>
<thead>
<tr>
<th>Certifications</th>
<th>Grade 1 - ANSI A156.4, UL 10C, ADA*, 100 Hour Salt Spray, Meets BAA - Buy American Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>*4511T cylinder meets ADA requirements</td>
<td></td>
</tr>
</tbody>
</table>
| 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 |
| Handling | Handed |
| Size | Sized, 1, 3 or 4 |
| Warranty | 15 years |

<table>
<thead>
<tr>
<th>Cover</th>
<th>Metal Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fasteners</td>
<td>TORX machine screw pack</td>
</tr>
<tr>
<td>Mounting</td>
<td>Hinge (Pull Side)</td>
</tr>
<tr>
<td>Arms</td>
<td>Standard security arm, security track (non hold-open) and track roller</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Finishes/Colors/ Powder Coat</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum (689)</td>
<td></td>
</tr>
<tr>
<td>Statuary Bronze (690)</td>
<td></td>
</tr>
<tr>
<td>Light Bronze (691)</td>
<td></td>
</tr>
<tr>
<td>Black (693)</td>
<td></td>
</tr>
<tr>
<td>Dark Bronze (695)</td>
<td></td>
</tr>
<tr>
<td>Brass (696)</td>
<td></td>
</tr>
<tr>
<td>Custom colors optional</td>
<td></td>
</tr>
<tr>
<td>Optional SRI primer - powder coat only</td>
<td></td>
</tr>
<tr>
<td>Optional plated finishes</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.

- **AVAILABLE**
- **NOT AVAILABLE**
- Closer available with less than 5.0 lbs. opening force on 36˝ door.
- Maximum opening with standard template.
- Advanced Variable Backcheck.

---

LCN Door Control Catalog  
phone: 877-671-7011  
fax: 800-248-1460  
www.allegion.com/us  
009426 rev. 11/16
4510T Series

Hinge (Pull Side)
Mounting

### Mounting details

#### Hinge (Pull Side) 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>Recommended where a door cannot swing 180°</td>
</tr>
<tr>
<td>Reveal</td>
<td>Should not exceed 1/8” (3 mm)</td>
</tr>
<tr>
<td>Top Rail</td>
<td>Less than 3-3/4” (95 mm), requires PLATE 4510T-18</td>
</tr>
<tr>
<td></td>
<td>Plate requires 2” (51 mm) minimum top rail</td>
</tr>
<tr>
<td>Head Frame</td>
<td>Minimum 2-1/8” (54 mm)</td>
</tr>
<tr>
<td>Clearance</td>
<td>2-1/4” (57 mm) behind door required for installation</td>
</tr>
<tr>
<td>Advanced Variable Backcheck</td>
<td>Cylinder starts backcheck at approximately 45° instead of the normal 75°</td>
</tr>
<tr>
<td></td>
<td>Add suffix &quot;AVB&quot; to selected cylinder (eg. 4513T AVB)</td>
</tr>
<tr>
<td>Maximum opening</td>
<td>Templating allows 180°</td>
</tr>
<tr>
<td></td>
<td>Consult factory if door will be held open at 180°.</td>
</tr>
<tr>
<td>Options</td>
<td>Advanced Variable Backcheck cylinder</td>
</tr>
</tbody>
</table>
### Cylinder

<table>
<thead>
<tr>
<th>4511T(3)(4) Cylinder Assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handed</td>
</tr>
</tbody>
</table>

### Cover

<table>
<thead>
<tr>
<th>4510T-72MC Metal Security Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handed</td>
</tr>
</tbody>
</table>

### Arms

<table>
<thead>
<tr>
<th>4510T-3077T Standard Security Arm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handed</td>
</tr>
</tbody>
</table>

### Track

<table>
<thead>
<tr>
<th>4510T-3038 Security Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-handed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4510T-3034 Security Track Roller</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low friction track roller threads into 4510T-3077T arm for extra strength and security</td>
</tr>
</tbody>
</table>

### Installation Accessories

<table>
<thead>
<tr>
<th>4510T-18 Plate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required where top rail is less than 3 3/4” (95 mm)</td>
</tr>
</tbody>
</table>
How-to-order 4510T Series

Table of sizes
- Select closer based on width of door
- Sized 4510T Series cylinders available in size 1, 3 or 4
- Closing power of all 4510T Series closers may be increased 15%

Select cylinder size
- 4511T (ADA)
- 4513T
- 4514T

Select hand
- RH
- LH

Specify finish
- Standard Powder Coat
  - Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass
- Advanced Variable Backcheck (AVB)

Closer will be shipped with:
- Standard cylinder
- Security cover
- Standard security arm
- Security track roller
- Security track
- TORX machine screw pack, unless options listed below are selected.

NOTE: Installation of this closer requires T-27 and T-25 driver bits for TORX machine screws with a security pin. Sold separately.

Installation accessories
- PLATE, 4510T-18

Special template
- ST-

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

Screw pack
- TB* and TORX Machine Screw (TBTRX)
  * Specify door thickness if other than 1-3/4”.

Interior door width

<table>
<thead>
<tr>
<th>Door Width</th>
<th>26” (660mm)</th>
<th>34” (864mm)</th>
<th>38” (965mm)</th>
<th>48” (1219mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4511T</td>
<td>size 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4513T</td>
<td></td>
<td>size 3</td>
<td></td>
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</tr>
<tr>
<td>4514T</td>
<td></td>
<td></td>
<td>size 4</td>
<td></td>
</tr>
</tbody>
</table>

Indicates recommended range of door width for closer size.

Note: Minimum door width 30” (762mm).

Reduced opening force 4510T 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.
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.

<table>
<thead>
<tr>
<th>LOW ENERGY POWERED SYSTEMS</th>
<th>CONCEALED MOUNT</th>
<th>SURFACE MOUNTED PULL SIDE</th>
<th>SURFACE MOUNTED PUSH SIDE</th>
<th>SURFACE MOUNTED DOUBLE EGRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2610 (PNEUMATIC)</td>
<td>4630 (ELECTROHYDRAULIC)</td>
<td>4640 (ELECTROHYDRAULIC)</td>
<td>9550 (ELECTROMECHANICAL)</td>
</tr>
<tr>
<td></td>
<td>2850 (ELECTROMECHANICAL)</td>
<td>4810 (PNEUMATIC)</td>
<td>4820 (PNEUMATIC)</td>
<td>9560 (ELECTROMECHANICAL)</td>
</tr>
<tr>
<td></td>
<td>2860 (ELECTROMECHANICAL)</td>
<td>9130 (ELECTROMECHANICAL)</td>
<td>9140 (ELECTROMECHANICAL)</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>9530 (ELECTROMECHANICAL)</td>
<td>9150 (ELECTROMECHANICAL)</td>
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<td>9550 (ELECTROMECHANICAL)</td>
<td>9550 (ELECTROMECHANICAL)</td>
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<td>9550 (ELECTROMECHANICAL)</td>
<td>9550 (ELECTROMECHANICAL)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>9560 (ELECTROMECHANICAL)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## 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.

### TOP JAMB (PULL SIDE)

<table>
<thead>
<tr>
<th>OPERATOR SERIES</th>
<th>MOUNTING</th>
<th>FINISH</th>
<th>COVER</th>
<th>CYLINDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>2610</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4630</td>
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</tr>
<tr>
<td>4630CS</td>
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<td>4820</td>
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<tr>
<td>4840</td>
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</tbody>
</table>

### TOP JAMB (PUSH SIDE)

<table>
<thead>
<tr>
<th>OPERATOR SERIES</th>
<th>MOUNTING</th>
<th>FINISH</th>
<th>COVER</th>
<th>*ARM FUNCTION</th>
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<td>9530</td>
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<td>9550</td>
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<td>9560</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).

## 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.

### TOP JAMB SINGLE DOOR

<table>
<thead>
<tr>
<th>OPERATOR SERIES</th>
<th>MOUNTING</th>
<th>HANDING</th>
<th>FINISH</th>
<th>COVER</th>
</tr>
</thead>
<tbody>
<tr>
<td>2810</td>
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<td>9130</td>
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<td>9160</td>
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<tr>
<td>9530</td>
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<td>9540</td>
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<td>9550</td>
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</tr>
<tr>
<td>9560</td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- ● AVAILABLE
- ○ NOT AVAILABLE

- *** All electromechanical operators open to 90°.
- **** Handed for 2850 and 2860, double egress only.
**WHAT IS THE ADA?**
The ADA is a civil rights law, not a building code. This act is designed to provide protection for people with disabilities. The law is divided into four major titles that prohibit discrimination against the disabled in Employment, Title I; Public Services and Transportation Title II; Public Accommodations Title III; and Telecommunications Title IV. Title III concerns doors and door controls.

**WHAT IS THE INTENT OF ADA, TITLE III?**
Essentially, owners of certain types of buildings must remove barriers and provide people with disabilities with access equal to, or similar to, that available to the general public. The deadline for compliance was January 26, 1992. The final rules implementing Title III were published in the Federal Register of July 26, 1991. To obtain a copy or ask questions, contact the U.S. Department of Justice. Technical information can be obtained from the U.S. Architectural and Transportation Barriers Compliance Board.

**HOW DOES ADA AFFECT DOORS?**
The ADA defines an “accessible” opening which means, among other things, providing a door with a minimum 32” (813 mm) clear opening, easily manipulated handles, a maximum opening force, a minimum closing time, and capable of opening to at least 90°. ADA criteria, based on OPENING FORCE, are similar to American National Standards Institute (ANSI) Standard A117.1. This is different from ANSI Standard A156.4, which is based on CLOSING FORCE. **WHAT ARE THE OPENING FORCE LIMITS?**

<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 door’s 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 match 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**

---

4. **ADDITIONAL FORCES**

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

---

INFORMATION SOURCES

LCN CLOSERS  PHONE 877-671-7011
121 W. RAILROAD AVE.  FAX 800-248-1460
P.O. BOX 100  www.securitiestechologies.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

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.

ELECTROMECHANICAL FASTENERS

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

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

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

A156.19 SYSTEM DESIGN PARAMETERS
- Cycle test standard of 300,000 full load operating cycles.
- Power opening plus full door control.
- Open to backcheck no faster than 3 seconds.
- Opening time to fully open is no faster than 4 seconds.
- Remain fully open for at least 5 seconds.
- Closing time from 90° to 10° is no faster than 3 seconds.
- Less than 15 lb to stop doors motion.
- Kinetic energy must not exceed 1.25 lb-ft.
- In event of failure, less than 15 lb to release latch, less than 30 lb to put door in motion, less than 15 lb to fully open door system.

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

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

MAINTENANCE
- Operators mounted according to the LCN installation instructions require no periodic maintenance or adjustments.
- Periodic visual inspections are recommended.
PNEUMATIC (AIR) POWERED SYSTEMS
LCN Pneumatic Auto Equalizer systems use the power of pressurized air to do the work of automatically opening the door. These systems have exceeded 3 million full load automatic operating cycles; that's 10 times the industry standard! A basic pneumatic system consists of an automatic operator to provide the door control, a control box that contains the valves and electrical timing circuits, actuators to start the system, and a compressed air source.

UNIQUE FEATURES
- Multi-Door & Single-Door Solutions
  The pneumatic automatic operators are ideal for multidoor applications because the cost per door leaf decreases significantly as the number of door leaves increase. A single control box may power up to two pairs of doors simultaneously making it a cost-effective solution for single or multi-door applications. This flexibility results in significant savings in material and installation costs.
- Quiet Operation
  Since the pneumatic automatic operators are powered by pressurized air, they are quiet, efficient, and very reliable. Flexible LCN pneumatic tubing is the only connection between the control box and the door frame. There is no need for high-voltage wiring at the door frame since all of the power for operation is generated by pressurized air located away from the door frame. (Note: special fittings are available so 3/16˝ metal tubing (by others) can be used in fire rated plenums).
- Pneumatically (Air) Powered
  All pneumatic automatic operators require a compressed air source. LCN's pneumatic systems have the flexibility to run as an independent unit (7980 Series has a compressor built into the control box) or to run off an existing air supply (7900 Series has connections for utilizing existing air supply). Using a self-contained 7980 Series control box for single or double door leaf applications eliminates the need for an independent compressor. Existing building air compressors with a storage tank can be used to reduce the cost of multi-door systems and must utilize the 7900 Series control boxes.
- Easy Adjustment/Installation
  The air pressure and timing cycle are easily adjustable to meet the need of a specific installation. Because the control box can be located anywhere within 100 linear tubing feet from the controlled door for the 7900 Series or within 50 linear tubing feet for the 7980 Series, they can be placed in easily accessible locations. Convenient features such as sequential operation of vestibule doors are available.
- Multiple Mounting Configurations
  Available in three different mounting configurations:
  - Concealed in the frame (2610 Series).
  - Top Jamb Surface Mounted on the pull side of the door (4810 Series).
  - Top Jamb Surface Mounted on the push side of the door (4820 Series).
  - Door Mounted, Parallel Arm on the push side of the door (4840 Series).

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

Blow-Open (Smoke Evacuation 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.
Typical Pneumatic Powered Systems

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

SINGLE INTERIOR DOOR SYSTEM (WIRED)
- Slow opening interior door leaf
- System may be expanded to include an additional simultaneous door
- No guide rails or safety devices

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

Bill Of Materials:

<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>925</td>
<td></td>
<td>Tubing</td>
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<tr>
<td></td>
<td>(as needed)</td>
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</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>
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<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>925</td>
<td></td>
<td>Tubing</td>
</tr>
<tr>
<td></td>
<td>(as needed)</td>
<td></td>
</tr>
</tbody>
</table>
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>
</tr>
</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 Sequencer Card</td>
</tr>
<tr>
<td>1</td>
<td>8310-856</td>
<td>Actuator</td>
</tr>
<tr>
<td></td>
<td>(as needed) 925</td>
<td>Tubing</td>
</tr>
</tbody>
</table>

* Contact Technical Support to verify compressor requirements.

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

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

**Bill Of Materials:**

<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 Sequencer Card</td>
</tr>
<tr>
<td>4</td>
<td>8310-3856WS</td>
<td>RF Actuators</td>
</tr>
<tr>
<td>2</td>
<td>8310-865</td>
<td>RF Receiver</td>
</tr>
<tr>
<td></td>
<td>(as needed) 925</td>
<td>Tubing</td>
</tr>
</tbody>
</table>
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

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 (Pull Side)</td>
<td>Powder Coat</td>
<td>Plastic</td>
<td>Standard (Single)</td>
<td>90°</td>
</tr>
<tr>
<td>Top Jamb (Push Side)</td>
<td>Plated</td>
<td>Metal</td>
<td>Regular (Disabled)</td>
<td>Extra Duty Arm</td>
</tr>
<tr>
<td>Parallel Arm</td>
<td></td>
<td></td>
<td></td>
<td>CUSH N/STOP SPRING CUSH</td>
</tr>
<tr>
<td>Concealed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- AVAILABLE
- NOT AVAILABLE

* Meets ADA requirements (power mode).
* See individual series for maximum manual opening.
2610 Series
Auto Equalizer

Concealed Mounting

Mounting details

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 options

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

Screw pack
- Wood & Machine Screw (WMS)

Special template
- ST- ________

Table of sizes

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

Exterior (and Vestibule) door width

<table>
<thead>
<tr>
<th>30&quot;</th>
<th>36&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>762mm</td>
<td>914mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2614</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

Minimum door width

Interior door width

<table>
<thead>
<tr>
<th>30&quot;</th>
<th>38&quot;</th>
<th>48&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>762mm</td>
<td>965mm</td>
<td>1219mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2613</th>
<th>2614</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Minimum door width

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

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

**AVAILABLE**
- •
- ○

**NOT AVAILABLE**
- ○

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

[Diagram showing available options: MOUNTING, FINISH, COVER, CYLINDER, ARM FUNCTION]
### 4810 Series
#### Auto Equalizer

**Top Jamb (Pull Side) Mounting**

<table>
<thead>
<tr>
<th>Mounting Details</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Jamb (Pull Side) Mounting</td>
<td>2-5/8&quot; (67 mm)</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)

**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

4810-3038
Standard Track
- Non-handed
- Will not accept hold open clip or bumper assembly
- Standard

4810-3077T
Standard Arm
- Non-handed
- Track roller not included with arm

Track Roller

4810-3034
Track Roller
- Quiet low friction roller assembly
- Shoulder dimension "X" = 1/8" (3mm)

Installation Accessories
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>Minimum door width</th>
</tr>
</thead>
<tbody>
<tr>
<td>28”</td>
<td>711 mm</td>
</tr>
<tr>
<td>30”</td>
<td>762 mm</td>
</tr>
<tr>
<td>36”</td>
<td>914 mm</td>
</tr>
</tbody>
</table>

4811 - size 3

Interior door width

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

4811 - size 2

Indicates recommended range of door width for closer size.

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

**Features**

<table>
<thead>
<tr>
<th>Cover</th>
<th>Metal, standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fasteners</td>
<td>Wood and machine screw</td>
</tr>
<tr>
<td>Mounting</td>
<td>Top Jamb (Push Side)</td>
</tr>
<tr>
<td>Arms</td>
<td>Regular arm, standard</td>
</tr>
<tr>
<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>
</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.

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

AVAILABLE
NOT AVAILABLE

Meet ADA requirements (power mode).
* See individual series for maximum manual opening.
```
### Top Jamb (Push Side) Mounting

#### Mounting details

<table>
<thead>
<tr>
<th><strong>Butt Hinges</strong></th>
<th>Should not exceed 5” (127 mm) in width</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Auxiliary Stop</strong></td>
<td>Recommended</td>
</tr>
</tbody>
</table>
| **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>
<tr>
<td>4822</td>
<td>4822</td>
<td>4822</td>
<td>4822</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>
</tr>
</thead>
<tbody>
<tr>
<td>610mm</td>
<td>864mm</td>
<td>965mm</td>
<td>1219mm</td>
<td>1372mm</td>
</tr>
<tr>
<td>4822</td>
<td>4822</td>
<td>4822</td>
<td>4822</td>
<td>4822</td>
</tr>
</tbody>
</table>

Minimum door width
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.

- **MOUNTING**
  - Top Arm (Pull Side)
  - Top Arm (PUSH Side)
  - Parallel Arm
  - Concealed

- **FINISH**
  - Powder Coat
  - Plastic

- **COVER**
  - Metal
  - Plated
  - Non-Handed
  - Accessibility
  - Power Operator
  - Hold Open

- **CYLINDER**
  - Standard (Single)
  - Extra Heavy Duty
  - Extra Cush-N-Stop
  - Spring Cush

- **ARM FUNCTION**
  - 90°
  - 90°
  - 90°

Meets ADA requirements (power mode).
*See individual series for maximum manual opening.
4840 Series
Auto Equalizer

Mounting details
Parallel Arm (Push Side) Mounting

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

---

4840 Series
Auto Equalizer

Mounting details
Parallel Arm (Push Side) Mounting

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

---

4840 Series
Auto Equalizer

Mounting details
Parallel Arm (Push Side) Mounting

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

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- Requires control boxes with integral compressor and control box using auxiliary air supply
- See CONTROL BOX pages 28-29 and actuators and accessories, pages 115-131
- Guard rails/safety mats not required
**Cylinders**

4841-3971
Cast Iron Cylinder Assembly
- Non-handed
- Standard

4841-3071
Cast Iron Cylinder Assembly
- Non-handed
- Mounting plate
- Standard

**Arms**

4840-3077EDA
Extra Duty Arm
- Non-handed
- Features forged solid steel main arm and forearm for potentially abusive installations
- Standard

4840-3077CNS
Cush-n-Stop Arm
- Non-handed
- Features forged solid steel main arm and forearm with stop in soffit shoe
- Optional

4840-3077SCNS
Spring CUSH Arm
- Non-handed
- For abusive applications features forged solid steel main arm and forearm with spring loaded stop in soffit shoe
- Optional

**Cover**

4840-72MC
Metal Cover
- Non-handed
- With black end caps
- Standard
**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></th>
<th>24&quot;</th>
<th>30&quot;</th>
<th>36&quot;</th>
<th>42&quot;</th>
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<tbody>
<tr>
<td>610mm</td>
<td>1067mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1067mm</td>
<td>1067mm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 4841     | size 3 | size 4 | size 5 |

Minimum door width

Interior door width

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

| 4841     | size 2 | size 3 | size 4 | size 5 |

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
Accessories

-3390A
Relay Package “A”
- ES relay assembly for 7901 and 7981 Series control boxes or the ‘A’ circuit ES relay assembly in a 7902 or 7982 Series control box
- 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 7902ES, 7902ES, 7982ES, or 7982ES Series control box

-3390B
Relay Package “B”
- ES relay assembly for ‘B’ circuit in 7902 or 7982 Series control boxes
- Includes –390 relay, base, and wires
- Can be added to standard 7902 or 7982 Series control boxes to convert to ES operation
- Relay package, -3390B is included when ordering a 7902ES or 7982ES Series control box

-3390C
Relay Package “C”
- ES relay assembly in 7949 Series blow open control box
- Includes –390C relay, base, and wires
- Can be added to standard 7949 Series blow open control box to convert to ES operation
- Relay package, -3390C is included when ordering a 7949ES Series control box

-962
Isolator
- Rubber isolators for 7981/7982 control assembly, -3960

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

-3960
Compressor Assembly
- Internal air pump assembly for 7981 or 7982 Series control box
- Includes starter capacitor, -962 isolators, and -329 air filter

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

925
Pneumatic Tubing
- 1/8” (3mm) I.D. flexible pneumatic tubing for use with standard barbed fittings provided on pneumatic control boxes and operators
- Order by linear footage required
- 925 tubing is not fire-rated
- Contact LCN for applications where tubing must run through rated plenums
ELECTRIC AUTO EQUALIZERS
These Auto Equalizer products are an addition to the original pneumatic drive system. People moving through a door can use it as a normal rack & pinion door closer or, at the touch of a button, open the door automatically. An integrated digital control suite provides all electrical control functions. These self-contained units are suitable for use on single leaf doors or pair of doors where each leaf is equipped with an operator. The operator provides all the control and power elements into a single operator package; only some actuators are required to complete the system.

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

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

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

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

- **On-Board Power Supply**
  Provides both 12V DC and 24V DC outputs to power card readers, manual actuators and other peripherals.

- **“No Destruct” Drive System**
  Specially designed motor and clutch assembly provide a ‘breakaway’ function that reduces the chance the operator will be damaged in an abusive application. If a vandal tries to force the door closed while it is trying to open, the clutch mechanism prevents damage. The door is never out of control because the heavy duty 4040 closer is always operable.

- **Electronic Circuit Protection**
  The high voltage input circuit is protected by a one amp slow blow fuse. The low voltage output circuits by self-resetting fuses.

- **Visual Function Indicators**
  LED’s allow direct observation of these inputs:
  - input power
  - fire alarm input
  - normal trigger (actuator) input
  - sequential trigger (actuator) input
  - hold open/alternate action (actuator) input
  - lockout timer
  - safety sensor (clear) input
  - safety sensor (active) input

- **Programming Mode**
  Allows tailoring the following functions to meet specific site conditions:
  - hold open time
  - 90° slow down time
  - one shot input [ON or OFF]
  - Exterior mode [ON or OFF] function to accommodate momentary resistance, like wind gusts, during the opening swing.
  - electric strike delay timer
  - electric strike 3 second power function [ON or OFF]
  - sequential trigger delay timer
  - alternate action timer
  - lockout timer
ELECTRIC AUTO EQUALIZER SYSTEMS
- Originally introduced in 1995.
- Exceeds proposed ANSI cycle test standard of 300,000 full load automatic operating cycles. Integrated LCN 10 million cycle heavy duty 4040 door closer.
- Power operation plus full door control.
- For all applications, single or multi-door projects.
- Opening time to backcheck no faster than 3 seconds.
- Opening time 4 seconds or more to fully open.
- Must remain fully open for at least 5 seconds.
- Closing time from 90° to 10° no faster than 3 seconds.
- Less than 15 pounds-force to stop door’s motion.
- Kinetic energy must not exceed 1.25 lbf-ft.
- In event of failure; less than 15 lbf. to release latch, less than 30 lbf. to put door in motion, less than 15 lbf. to fully open door systems.

STANDARDS, LISTINGS & APPROVALS
- UL listed for Fire Door Operator (GUJY) and Door Operator System (+DDR) file R18222.
- Tested and certified under ANSI Standard A156.19. Refer to Section 2.1 and consult factory for details.
- ADA law, Section 4.13.12.
- Listed for positive pressure plus UL 10B and UL 10C.
- Wiring is compliant with both UL 325 and the NEC. Separation of high and low voltage.
- Consult the factory for other listings such as; State and Local Government regulations.
- UL 10 C Listed for Fire Rated Door Operators with Automatic Closers, File No. (GUJY).

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

MAINTENANCE
- Operators mounted according to the LCN installation instructions require no periodic maintenance or adjustments.
- Periodic visual inspections are recommended.
- No service contracts.
This page illustrates examples of typical Electric LCN systems. Please consult your local SSC representative or LCN for assistance with specific installations and material requirements.

### SINGLE DOOR SYSTEMS (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>
<tr>
<td></td>
<td></td>
<td>Other products from Von Duprin and Locknetics</td>
</tr>
</tbody>
</table>
1 - DOOR CLOSER ASSEMBLY
- Based on a heavy duty 4040, cast iron cylinder with all-weather fluid for consistency and reliability
- Rugged drive mechanism provides the connection to the electric motor assembly
- Fully adjustable, independent hydraulic regulation controls the door to minimize the chance of damage to the door and frame assemblies

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

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

4.X - FIELD WIRING
4.1
- Input power; 120V AC @ 1.5 amperes
- On-board, low voltage power supply provides both 12V and 24V DC @ 1.0 ampere (maximum combined load) for LCN actuators, RF receivers, and electric strikes or magnetic locks
- Slow blow and self-resetting fuses protect input and output power from voltage spikes
- Terminal strips simplify field wiring

4.2
- On/Off Switch

4.3
- Hold Open Switch

4.4
- Separate conduits for high voltage power and low voltage power and signal wiring meet UL and National Electrical Code requirements
**LCN LOW VOLTAGE (CLASS 2 NEC) ELECTRICAL CONNECTIONS**

<table>
<thead>
<tr>
<th>Function</th>
<th>Terminal</th>
</tr>
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<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 325/22B, 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**
- 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

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

Meet ADA requirements (power mode).*

** ARM FUNCTION**

- 90°
- Extra Duty
- Cush-N-Stop
- Spring Cush
### 4630 Series Auto Equalizer

#### Mounting details

**Top Jamb (Pull Side) Mounting**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1/4” (32 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>
<tr>
<td>33-1/2” (850 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

**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:**

- 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

---

*LCN Door Control Catalog*

Phone: 877-671-7011  ■  Fax: 800-248-1460  ■  www.allegion.com/us  ■  009426 rev. 01/18
### Cylinders

**4631-3971**
- Cast Iron Cylinder Assembly
- Non-handed
- Standard

**4631-3071**
- Cast Iron Cylinder Assembly
- Non-handed
- Mounting plate
- Includes 4630-3454 Motor Clutch, 4630-3180 I/O Board Assembly and 4630-3462 Controller
- Standard

**4631-3071CS**
- Cast Iron Cylinder Assembly
- Non-handed
- Mounting plate
- Includes 4630-3454 Motor Clutch, 4630-3180 I/O Board Assembly and 4630-3462 Controller
- Same as a 4630-3071 assembly except on/off switch is concealed in endcap and no hold open switch is included (Separate key switches suggested)
- Standard

### Cover

**4630-72MC**
- Metal Cover
- Non-handed
- Standard

### Track

**4630-3038**
- Standard Track
- Non-handed
- Will not accept hold open clip or bumper assembly
- Standard

### Arm

**4630-3077T**
- Standard Arm
- Non-handed
- Track roller not included with arm

### Installation Accessories

**4630-3034**
- Track Roller
- Quiet low friction roller assembly
- Shoulder dimension “X” = 1/8” (3mm)
Installation Accessories

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

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

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

4630-3179-1 On/Off Switch Assembly
- Black rocker switch. Plugs into high voltage PC board

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

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

4630-3454 Motor/Clutch Assembly
- A geared assembly in an LCN power operator that incorporates a “no destruct” feature

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

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

4630-3498-1 Ribbon Cable Connector
- 16 wire ribbon cable connecting 1-24 pin terminal connectors to controller
**How-to-order 4630 Series closers**

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

**Closer options**

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

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

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

**Special template**
- ST-

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

---

**Exterior (and Vestibule) door width**

<table>
<thead>
<tr>
<th>Size</th>
<th>Minimum door width</th>
</tr>
</thead>
<tbody>
<tr>
<td>36”</td>
<td>914mm</td>
</tr>
</tbody>
</table>

**Interior door width**

<table>
<thead>
<tr>
<th>Size</th>
<th>Minimum door 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>
</tbody>
</table>

4631

Indicates recommended range of door width for closer size.

**4630 Series Auto Equalizer**

**Ordering Information**

**Closer will be shipped with:**
- Standard cylinder
- Standard metal cover
- Standard arm
- Track roller
- Standard track
- Wood and machine screw pack

unless options listed below are selected.
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

### Handling
Non-Handed

### Size
Adjustable Spring Size 2-5

### Warranty
2 years

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

### Coverage
Metal, standard

### Fasteners
Wood and machine screws

### Mounting
Top jamb (Push Side)

### Arms
- Regular arm, standard
- 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 SRI primer - powder coat only
- Optional plated finishes*

*End caps are black

---

- **Meets ADA requirements (power mode).**
- *See individual series for maximum manual opening.*
- **Switch provided for continuous hold open (4640 only).**
Top Jamb (Push Side) Mounting

### Mounting details

**Top Jamb (Push Side)**

**Mounting**

<table>
<thead>
<tr>
<th>Top Jamb (Push Side) Mounting</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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, 4640-79LR

**Head Frame**

- Minimum 1-3/4” (44 mm). The standard mounting plate is also used to meet flush ceiling conditions

**Top Rail**

- Minimum 1-3/4” (44 mm)
- Flush ceiling installation requires 3-3/4” (95 mm) minimum

**Opening Time and Force**

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

**System Diagram**

- See “AUTOMATIC OPERATORS” section page 35 for typical system wiring and pages 37-38 for electrical data

**Maximum Opening**

- Templating allows 90° power opening and 100° manual opening
- Consult factory for all pivot mounted installations

**Notes:**

- Actuators are sold separately, see pages 175-171
- 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.
Accessories

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

4640-3071CS
Cast Iron Cylinder Assembly
- Non-handed
- Mounting plate.
- Includes; 4640-3454 Motor Clutch, 4640-3180 I/O Board Assembly and 4640-3462 Controller
- Standard

4640-72MC
Metal Cover
- Non-handed
- Standard

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

Cylinders

Arms
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%

<table>
<thead>
<tr>
<th>Exterior (and Vestibule) door width</th>
<th>Interior door width</th>
</tr>
</thead>
<tbody>
<tr>
<td>36” 914mm</td>
<td>42” 1067mm</td>
</tr>
<tr>
<td>size 5</td>
<td>size 3</td>
</tr>
</tbody>
</table>

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**

- 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>
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

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

Disabled when optional 3 position switch is in Off position

Activation Device N.O. Dry Contacts

Multiple activation devices should be connected in parallel

Activation Device N.O. Dry Contacts

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
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.

---

**Features**
- Special Templates
- 9130 Series Benchmark
### Butt Hinges
Should not exceed 5” (127 mm) in width

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

### Head Frame
Minimum 2” (51 mm)

### Top Rail
Minimum 2” (51 mm)

### Opening and Closing Time
- 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 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 microprocessor control box that ensures reliability and maintains customer settings
- **Power boost** allows for increased closing force near latch
- **On/off switch** is included as standard
- **All potentiometers** are clearly labeled with their functions
- **LED lights** indicate power to control box and motor gearbox
Motor Gearbox

- **9130-3454S**
  - Driving mechanism for operator (switch included)
  - For 27” unit

- **9130-3462**
  - Control Box (120v)
  - Electronic controlling device with power supply output and power boost feature for Benchmark

Control Box

- **9130-3454**
  - Motor Gearbox Assembly (W/O Switch)
  - Driving mechanism for operator (switch not included)
  - For full length 36” unit

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

- **9130-163-1**
  - Cover End Cap Insert
  - Used to cover switch hole opening

- **9130-163**
  - Cover Insert
  - Used to cover operator shaft opening (includes 2 pieces)

- **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

<table>
<thead>
<tr>
<th>Door width</th>
<th>30˝</th>
<th>48˝</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<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.

<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>
</tbody>
</table>
| 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 |

**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.

---

**LCN Door Control Catalog**
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"
### Accessories

#### Motor Gearbox

- **9140-3454S Motor Gearbox Assembly**
  - Driving mechanism for operator (switch included)
  - For 27” unit

- **9140-3454 Motor Gearbox Assembly (W/O Switch)**
  - Driving mechanism for operator (switch not included)
  - For full length unit (36”)

#### Control Box

- **9130-3462 Control Box (120v)**
  - Electronic controlling device with power supply output and power boost feature for Benchmark

#### Brackets

- **9140-3018 Mounting bracket**
  - Standard

- **9140-3351-1 Switch Bracket**
  - 29” cable
  - Used with a 36” door
  - Used to locate switch at end of cover on full length unit

#### Covers

- **9140-72MC Metal Cover**
  - Non-handed
  - 27”
  - Extruded aluminum cover
  - Standard

- **9140-72FC Full Metal Cover**
  - Non-handed
  - 36”
  - Extruded aluminum cover

- **9140-163 Cover Insert**
  - Used to cover operator shaft opening (includes 2 pieces)

- **9140-163-1 Cover End Cap Insert**
  - Used to cover switch hole opening

- **9140-334 Cover End Cap**
  - Black plastic
  - Includes 9130-163-1 cover and cap insert
Arms

9140-3077  
Regular arm  
- Non-handed

9140-3077L  
Long push arm  
- Non-handed

9140-79  
Rod and shoe  
- For use with regular arm

9140-79LR  
Long rod and shoe  
- Used with long arm, for deep reveals
How-to-order 9140 Series closers

Specify Finish
- Standard Anodized Finish
  - Aluminum or Dark Bronze

Operator options

Cover
- 36˝ Full Cover

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

Operator will be shipped with:
- Standard motor gearbox
- Standard control box
- Mounting bracket
- 27˝ metal cover
- Standard arm (3077)
- Standard track w/track roller
- Wood and machine screw pack

unless options listed below are selected

Table of sizes

<table>
<thead>
<tr>
<th>Door width</th>
<th>26˝</th>
<th>48˝</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>600mm</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                                                                                      |

<table>
<thead>
<tr>
<th>Cover</th>
<th>Metal, standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fasteners</td>
<td>Wood and machine screws</td>
</tr>
<tr>
<td>Mounting</td>
<td>Pair of doors, surface mount, offset pivot / butt hinges (Push Side)</td>
</tr>
<tr>
<td>Arms</td>
<td>Regular arms</td>
</tr>
</tbody>
</table>
| 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

<table>
<thead>
<tr>
<th>9150 Series Benchmark</th>
</tr>
</thead>
</table>

LCN Door Control Catalog
phone: 877-671-7011  
fax: 800-248-1460  
www.allegion.com/us  
009426  rev. 01/18
Top jamb, Independent/Simultaneous Pair 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 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</td>
<td>9150-3462</td>
</tr>
<tr>
<td>Motor Gearbox Assembly</td>
<td>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</td>
</tr>
<tr>
<td>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</td>
</tr>
<tr>
<td>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</td>
</tr>
<tr>
<td>Cover Insert</td>
</tr>
<tr>
<td>Used to cover operator shaft opening (includes 2 pieces)</td>
</tr>
<tr>
<td>9150-163-1</td>
</tr>
<tr>
<td>Cover End Cap Insert</td>
</tr>
<tr>
<td>Used to cover switch hole opening</td>
</tr>
<tr>
<td>9150-334</td>
</tr>
<tr>
<td>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</td>
</tr>
<tr>
<td>Regular arm</td>
</tr>
<tr>
<td>Non-handed</td>
</tr>
<tr>
<td>9150-3077L</td>
</tr>
<tr>
<td>Long arm</td>
</tr>
<tr>
<td>Non-handed</td>
</tr>
<tr>
<td>9150-79</td>
</tr>
<tr>
<td>Rod and shoe</td>
</tr>
<tr>
<td>For use with regular arm</td>
</tr>
<tr>
<td>9150-79LR</td>
</tr>
<tr>
<td>Long rod and shoe</td>
</tr>
<tr>
<td>Used with long arm, for deep reveals</td>
</tr>
</tbody>
</table>
Ordering Information

**How-to-order 9150 Series closers**

Specify Finish
- [ ] Standard Anodized Finish
  - Aluminum or Dark Bronze

Operator options

Arm
- [ ] Long Arm (3077L) (Reveals 6” to 9-3/4”)

Operator will be shipped with:
- Standard motor gearbox (2 ea)
- Standard control box (2 ea)
- Mounting bracket (2 ea)
- 72” metal cover
- Standard arm (2 ea)
- Wood and machine screw pack
  
  unless options listed below are selected

---

**Table of sizes**

Notes:
- For 9150 Benchmark Series
- 72” door width only for full length push double door operator.
**Digital Control Suite**
Provides exceptionally precise control of a large range of built-in functions combined with superior durability and performance. Visual indications and digital readouts of all control function settings and activity make adjustments easy, fast and accurate.

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

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

**On-Board Power Supply**
Provides 24V AC output or 24V DC output with rectifier to power card readers, manual actuators and other peripherals.

**Plug and Play Sensors**
Motion sensors and safety sensors feature a “plug and play” concept allowing fast and accurate wiring connections in only seconds.

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

**Visual Function Indicators**
LED Display allows direct observation of these inputs while in visual function indicator mode:
- Key switch- set to Auto, OFF or HOLD
- Activate
- DMSS approach
- DMSS safety
- Bodyguard
- Power Boost Disable

**Programming Mode**
Allows tailoring the following functions to meet specific site conditions
- Opening Speed
- Backcheck Speed
- Backcheck Position
- Hold Open Delay
- Latch Position
- Auto Reverse - Closing
- Electric Lock Delay
- Power Boost
- Push N’ Go
- Alternate Action
- Safety Slow/Stop
- Slow Down Disable

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

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

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

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

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

**Electric Lock Delay**
Causes a 1 second delay between activate signal and door opening to allow time for most electric locks to disengage before operator opens door.
The 2810 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operator when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

**Certifications**
Grade 1 - ANSI A156.19, UL325, UL998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act

**Handing**
Handed

**Door Width**
Minimum door width 33” - 48” 49” 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.
### 2810 Series Senior Swing

#### Mounting details

**Concealed Single Door Mounting**

---

### 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
- Minimum header length 33” with applied stop by others and 36” with LCN fixed or breakaway stop

### 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

---

**LCN Door Control Catalog**

### 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
## 2810 Series Senior Swing

### Accessories

#### Motor Gearbox
- **2810-3454** Motor Gearbox
  - Senior swing
  - Handed
  - Driving mechanism for operator
  - Provides maximum 15 lbs opening force

#### Mount Brackets
- **2810-375** Mounting Bracket
  - Motor gearbox mounting bracket for 3-3/4˝ offset pivot, butt hinge or center pivot with finger guard installations
  - Front bracket
- **2810-275** Mounting Bracket
  - Motor gearbox mounting bracket for 2-3/4˝ center pivot installations
  - Front bracket
- **2810-3018** Rear Mounting Bracket
  - Motor gearbox mounting bracket
  - Rear bracket

#### Control Box
- **2810-3462** Control Box
  - Senior swing
  - Electronic controlling device for Senior Swing

#### Headers
- **2810-3572HL** Header
  - Standard
  - Single door, single operator
  - Specify length 33˝ to 49˝ maximum
- **2810-3572DD** Header
  - Standard
  - Double door, single operator
  - Specify length 49˝ to 98˝ maximum

#### End Cap
- **2810-334** Header End Caps
  - 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

2810-3072 Concealing Channel
- Used to conceal arm in overhead concealed applications
- For offset pivot installations only
- If ordering separately specify length and hand

2810-168 Slide channel
- Offset pivot or butt hinge installations only
- Mounts in top rail of door
- Allows arm to slide

Installation Accessories

2810-384B Door Stop Breakaway
- Allows in-swinging door to swing out in case of emergency
- Disables operator in breakaway mode.
- For center pivoted installations only

2810-384F Door Stop Fixed
- Prevents out-swinging door from swinging in
- For center pivoted installations only

Pivots

2810-3107 Bottom Pivot Assembly
- Includes pivot body, pivot post and bottom pivot plate
- For overhead concealed, center pivoted installations
- Includes: 2810-107, 2810-110 and 2810-117

2810-107 Bottom Pivot Body
- For center pivoted installations

2810-12 Filler Plate Blank
- Completes length of header box

2810-110 Pivot Post
- Connects pivot body to bottom pivot plate for center pivoted installations

2810-117 Bottom Pivot Plate
- Applied to floor for center pivoted installations

2810-11A Spindle Plate
- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 2-3/4” center pivot installations

2810-11B Spindle Plate
- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 3-3/4” offset pivot, butt hinge or center pivot with finger guard installations
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” 838mm</th>
<th>48” 1219mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>2811</td>
<td>Minimum door width</td>
<td></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 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.

<table>
<thead>
<tr>
<th>Certifications</th>
<th>Grade 1 - ANSI A156.19, UL325, UL998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid</td>
<td>All Weather Fluid</td>
</tr>
<tr>
<td>Handing</td>
<td>Handed</td>
</tr>
<tr>
<td>Door Width</td>
<td>Combined width min 52&quot; - 96&quot; Simultaneous pair - width per leaf 26&quot; minimum to 48&quot; maximum</td>
</tr>
<tr>
<td>Warranty</td>
<td>2 years</td>
</tr>
</tbody>
</table>

**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.

---

**MOUNTING**
- Surface Mount Single Door
- Surface Mount Simultaneous Pair
- Concealed Single Door
- Concealed Simultaneous Pair

**HANDING**
- Handed
- Non-Handed

**FINISH**
- Standard Anodized
- Metal

**COVER**
- Standard (Single Lever)
- Regular (Double Lever)
- Offset Pivot Butt/Hinge Arm

**ARM FUNCTION**
- Double Egress (Push/Pull)
- Center Pivot Arm

* For double egress only.
2850 Series
Senior Swing

Mounting details

Concealed Simultaneous Pair

Head Frame
Minimum 52” (L) x 5-3/4” (H) x 4-1/2” (W) (1324 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
### Mounting details

**Concealed Simultaneous Pair**

**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
- **2850-3454**
  - Motor Gearbox
  - Senior swing
  - Driving mechanism for operator
  - Provides maximum 15 lbs opening force
  - Handed

#### Mount Brackets
- **2850-375**
  - Mounting Bracket
  - Motor gearbox mounting bracket for 3-3/4” offset pivot, butt hinge or center pivot with finger guard installations
  - Front bracket

- **2850-275**
  - Mounting Bracket
  - Motor gearbox mounting bracket for 2-3/4” center pivot installations
  - Front bracket

- **2850-3018**
  - Rear Mounting Bracket
  - Motor gearbox mounting bracket
  - Rear bracket

#### Control Box
- **2850-3462**
  - Control box
  - Senior swing
  - Electronic controlling device for Senior Swing

#### Header
- **2850-3572HL**
  - Header
  - Mounting header
  - Pair door, two operators
  - Specify length 52” to 98” maximum
  - Standard

#### Control Box
- **2850-334**
  - Header End Caps
  - End cap with openings for wiring

#### Arms
- **2850-3077CP**
  - Center pivot arm
  - Center pivot installations only
  - Used with overhead concealed operators and center pivoted doors

- **2850-3077OP**
  - Offset pivot arm
  - Offset pivot or butt hung installations only
  - Handed
  - Used with overhead concealed operators

- **2850-3077OPCM**
  - Offset Pivot Arm Assembly
  - Offset arm with track and concealing channel
  - Includes 3072 Concealing Channel, 168 Slide Channel and 30770P Offset pivot arm
### Channels

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2850-3072</td>
<td>Concealing Channel ▪ Used to conceal arm in overhead concealed applications ▪ For offset pivot installations only ▪ If ordering separately specify length and hand</td>
</tr>
<tr>
<td>2850-168</td>
<td>Slide Channel ▪ Offset pivot or butt hinge installations only ▪ Mounts in top rail of door ▪ Allows arm to slide</td>
</tr>
</tbody>
</table>

### Installation Accessories

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2850-384B</td>
<td>Door Stop Breakaway ▪ Allows in-swinging door to swing out in case of emergency ▪ For center pivoted installations only</td>
</tr>
<tr>
<td>2850-384F</td>
<td>Door Stop Fixed ▪ Prevents out-swinging door from swinging in ▪ For center pivoted installations only</td>
</tr>
</tbody>
</table>

### Pivots

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2850-3107</td>
<td>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</td>
</tr>
<tr>
<td>2810-107</td>
<td>Pivot Body ▪ Pivot body for center pivoted installations</td>
</tr>
<tr>
<td>2850-110</td>
<td>Pivot Post ▪ Connects pivot body to bottom pivot plate for center pivoted installations</td>
</tr>
<tr>
<td>2850-117</td>
<td>Bottom Pivot Plate ▪ Applied to floor for center pivoted installations</td>
</tr>
<tr>
<td>2850-11A</td>
<td>Spindle Plate ▪ Hides bottom of motor gearbox ▪ Completes header box ▪ Cutout allows for motor gearbox shaft ▪ For 2-3/4” center pivot installations</td>
</tr>
<tr>
<td>2850-11B</td>
<td>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</td>
</tr>
</tbody>
</table>
How-to-order 2850 Series

Select installation type
- 2853

Specify arm
- 3-3/4˝ (Offset pivoted) Arm (3077OP)
- 2-3/4˝ (Center pivoted) Arm (3077CP)
- 3-3/4˝ (Center pivoted) Arm (3077CP)

Specify hand
- RH
- LH

Specify header/length
- HL__ (Specify length 52˝ to 98˝)

Specify finish
- Standard Anodized Finish ________________
  Aluminum or Dark Bronze

Operator 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.

**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 with 52” - 96”
- Simultaneous pair - width per leaf 26” minimum to 48” maximum

**Warranty**
- 2 years

**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.

---

### 2860 Series Senior Swing

**Features**
- MOUNTING: Surface Mount, Single Door, Surface Mount Simultaneous Pair, Concealed Single Door, Concealed Simultaneous Pair
- HANDING: Standard (Single Lever), Regular (Double Lever)
- FINISH: Standard Anodized, Metal
- COVER: Standard (Single Lever), Regular (Double Lever)
- ARM FUNCTION: Offset Pivot Arm, Butto Arm, Center Pivot Arm

* For double egress only.

---

LCN Door Control Catalog
Concealed
Independent Pair

Mounting details

**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
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
### Channels

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

### Installation Accessories

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

### Pivots

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2860-3107</td>
<td>Bottom Pivot Assembly</td>
<td>Includes pivot body, pivot post and bottom pivot plate. For overhead concealed, center pivoted installations. Includes: 2860-107, 2860-110 and 2860-117.</td>
</tr>
<tr>
<td>2860-107</td>
<td>Bottom Pivot Body</td>
<td>Pivot body for center pivoted installations.</td>
</tr>
<tr>
<td>2860-110</td>
<td>Pivot Post</td>
<td>Connects pivot body to bottom pivot plate for center pivoted installations.</td>
</tr>
<tr>
<td>2860-117</td>
<td>Bottom Pivot Plate</td>
<td>Applied to floor for center pivoted installations.</td>
</tr>
<tr>
<td>2860-11B</td>
<td>Spindle Plate</td>
<td>Hides bottom of motor gearbox. Complements header box. Cutout allows for motor gearbox shaft. For 3-3/4” offset pivot, butt hinge or center pivot with finger guard installations.</td>
</tr>
</tbody>
</table>
2860 Series  
Senior Swing

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, UL325/228, UL998, 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

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

**Mounting details**

**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.
## 9530 Series
### Senior Swing

### Accessories

#### Motor Gearbox
- **9530-3454**
  - Motor Gearbox
  - Senior swing
  - Handed
  - Driving mechanism for operator
  - Provides maximum 15 lbs opening force

#### Mount Brackets
- **9530-275**
  - Mounting Bracket
    - Motor gearbox mounting bracket for 2-3/4” offset pivot or butt hinge installations
    - Front bracket
- **9530-3018**
  - Rear Mounting Bracket
    - Motor gearbox mounting bracket
    - Rear bracket
- **9530-334-1**
  - Angled Bracket
    - Mounting bracket for surface applications (includes 2 mounting brackets)

#### Control Box
- **9530-3462**
  - Control Box
    - Electronic controlling device for Senior Swing

#### Headers
- **9530-3572HL**
  - Header
    - Standard
    - Single door, single operator
    - Specify length 33” to 48” maximum
- **9530-3572DD**
  - Header
    - Standard
    - Double door, single operator
    - Specify length 49” to 98” maximum

#### End Caps
- **9530-334**
  - Header End Caps
    - With openings for wiring
- **9530-334-2**
  - End Dress Plate
    - Metal finish end cap
9530 Series Senior Swing

Accessories

Arms

9530-3077PLCM
Standard Arm Assembly
- Handed
- Track roller included (includes 3038, 3077T, 3034 & 73)

9530-3077T
Standard Arm
- Handed
- Track roller not included

Tracks

9530-3038
Track
- Non-handed
- Includes 3034 & 73

9530-73
Track End Cap
- Black plastic end caps

9530-3034
Roller
- Quiet low friction roller assembly

Installation Assembly

9530-11A
Spindle Plate
- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 2-3/4” offset pivot or butt hinge installations

9530-12
Filler
- Plate blank
- Completes length of header box (specify Length)

9530-18
Mounting Plate
- Optional mounting plate for standard hollow metal door frames
- Specify length 36-1/2” to 101-1/2” maximum, when using angle brackets
- Specify length 33” to 98” maximum when using end dress plates

NOTE: The length of a universal 18 plate will need to be ordered 3-1/2” longer than the supplied header when using angle brackets
How-to-order 9530 Series closers

Specify hand
☐ RH
☐ LH

Specify header/length
☐ HF __ (Specify length 33” to 48”)
☐ DD __ (Specify length 49” to 98”)

Specify finish
☐ Standard Anodized Finish ____________
   Aluminum or Dark Bronze

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

Operator options

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

Table of sizes

<table>
<thead>
<tr>
<th>Door width</th>
<th>Minimum door width</th>
</tr>
</thead>
<tbody>
<tr>
<td>33” 838mm</td>
<td>48” 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, UL325/228, 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

---

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

---

**Features**

![Diagram of 9540 SENIOR SWING]
### 9540 Series
**Senior Swing**

**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.

---

**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
## 9540 Series Senior Swing

### Accessories

<table>
<thead>
<tr>
<th>Motor Gearbox</th>
<th>Control Box</th>
<th>Mount Brackets</th>
<th>Headers</th>
<th>End Caps</th>
</tr>
</thead>
<tbody>
<tr>
<td>9540-3454 Motor Gearbox</td>
<td>9540-3462 Control Box</td>
<td>9540-275 Mounting Bracket</td>
<td>9540-3572HL Header</td>
<td>9540-334 Header End Caps</td>
</tr>
<tr>
<td>Senior</td>
<td>Electronic controlling device</td>
<td>Senior</td>
<td>Double door, single operator</td>
<td>With openings for wiring</td>
</tr>
<tr>
<td>Handed</td>
<td>for Senior Swing</td>
<td>Single</td>
<td>Specify length 49” to 98”</td>
<td>Metal finish end cap</td>
</tr>
<tr>
<td>Drives mechanism for operator</td>
<td></td>
<td>door, single operator</td>
<td>maximum</td>
<td></td>
</tr>
<tr>
<td>Provides maximum 15 lbs</td>
<td></td>
<td>Specify length 33” to 48”</td>
<td>Standard</td>
<td></td>
</tr>
<tr>
<td>opening force</td>
<td></td>
<td>maximum</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**Control Box**
- Electronic controlling device for Senior Swing

**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)

**Headers**
- 9540-3572HL Header
  - Single door, single operator
  - Specify length 33” to 48” maximum
  - Standard
- 9540-3572DD Header
  - Double door, single operator
  - Specify length 49” to 98” maximum
  - Standard

**End Caps**
- 9540-334 Header End Caps
  - With openings for wiring
- 9540-334-2 End Dress Plate
  - Metal finish end cap
9540 Series Senior Swing

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
- HF ___ (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>9542</td>
<td>838mm</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 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.

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 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
### Motor Gearbox

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

### Mount Brackets

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

### Control Box

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

### Header

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

### End Caps

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

- **9550-3038 Track**
  - Non-handed
  - Standard

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

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

### Arms

- **9550-3077Plcm Standard Arm Assembly**
  - Handed
  - Includes 3077 regular arm assembly, 3038 track, and 3034 track roller

- **9550-3077 Regular Arm Assembly**
  - Handed
  - Includes 77 main arm assembly and 79 linkage assembly

- **9550-3077L Regular Long Arm Assembly**
  - Handed
  - Includes 77 main arm assembly and 79LR linkage assembly

- **9550-3077T Standard Arm**
  - Handed
  - Track roller not included

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

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

### Installation Assembly

- **9550-11A Spindle Plate**
  - Hides bottom of motor gearbox
  - Completes header box
  - Cutout allows for motor gearbox shaft
  - For 2-3/4” offset pivot or butt hinge installations

- **9550-12 Filler Plate**
  - Blank
  - Completes length of header box
  - Specify length

- **9550-18 Mounting Plate**
  - Optional mounting plate for standard hollow metal door frames
  - Specify length 68-1/2” to 101-1/2” maximum when using angle brackets
  - Specify length 65” to 98” maximum when using dress plates.

**NOTE:** The length of a universal 18 plate will need to be ordered 3-1/2” longer than the supplied header when using angle brackets.
9550 Series
Senior Swing

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

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

### Covers
- 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

---

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

---

* For double egress only.
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
### Motor Gearbox
- **9560-3454 Motor Gearbox**
  - Senior swing
  - Handed
  - Driving mechanism for operator
  - Provides maximum 15 lbs opening force

### Mounting Brackets
- **9560-275 Mounting Bracket**
  - Motor gearbox mounting bracket for 2-3/4” center pivot installations
  - Front bracket
- **9560-3018 Rear Mounting Bracket**
  - Motor gearbox mounting bracket
- **9560-334-1 Angled Bracket**
  - Mounting bracket for surface applications
  - Includes 2 mounting brackets

### Control Box
- **9560-3462 Control Box**
  - Electronic controlling device for Senior Swing

### Header
- **9560-3572HL Header**
  - Pair door, two operators
  - Specify length 65” to 98” maximum
  - Standard

### End Caps
- **9560-334 Header End Caps**
  - With openings for wiring
- **9560-334-2 End Dress Plate**
  - Metal finish end cap
### Tracks

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9560-3038</td>
<td>Track</td>
</tr>
<tr>
<td>9560-73</td>
<td>Track End Cap</td>
</tr>
<tr>
<td>9560-3034</td>
<td>Roller</td>
</tr>
</tbody>
</table>

- **Non-handed**
- **Standard**

### Arms

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9560-3077T</td>
<td>Standard Arm</td>
</tr>
<tr>
<td>9560-3077</td>
<td>Regular Arm Assembly</td>
</tr>
<tr>
<td>9560-3077L</td>
<td>Regular Long Arm Assembly</td>
</tr>
<tr>
<td>9560-77</td>
<td>Main Arm</td>
</tr>
<tr>
<td>9560-79</td>
<td>Linkage Assembly</td>
</tr>
<tr>
<td>9560-79LR</td>
<td>Linkage Assembly</td>
</tr>
</tbody>
</table>

- **Handed**
- **Track roller not included**
- **Threaded rod attaches to door**
- **Threaded long rod attaches to door**

### Installation Accessories

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9560-11A</td>
<td>Spindle Plate</td>
</tr>
<tr>
<td>9560-12</td>
<td>Filler Plate</td>
</tr>
<tr>
<td>9560-18</td>
<td>Mounting Plate</td>
</tr>
</tbody>
</table>

- **Hides bottom of motor gearbox**
- **Blank**
- **Optional mounting plate for standard hollow metal door frames**

**NOTE:** The length of a universal 18 plate will need to be ordered 3-1/2” longer than the supplied header when using angle brackets.
9560 Series Senior Swing

Ordering Information

**How-to-order 9560 Series**

**Specify hand**
- RH
- LH

**Specify header/length**
- HL_ (Specify length 65” to 98”) regular or long arm

**Specify finish**
- Standard Anodized Finish _____________
  - Aluminum or Dark Bronze

**Operator 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**

**Combined door width**

- 65” 1651mm
- 98” 2489mm

**Minimum combined Door width**

**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”

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

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

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

**8310-800**
Weather/Trim Ring
- Weather/Trim Ring, 4-1/2˝ Round
- Optional accessory - must be used w/any 4-1/2˝ round plastic mounting box

**8310-844**
Transmitter
- Transmitter, Wireless, 1 Channel, 9v battery included
- Use to convert standard wall mount actuator to wireless
- Requires 8310-865 Receiver

**8310-874**
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”

### 8310-852WP 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”

### 8310-869S Surface Mount Box
- Rugged Plastic Box, 6” Round
- Optional accessory - can be used w/ any 6” round actuator
- Not to be used with wireless function

### 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.

### 8310-8/444 Transmitter
- Transmitter, Wireless, 1 Channel, 9v battery included
- Use to convert standard wall mount actuator to wireless
- Requires 8310-865 Receiver

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

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

---

**Automatic 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)

8310-3852TWF
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)

8310-3852WS
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)

8310-3852TWS
Surface Mount Kit
- 6” Round, Logo, Text, Wireless,
- Includes 8310-852T Actuator, 8310-844 Transmitter, 8310-869S Surface Box, 8310-802 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)
NOTE: LCN recommends for all jamb mount actuators be used on an interior installation only.

### Automatic Operator Actuators & Accessories

**8310-818**  
Jamb Mounted Actuator  
- Hardwired low voltage actuator with rectangular stainless steel touch plate.  
- 1-1/2” (38mm) wide by 4-3/4” (121mm)  
- Engraved blue filled handicap symbol conforms to most accessibility codes  
- Designed to mount in a frame cutout (template provided) projecting approximately 1/2” (12mm) from the frame  
- Optional mounting in surface or flush mount box (sold separately)  
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard

**8310-818T**  
Jamb Mounted Actuator  
- Same as the 8310-818, with the added engraving of “Push to Open”

**8310-819F**  
Flush Mount Box  
- Rugged Plastic Jamb Box  
- 1-1/2” x 4-3/4” rectangle, optional accessory - can be used w/ any 1-1/2” x 4-3/4” jamb mount actuator

**8310-819S**  
Surface Mount Box  
- Rugged Plastic Jamb Box  
- 1-1/2” x 4-3/4”, rectangle  
- Optional accessory - can be used w/ any 1-1/2” x 4-3/4” jamb mount plastic mounting box

**8310-844J**  
Transmitter  
- Wireless, 1 Channel, Jamb Mount, 3v battery included  
- Used to convert standard jamb mount actuator to wireless when used w/ 819F or 819S boxes. Requires 8310-865 Receiver (interior use only)

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

---

NOTE: LCN recommends for all jamb mount actuators be used on an interior installation only.
8310 Series
Auto Operator Actuators & Accessories
1-1/2” x 4-3/4” Surface and Flush Mounts

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

Automatic Operator Actuators & Accessories

8310-3818WF
Flush Mount Kit
- Actuator, 1-1/2” x 4-3/4” Rectangle, Logo, Wireless
- Includes 8310-818 Actuator, 8310-844J Transmitter, 8310-819F Flush Box
- Requires 8310-865 Receiver (not part of kit)

8310-3818TWF
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)

8310-3822T
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

8310-3818WS
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)

8310-3818TWS
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)

8310-3822TW
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
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) on an 8310-866 bollard post
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard

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

8310-853WP
Surface Mounted Actuator
- Wireless, low profile, low voltage actuator with square, stainless steel touch plate in 4-3/4” (121mm) square
- Engraved blue filled handicap symbol conforms to most accessibility codes
- Surface mount box includes integral transmitter w/battery and actuator switch
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard
- Requires 8310-865 Receiver

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

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

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

8310-844
Transmitter
- Wireless, 1 Channel, 9v battery included
- Use to convert standard wall mount actuator to wireless
- Requires 8310-865 Receiver

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

8310-813
Touchless Wall Mounted Actuator
- Hardwired low voltage actuator with plastic plate in 4-3/4” (121mm) square
- Optional mounting in single gang electrical box (by others) or double gang box (4” x 4” by others)
Automatic Operator Actuators & Accessories

**8310-3853WF**
Flush Mount Kit
- Actuator, 4-3/4˝ Square, Logo, Wireless
- Includes 8310-853, 8310-844 Transmitter, 8310-867F Flush Box, 8310-801 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)

**8310-3853WS**
Surface Mount Kit
- Actuator, 4-3/4˝ Square, Logo, Wireless
- Includes 8310-853, 8310-844 Transmitter, 8310-867S Surface Box, 8310-801 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)

**8310-3853TWF**
Flush Mount Kit
- Actuator, 4-3/4˝ Square, Logo, Text, Wireless
- Includes 8310-853T, 8310-844 Transmitter, 8310-867F Flush Box, 8310-801 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)

**8310-3853TWS**
Surface Mount Kit
- Actuator, 4-3/4˝ Square, Logo, Text, Wireless
- Includes 8310-853T, 8310-844 Transmitter, 8310-867S Surface Box, 8310-801 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)

**8310-3857T**
Surface Mount Kit
- Actuator Package, 4-3/4˝ Square
- Includes 8310-853T (2) Wall Mount Actuator, 8310-867S (2)
- Surface Mount Box

**8310-3857TW**
Surface Mount Kit
- Actuator Package, 4-3/4˝ Square
- Includes 8310-853T (2) Wall Mount Actuator, 8310-867S (2) Surface Mount Box, 8310-801 (2) Weather/Trim Ring, 8310-844 (2) Transmitter, 8310-865 Receiver

*NOTE: Weather/Trim Rings are sold separately*
8310-855  
Dual Wall Mounted Actuator
- Hardwired low voltage actuator with dual rectangle, stainless steel touch plate in 4-3/4˝ (121mm) square
- Engraved blue filled handicap symbol w/ text, conforms to most accessibility codes
- Designed to mount in a flush or surface mount box (sold separately) in/on a vertical surface near the controlled door
- Optional mounting in double gang box (4" x 4" by others) or on an 8310-866 bollard post
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard

8310-867F  
Flush Mounted Actuator
- Rugged Plastic Box, 4-3/4˝ Square
- Optional accessory - can be used w/ any 4-3/4˝ square actuator

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

8310-801  
Weather/Trim Ring
- Plastic Weather Ring, 4-3/4˝ Square
- Optional accessory - can be used w/ any 4-3/4˝ square plastic mounting box

8310-844  
Transmitter
- Transmitter, Wireless, 1 Channel, 9v battery included
- Use to convert standard wall mount actuator to wireless
- Requires 8310-865 Receiver

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

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

Automatic Operator Actuators & Accessories

8310-3855WF
Flush Mount Kit
- Actuator, 4-3/4” Square, Logo, Text, Dual Vestibule, Wireless
- Includes 8310-855 Actuator, 8310-844 Transmitter (2), 8310-867F Flush Box, 8310-801 Weather/Trim Ring
- Requires 8310-865 Receiver (2) (not part of kit)

8310-3855WS
Surface Mount Kit
- Actuator, 4-3/4” Square, Logo, Text, Dual Vestibule, Wireless
- Includes 8310-855 Actuator, 8310-844 Transmitter (2), 8310-867S Surface Box, 8310-801 Weather/Trim Ring
- Requires 8310-865 Receiver (2) (not part of kit)

8310-3853WB
Actuator, Bollard Mount Kit
- 4-3/4” Square w/ Logo, Wireless actuator
- Use w/ 8310-866 Bollard (not included) - Includes 8310-853 actuator, 8310-844 transmitter
- Requires 8310-865 Receiver (not part of kit)

8310-3853TWB
Actuator, Bollard Mount Kit
- 4-3/4” Square w/ Logo, Text, Wireless actuator
- Use w/8310-866 Bollard (not included) - Includes 8310-853T actuator, 8310-844 Transmitter
- Requires 8310-865 Receiver (not part of kit)
Automatic Operator Actuators & Accessories

8310-836T Full Length Actuator (FLA)
- Hardwired low voltage actuator with stainless steel touch plate with 36” x 6” activation surface
- Blue handicap symbol conforms with most accessibility codes
- Added “PUSH TO OPEN” lettering for enhanced identification
- Designed to meet California building codes and increase accessibility for wheelchair bound entrants
- Can easily be mounted to any flat surface or a bollard post

8310-836TW Flush Length Actuator (FLA)
- Same as the 8310-836T with a built in wireless transmitter and 3v battery
- Use in conjunction with 8310-865 Receiver (not included)

8310-844 Transmitter
- Wireless, 1 Channel, 9v Battery included.
- Used to convert standard actuators to wireless
- Requires 8310-865 Receiver
- Recommended for exterior application with 8310-836T
- Used with the 866FLA bollard post

8310-866FLA FLA Bollard Post
- A powder coated steel 42” x 4” x 6” Bollard Post, mounting base pre 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)

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>8310-804-1</td>
<td>Door Mount Safety Sensor</td>
<td>Contains one active sensor module to detect obstruction(s) on leading edge of door</td>
</tr>
<tr>
<td>8310-804-2</td>
<td>Door Mount Safety Sensor</td>
<td>Contains two active sensor modules to detect obstruction(s) on full face of door</td>
</tr>
<tr>
<td>8310-877</td>
<td>Header Mount Safety Sensor</td>
<td>Safety Sensor, &quot;Diffused Infrared&quot; Technology</td>
</tr>
<tr>
<td>8310-878</td>
<td>Monitored Safety Sensor Kit</td>
<td>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</td>
</tr>
<tr>
<td>8310-879</td>
<td>Monitored Safety Sensor Kit</td>
<td>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</td>
</tr>
<tr>
<td>8310-846</td>
<td>Door Mount Harness</td>
<td>Used with 8310-804-1 or 8310-804-2 Door Mount Safety Sensor, must order separately.</td>
</tr>
<tr>
<td>8310-847</td>
<td>Door Mount Harness</td>
<td>Used with Senior Swing only, must order separately.</td>
</tr>
<tr>
<td>8310-859</td>
<td>Handheld Remote Control</td>
<td>Used to program 8310-877 Header Mount Safety Sensor from a distance</td>
</tr>
<tr>
<td>8310-877S</td>
<td>Monitored Safety Sensor Kit</td>
<td>For single door applications.</td>
</tr>
<tr>
<td>8310-878S</td>
<td>Monitored Safety Sensor Kit</td>
<td>For all double door applications.</td>
</tr>
</tbody>
</table>

The sensors and accessories are designed to work specifically with LCN automatic operators. When using sensors manufactured by other suppliers, it is advisable to consult the factory for compatibility and correct installation procedures. The choice of sensors and accessories depends on the specific requirements of the opening, including the desired function, traffic patterns, and physical design.
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)

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

8310-3883 Safety Sensor Package
- Activation/Safety Sensor Package, Low Energy Convenience
- Single Door, Includes 8310-804-1 Door Mount Safety
- Sensor (approach side), 8310-805C Door Position Switch (Concealed), 8310-845 Programmable Relay Module (Used with Senior Swing only)
8310 Series
Auto Operator Actuators & Accessories
Packages

Automatic Operator Sensors & Accessories

8310-3882
Safety Sensor Package
- Activation/Safety Sensor Package, Double Door
- Includes 8310-854 (2) Header Mount Sensor,
  8310-879 Monitored Saftey 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.
Automatic Operator Sensors & Accessories

8310-805
Door Position Switch
- Surface mount
- Used when 8310-804-1 or 8310-804-2 Door Mounted Safety Sensor and 8310-845 Relay Module is installed in conjunction with either an electrohydraulic, pneumatic or Benchmark Automatic Operator
- Disables approach side sensor when door is closed

8310-805C
Door Position Switch
- Concealed
- Used when 8310-804-1 or 8310-804-2 Door Mounted Safety Sensor and 8310-845 Relay Module is installed in conjunction with either an electrohydraulic, pneumatic or Benchmark Automatic Operator
- Disables approach side sensor when door is closed

8310-824
Transformer, 24v,
- Hardwired
- Optional accessory - Used to remotely power any 24v sensor/receiver

8310-824P
Transformer
- 24v, plug in
- Optional accessory - Used to remotely power any 24v sensor/receiver

8310-854ERA
Protective Cover
- Cover used w/ 8310-854 Header Mount Activation Sensor
- Optional

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

8310-3888
Harness
- Safety module, service part
- Safety Module Harness for pneumatic control box

8310-854ECA
Drop Ceiling Bracket
- Bracket used w/ 8310-854 Header Mount Activation Sensor
- Optional

8310-854ERA
Drop Ceiling Bracket
- Bracket used w/ 8310-854 Header Mount Activation Sensor
- Optional

8310-854ERA
Protective Cover
- Cover used w/ 8310-854 Header Mount Activation Sensor
- Optional

8310-3803
Wireless Conversion Kit
- Jamb mount, 3v
- Converts standard jamb actuator to wireless version
- Includes 8310-865 Receiver, 8310-844J (2) Jamb Mounted
- Transmitter - Requires 8310-819S or 8310-819F Jamb Box

8310-3809
Wireless Conversion Kit
- Jamb mount, 9v
- Converts standard wall mount actuator to wireless version
- Includes 8310-865 Receiver, 8310-844 (2) Wall Mount Transmitter
- Requires Surface or Flush Box and Weather Ring
8310 Series
Auto Operator Actuators & Accessories

Automatic Operator Sensors & Accessories

8310-861 Transmitter
- Wireless
- 1 Channel, Handheld, 3v. Requires 8310-865 Receiver

8310-862 Transmitter
- Wireless
- 2 Channel, Handheld, 3v. Requires 8310-865 Receiver

8310-863 Transmitter
- Wireless
- 3 Channel, Handheld, 3v. Requires 8310-865 Receiver

8310-864 Transmitter
- Wireless
- 4 Channel, Handheld, 3v. Requires 8310-865 Receiver

8310-866 Bollard Post
- A powder coated steel 42” x 4” x 6” Bollard Post, Mounting Base and 8310-866CAP
- Actuator cut out accepts 8310-3853WB or 8310-3853TWB wireless actuators 4-3/4” square hard wired actuator

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

**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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