



ALLEGION™

LCN®

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.

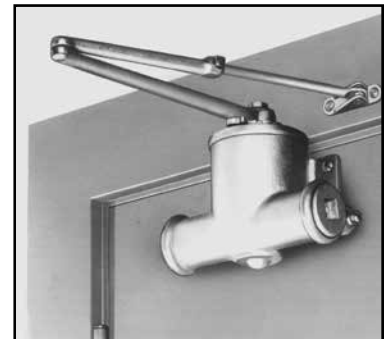
Growing Pains...

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...

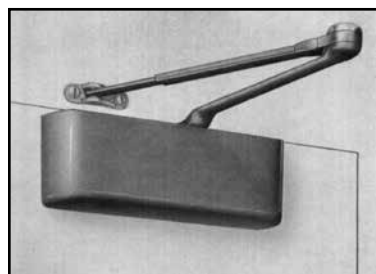
Competition drove Mr. Norton in a new direction. His air check had worked well but was slowly giving way to new technology. In 1900, Mr. Norton developed a liquid door check. This new liquid door check controlled the door through the entire door swing by incorporating three independent hydraulic regulations. 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.
- 1929** – L. C. Norton moves to California. D. R. Lasier heads up company.
- 1930** – Norton-Lasier Company produces wooden riding toys to cope with the Great Depression.
- 1937** – L. C. Norton passes away on November 4th.
- 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.

GENERAL INFORMATION

History of Door Closers & LCN2-3
 Table of Contents 4
 Finishes5
 Warranty..... 6
 Door Closer Specialists..... 7
 Specifications 8-10
 ANSI Cross Reference11-13
 Materials.....14
 Proper Door Control15
 Mechanical Considerations 16-21
 Glossary of Abbreviations 22
 Glossary of Terms.....23-31

4000 SERIES SURFACE MOUNTED CLOSERS

Product Selection Guide.....1-2
 4010 Series 3-6
 4010T Series..... 7-11
 4020 Series 13-16
 4020T Series..... 17-21
 4030 Series 23-30
 4030T Series..... 31-36
 4040XP Series 37-45
 4040XPT Series..... 47-53
 4050 Series 55-63
 4050T Series..... 65-71
 4110 Series..... 73-77
 4110T Series 79-83
 4000T Series 85-88

1000 SERIES SURFACE MOUNTED CLOSERS

Product Selection Guide.....1-2
 1250 Series 3-10
 1260 Series..... 11-18
 1450 Series..... 19-26
 1460 Series..... 27-34
 1460T Series..... 35-41

CONCEALED CLOSERS SERIES

Product Selection Guide.....1-2
 2010 Series..... 3-6
 2030 Series..... 7-11
 3030 Series..... 13-16
 3130 Series 17-20
 5010 Series..... 21-24
 5030 Series..... 25-28
 6030 Series 29-32

FIRE/LIFE SAFETY CLOSER/HOLDERS SERIES

Product Selection Guide.....1-3
 SEM Series5-10
 3130SE Series 11-14
 4040SE Series..... 15-20
 2310ME Series..... 21-24
 4310ME Series..... 25-29
 4410ME Series 31-35
 4310 HSA Series 37-40
 4410 HSA Series 41-44
 SEH Series 45-48

HIGH SECURITY CLOSERS SERIES

Product Selection Guide1-2
 2210 Series 3-6
 4210 Series..... 7-10
 4210T Series 11-14
 4510 Series..... 15-18
 4510T Series..... 19-22

AUTOMATIC OPERATORS

Product Selection Guide 1-5
 Pneumatic Powered Systems.....7-9
 2610 Series 11-14
 4810 Series 15-18
 4820 Series..... 19-22
 4840 Series 23-27
 7900 Series Control Boxes..... 28-31
 Electrohydraulic Powered Systems..... 32-34
 4630/4640 Electrohydraulic Series..... 35-36
 4630 Series..... 37-41
 4640 Series 43-47
 Electromechanical Powered Systems..... 49-53
 Benchmark Unique Features 54
 9130 Series 55-59
 9140 Series..... 61-65
 9150 Series..... 67-70
 Senior Swing Unique Features 71
 2810 Series..... 73-78
 2850 Series..... 79-84
 2860 Series..... 85-90
 9530 Series..... 91-95
 9540 Series..... 97-101
 9550 Series..... 103-108
 9560 Series 109-114
 Actuators, Sensors & Accessories..... 115-131

DOOR HARDWARE

PAH601

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
www.allegion.com/us.
 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 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.

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 compliment the plated finish. Hidden assemblies such as cylinders, tracks, and mounting plates are supplied with a powder coated finish. Plated finishes require handling 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)

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

4000 Series	30 Years
1460 Series	30 Years
1260 Series	20 Years
Concealed, High Security (except 2210DPS)	15Years
Automatic Operators; SE, ME, HSA, SEH Series; SEM Magnets; 2210 DPS (includes both electronic and mechanical components)	2 Years

Product Table - Cast Aluminum

1250 Series	15 Years
1450 Series	25 Years
4050 Series	25 Years

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 (viii) 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 is 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.



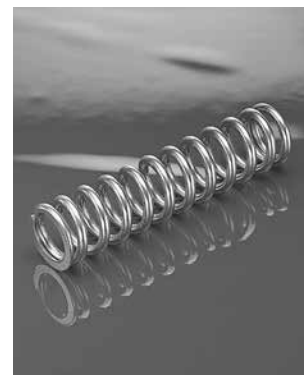
Extensive Abuse Test

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

1. American National Standards Institute (ANSI/BHMA):
 - 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)
3. American Society for Testing and Material (ASTM): Specification B117-9 Method of Finish Corrosion Testing
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 each 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 75°.
 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 45°.
 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. Closer 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 0° up to either 80° or 140°.
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.

7. **[2210 and 2210 DPS only.]** All concealed high security closers shall include a cast iron cylinder certified by an independent testing laboratory to exceed fifteen million (15,000,000) operating cycles, 3/8" steel mounting plate, heavy duty arm with special security roller, and a heavy gauge high security track designed to eject foreign objects.
8. **[2210 DPS only.]** A built-in door position switch shall be optional with concealed closers.

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 Electrical 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 hours testing as outlined in ANSI/BHMA Standard A156.18 **[2610, 4630, 4640, 4810, 4820, 4840 Series].**

-Or-

- 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.

-Or-

- 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:
- 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.
 - Easily accessible main power and maintain hold-open switches will be provided on the operator.
 - An electronically controlled clutch to provide adjustable opening force.
 - A microprocessor to control all motor and clutch functions.
 - An on-board power supply capable of delivering both 12V and 24V outputs up to a maximum of 1.0 ampere combined load.
 - 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:
- Maximum 8-1/2 lbs of manual opening force **[9130, 9140, 9150 Series]**.
 - Maximum 15 lbs of manual opening force **[2810, 2850, 2860, 9530, 9540, 9550, 9560 Series]**.
 - Bottom loaded header for easy access to controls **[2810, 2850, 2860, 9550, 9560 Series]**.
 - Power Boost, which adds an additional 25 lbs of closing force at latch **[2810, 2850, 2860, 9130, 9140, 9150, 9530, 9540, 9550, 9560 Series]**.
 - 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

- 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.
- All closers detailed with plated finishes shall include plated covers (or finish plates), arms, and visible fasteners.
- All electromechanical automatic operators supplied with anodized finishes.
- All closers must be shipped with a finish.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General

- Installation shall be in accordance with the templates and installation instructions packaged with the closers at the time of manufacture.
- Installation shall be made with fasteners packaged with the closer by the manufacturer.
- All electrical connections shall be made in accordance with the manufacturers recommendations.
- Clean installed closer to remove dirt, debris, and marks incidental to installation work.
- Installation instructions and templates are to be turned over to the Owners representative upon completion of the installation work.
- 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

- Install and regulate all closers in accordance with the installation instructions packaged with the closers at the time of manufacture.
- If unfamiliar with LCN products furnished, consult factory representative prior to installation for assistance.

ANSI FUNCTION NUMBER TO LCN PRODUCT

SURFACE MOUNTED		ANSI Standard A156.4-2013								
ANSI NUMBER	MOUNTING	LCN CLOSER	PT-4A	PT-4B	PT-4C	PT-4D	PT-4F	PT-4G	PT-4H	PT-4J
C02011	HINGE SIDE	4031	X	X	X	X			X	
		4040XP	X	X	X	X			X	
		1250	X	X	X	X			X	
		1260	X	X	X	X	X		X	
		1450	X	X	X	X			X	
		1460	X	X	X	X	X		X	
		4010	X	X	X	X	X		X	
		4050	X	X	X	X			X	
		4510	X	X	X	X	X		X	X
		C02021	PARALLEL	4031	X	X	X	X		X
		4040XP	X	X	X	X		X	X	
		1250	X	X	X	X		X	X	
		1260	X	X	X	X	X	X	X	
		1450	X	X	X	X		X	X	
		1460	X	X	X	X	X	X	X	
		4050	X	X	X	X		X	X	
		4110	X	X	X	X	X	X	X	
		4210	X	X	X	X	X	X	X	
C02031	BRACKET	4040XP	X	X	X	X		X		
		4010	X	X	X	X		X		
		4050	X	X	X	X		X		
C02041	TOP JAMB	4031	X	X	X	X		X		
		4040XP	X	X	X	X		X		
		1250	X	X	X	X		X		
		1260	X	X	X	X	X	X		
		1450	X	X	X	X		X		
		1460	X	X	X	X	X	X		
		4020	X	X	X	X	X	X		
		4050	X	X	X	X		X		
C02051	HINGE SIDE HOLD OPEN	4031	X	X	X	X		X		
		4040XP	X	X	X	X		X		
		1250	X	X	X	X		X		
		1260	X	X	X	X	X	X		
		1450	X	X	X	X		X		
		1460	X	X	X	X	X	X		
		4010	X	X	X	X	X	X		
		4050	X	X	X	X		X		
C02061	PARALLEL HOLD OPEN	4031	X	X	X	X		X	X	
		4040XP	X	X	X	X		X	X	
		1250	X	X	X	X		X	X	
		1260	X	X	X	X	X	X	X	
		1450	X	X	X	X		X	X	
		1460	X	X	X	X	X	X	X	
		4050	X	X	X	X		X	X	
		4110	X	X	X	X	X	X	X	
		4210	X	X	X	X	X	X	X	
C02071	BRACKET HOLD OPEN	4010	X	X	X	X	X	X		
		4040XP	X	X	X	X		X		
		4050	X	X	X	X		X		
C02081	TOP JAMP HOLD OPEN	4031	X	X	X	X		X		
		4040XP	X	X	X	X		X		
		1250	X	X	X	X		X		
		1260	X	X	X	X	X	X		
		1450	X	X	X	X		X		
		1460	X	X	X	X	X	X		
		4020	X	X	X	X	X	X		
		4050	X	X	X	X		X		
C02091	HINGE SIDE FUSIBLE LINK	4010	X	X	X	X	X	X		
C02101	PARALLEL FUSIBLE LINK	4110	X	X	X	X	X	X	X	
C02111	BRACKET FUSIBLE LINK	4010	X	X	X	X	X	X		
C02121	TOP JAMP FUSIBLE LINK	4020	X	X	X	X	X	X		
C02171	HINGE SIDE TELEPHONE BOOTH	4010TEL				X				
		4110TEL				X				
C02211	HINGE SIDE TRACK	1460T	X	X	X	X		X		
		4010T	X	X	X	X		X		
		4031T	X	X	X	X		X		
		4040XPPT	X	X	X	X		X		
		4510T	X	X	X	X		X	X	

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

SURFACE MOUNTED		ANSI Standard A156.4-2013								
ANSI NUMBER	MOUNTING	LCN CLOSER	PT-4A	PT-4B	PT-4C	PT-4D	PT-4F	PT-4G	PT-4H	PT-4J
C02221	HINGE SIDE HOLD OPEN TRACK	1460T	X	X	X	X			X	
		4010T	X	X	X	X			X	
		4031T	X	X	X	X			X	
		4040XPT	X	X	X	X			X	
		4031T	X	X	X	X			X	
		4040XPT	X	X	X	X			X	
C02231	STOP FACE TRACK	4510T	X	X	X	X			X	X
		1460T	X	X	X	X			X	
		4031T	X	X	X	X			X	
		4040XPT	X	X	X	X			X	
		4110T	X	X	X	X			X	
		4210T	X	X	X	X			X	X
C02241	STOP FACE HOLD OPEN TRACK	1460T	X	X	X	X			X	
		4031T	X	X	X	X			X	
		4040XPT	X	X	X	X			X	
		4110T	X	X	X	X			X	
C02251	TOP JAMB TRACK	1460T	X	X	X	X			X	
		4000T	X	X	X	X			X	
		4020T	X	X	X	X			X	
		4031T	X	X	X	X			X	
		4040XPT	X	X	X	X			X	
C02261	TOP JAMB HOLD OPEN TRACK	1460T	X	X	X	X			X	
		4020T	X	X	X	X			X	
		4031T	X	X	X	X			X	
		4040XPT	X	X	X	X			X	
C02271	TOP JAMB PUSH SIDE FLUSH FRAME TRACK	4031T	X	X	X	X			X	
C02281	TOP JAMB PUSH SIDE FLUSH FRAME HOLD OPEN TRACK	4031T	X	X	X	X			X	
C03011	HINGE SIDE	1250	X	X	X	X			X	
		1260	X	X	X	X	X		X	
		1450	X	X	X	X			X	
C03021	PARALLEL	1250	X	X	X	X		X	X	
		1260	X	X	X	X	X	X	X	
		1450	X	X	X	X		X	X	
C03041	TOP JAMB	1260	X	X	X	X	X		X	
C03051	HINGE SIDE HOLD OPEN	1250	X	X	X	X			X	
		1260	X	X	X	X	X		X	
		1450	X	X	X	X			X	
C03061	PARALLEL HOLD OPEN	1250	X	X	X	X		X	X	
		1260	X	X	X	X	X	X	X	
		1450	X	X	X	X		X	X	
C03081	TOP JAMB HOLD OPEN	1250	X	X	X	X			X	
		1260	X	X	X	X	X		X	
		1450	X	X	X	X			X	

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		ANSI Standard A156.4-2013			
ANSI NUMBER	MOUNTING	ARM	LCN CLOSER	PT-4A	PT-4D
C04011	CONCEALED IN DOOR	REG	3030	X	X
		HO	3030H	X	X
C04031	CONCEALED IN DOOR	STANDARD	3130		X
		HO	3130H		X

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

ANSI Standard A156.4-2013

ANSI NUMBER	MOUNTING	ARM	LCN CLOSER	ANSI Standard A156.4-2013								
				PT-8A	PT-8B	PT-8D	PT-8E	PT-8F	PT-8J	PT-8L		
C05011	BUTT HINGE	REG	5010	X	X	X	X	X	X	X	X	
			5030	X	X	X	X	X			X	
C05021	PIVOT	REG	5010	X	X	X		X	X	X		
			5030	X	X	X		X			X	
C05031	BUTT HINGE	STANDARD	2010	X	X		X	X			X	
			2030	X	X		X	X			X	
			2210	X		X	X	X				X
			2210 DPS	X		X	X	X				X
C05041	PIVOT	STANDARD	2010	X	X			X			X	
			2030	X	X			X			X	
			2210	X		X	X	X				X
			2210 DPS	X		X	X	X				X
C05071	PIVOT	STANDARD	2010	X	X			X			X	
			2030	X	X			X			X	
C05081	PIVOT	STANDARD	6030	X	X			X			X	
C05091	BUTT HINGE	HO	5010	X	X	X	X	X	X	X	X	
			5030	X	X	X	X	X			X	

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.

ANSI FUNCTION NUMBER TO LCN PRODUCT

LIFE SAFETY CLOSER/
HOLDER RELEASE DEVICE

ANSI Standard A156.15-2001

ANSI NUMBER	MOUNTING	ARM	LCN CLOSER	ANSI Standard A156.15-2001		
				PT4D	PT4N	PT4P
C00011	WALL	N/A	7830, 7840, 7850			
C00021	FLOOR	N/A	7820			
C00191	HINGE SIDE	STANDARD	4040SE	X	X	X
			4040SEL	X	X	X
C00231	STOP FACE	STANDARD	4040SE	X	X	X
			4040SEL	X	X	X
C00311	TOP JAMB	REG	4410HSA	X	X	
			4410ME	X	X	
C00351	HINGE SIDE	STANDARD	4310HSA	X	X	
			4310ME	X	X	
C00371	HINGE SIDE	SF	4310ME	X	X	
C00391	TOP JAMB	DE	4310HSA	X	X	
			4310ME	X	X	
C00471	HINGE SIDE	REG	4040SEH			X
C00511	PUSH SIDE	REG	4040SEH			X
C00611	CONCEALED	STANDARD	3130SE	X		X
			3130SEL	X		X
C00651	CONCEALED	STANDARD	2310ME	X	X	

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.

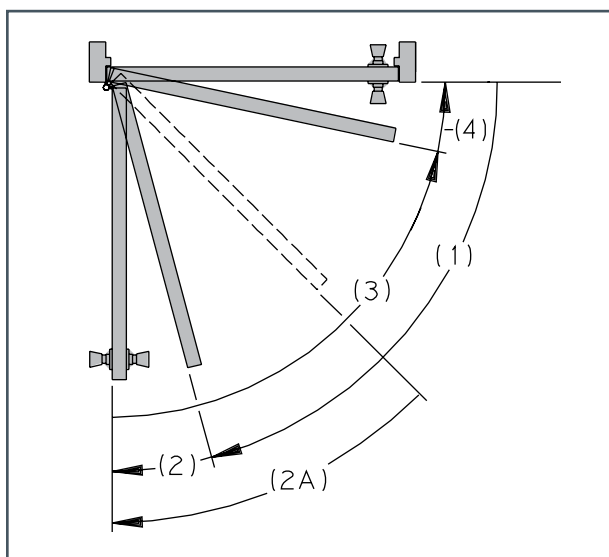
Precision machined **cast iron cylinders** and **forged steel pistons** work together because of the compatibility of their basic elements. **Heat-treated pinions** and **pistons** spread the load over a large gear tooth system to better handle the wear and stress of millions of operating cycles. Upper 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.



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 closers 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

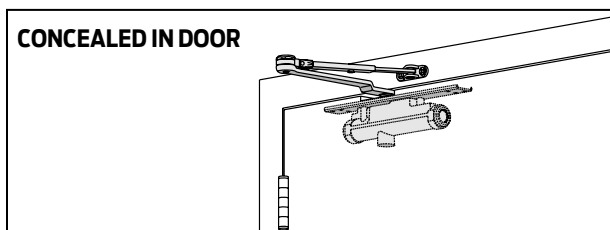
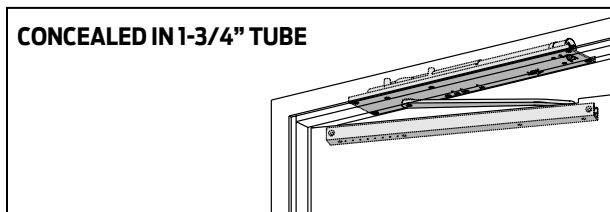
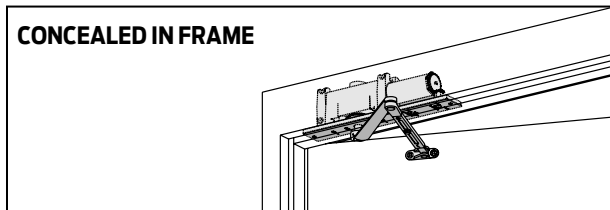
CONCEALED OR SURFACE MOUNTED CLOSERS?

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?

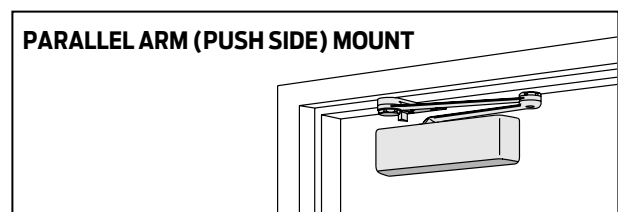
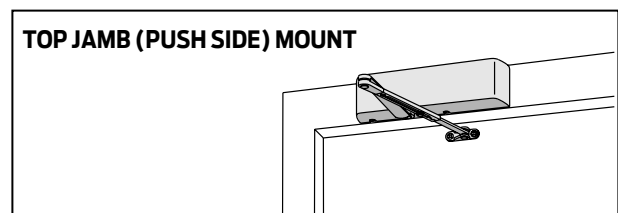
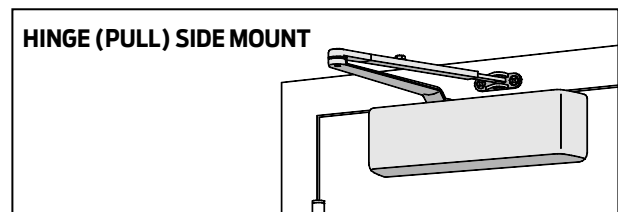
Closers concealed in the head frame over the door are out of sight and entirely out of the pedestrians way. They cannot be harmed by scrub water, cleaning chemicals or floor dirt, and are protected from airborne contaminants, like dust. They are easy to reach for regulation without removing any parts. 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.



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.



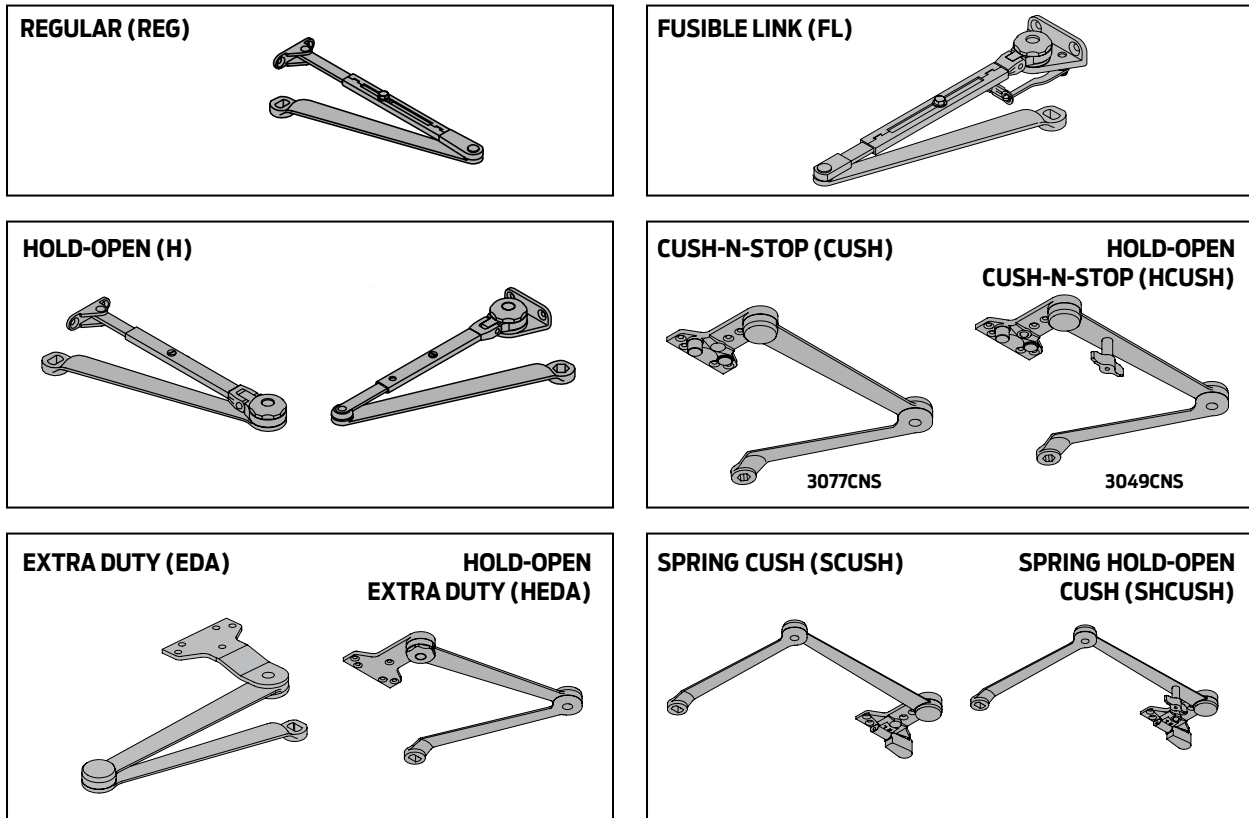
WHERE ARE HEAVY DUTY CLOSERS REQUIRED?

Heavy duty closers should always be used in these places:

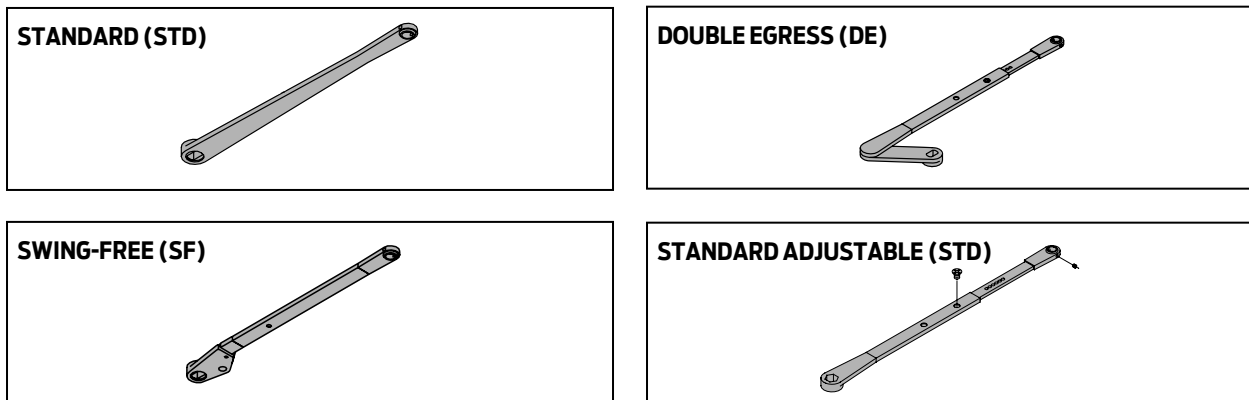
- 1) Schools or public buildings where heavy or abusive usage is expected.
- 2) Exterior doors.
- 3) Doors subject to draft, winds, or air pressure differentials.
- 4) High frequency doors such as those on department stores, malls, or mixed use tenancies.

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:

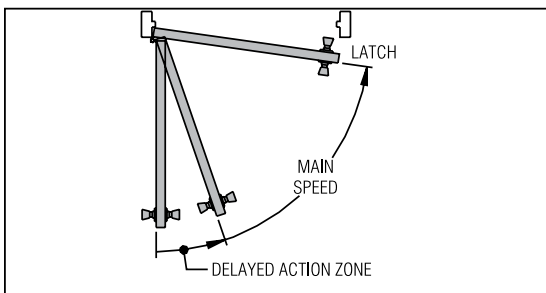


Single lever arm (track) closers may be used on interior or sheltered exterior doors. The hold-open function in a single lever arm system is provided by either the track or the cylinder assembly. Available single lever arms:

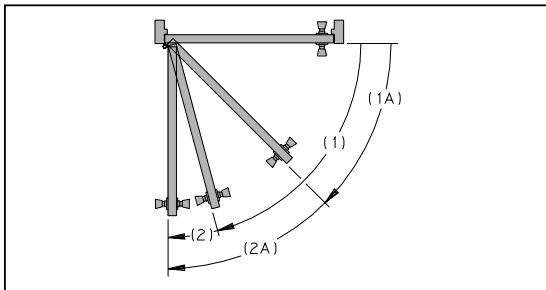


DO YOU NEED SPECIAL CYLINDER FUNCTIONS?

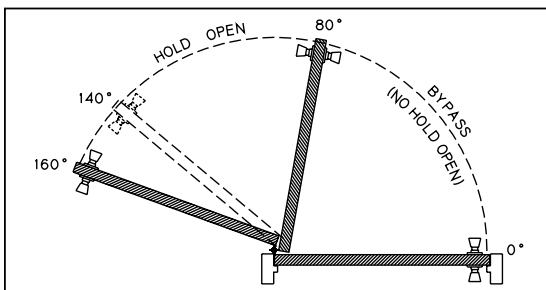
Many LCN closers can be ordered with a delayed action function built into the cylinder. **Delayed action** (DEL) is a special hydraulic circuit that provides additional time to pass through the door. A special regulating screw controls the closing speed from maximum opening through approximately 75°. 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.

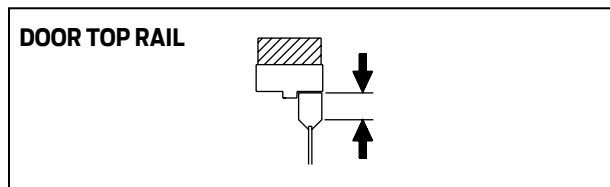
1. It is best to let the door swing as far as it can swing freely. Some closers are mounted in different locations for different degrees of opening.
2. Use a mechanical stop when a door can not swing 180° or at the selected hold-open point of a double lever arm system. The mechanical stop can be mounted 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.

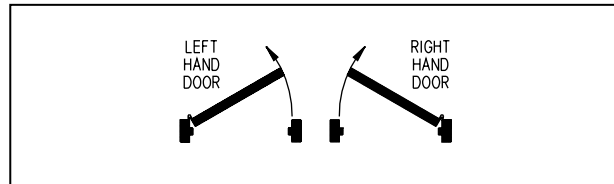
Door thickness may be a factor. A concealed-in-the-door closer should not be used in a hollow metal door less than 1-1/2" (38 mm) thick or a wood door under 1-3/4" (44 mm). Exceptionally thick doors can affect hinge and pivot centers to the extent that closer functions and geometry are also affected.

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.

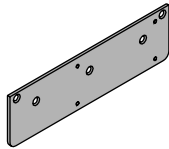
WILL A STANDARD CLOSER AND TEMPLATE MEET YOUR NEEDS?

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, ADAPTERS AND OTHER SPECIAL PIECES?

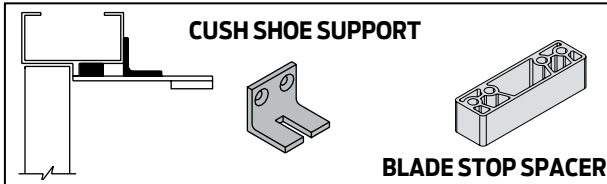
A drop plate is now commonly used to drop (lower) closers to meet special conditions or adapt a closer to door or frame surfaces that are not adequate for normal mounting patterns.

DROP PLATE



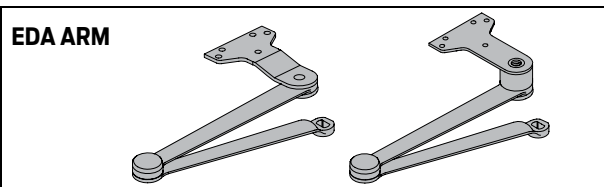
Specialized brackets, adapters, and parallel arm shoes are available to simplify the installation of closers with a variety of frame and door conditions. The most commonly used are listed with each closer. Consult LCN for assistance if you are not sure.

CUSH SHOE SUPPORT



BLADE STOP SPACER

EDA ARM



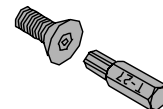
WHAT FASTENERS SHOULD BE USED?

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.

TORX



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 lbf 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 w/ 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

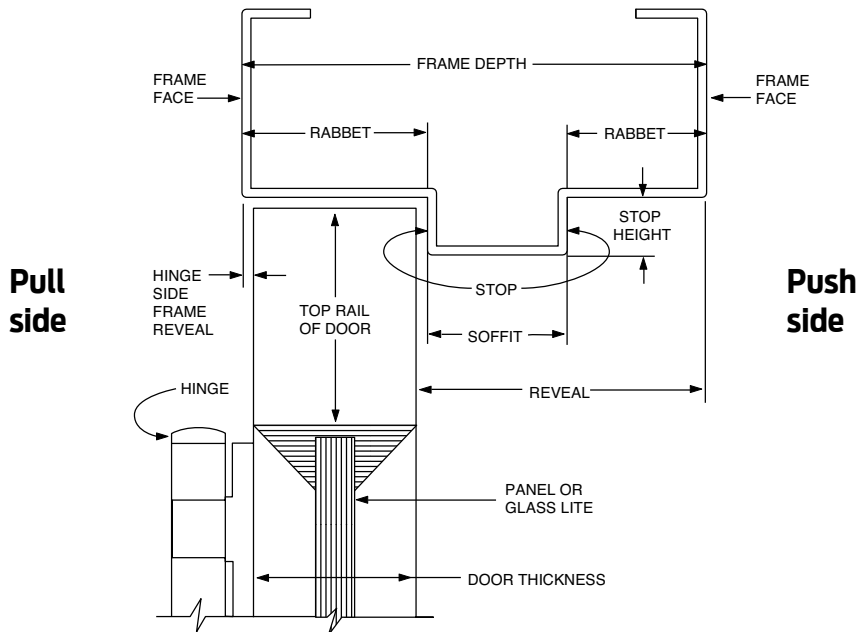
SF	- Standard Force Motor Gearbox
----	--------------------------------

Powder Coat Finishes

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

Miscellaneous Terms

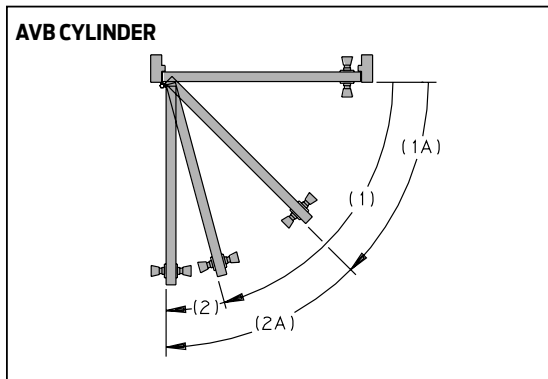
ELR	- Extra Long Rod
SRI	- Special Rust Inhibitor
SE	- Single Point Electronic
ME	- Multi-Point Electronic
PAH	- Parallel Arm Holder
HSA	- Hold Open / Scanner Activated
ES	- Electric Strike Relay (Control Boxes)
S	- Sequential (Control Boxes)
RF	- Radio Frequency
TJ	- Top Jamb
PA	- Parallel Arm
G	- Flush 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.

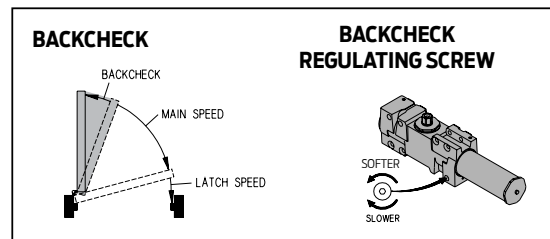
AUTOEQUALIZER™ – An LCN specific term for an electric or a pneumatic power operator. System is low-energy & carries a two-year warranty.

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

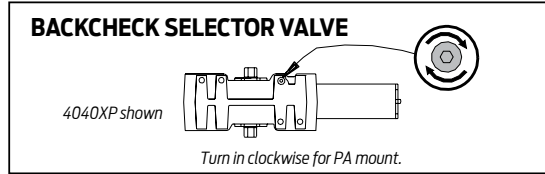
AUXILIARY DOOR STOP – Hardware designed and installed to limit the swing of a door.

B

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

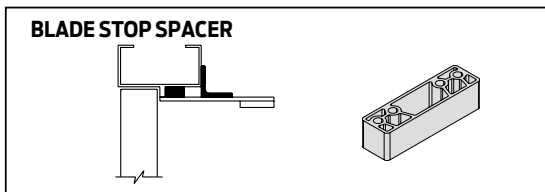


BACKCHECK SELECTOR VALVE – Valve used to provide proper backcheck location for 4040XP and 4050 parallel arm mounting.



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

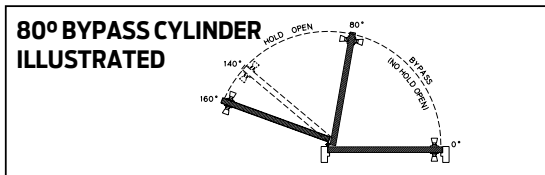
BLADE STOP SPACER – Spacer lowers a parallel arm 1/2" so the arm will clear a blade stop.



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.

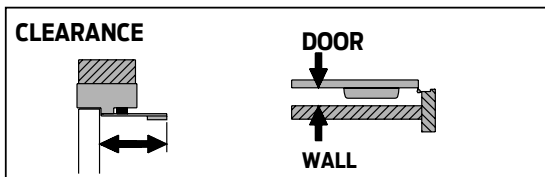


C
CASED OPENING – Frame section without stops.

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.

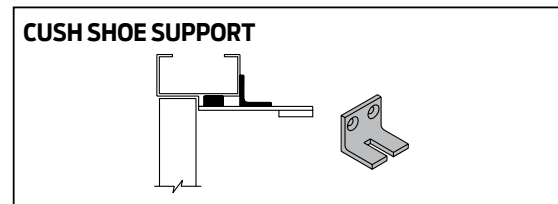
CONTROL BOX, 2800, 9500 SERIES – Microprocessor door control, includes adjustment for opening, closing & backcheck speeds. Features Push 'N Go & Power Boost.

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

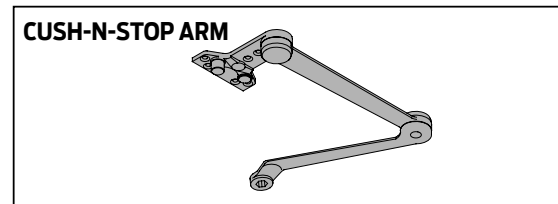
CONTROLLER ASSEMBLY – Digital control suite used in the LCN electric power operator. Includes adjustments for opening force and opening speed.

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.



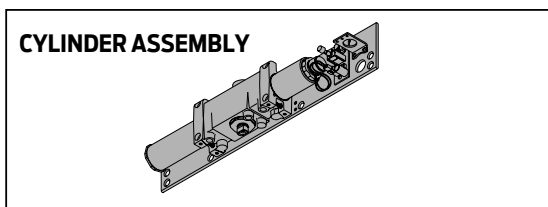
CUSH-N-STOP ARMS (CUSH) – Extra duty, parallel arm that includes a stop in the CUSH shoe.



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.

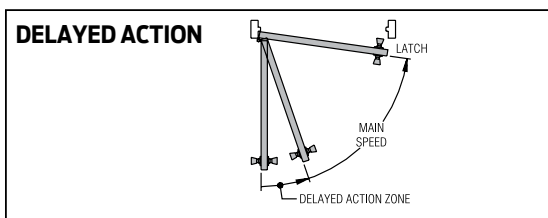


CYLINDER ONLY – Hydraulic cast iron cylinder.

D

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

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



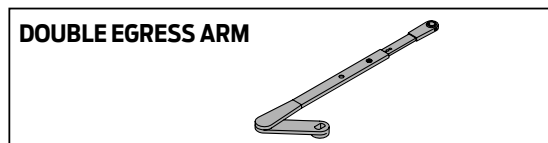
DESIGNER SERIES COVER (DSI) – An aesthetically pleasing cover design that appeals to many types of facilities & architects.

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.

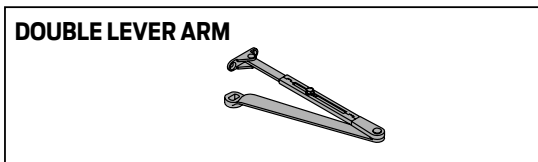
DOUBLE DOOR HEADER – One automatic electromechanical power operator and one manual door within the same header, for a pair of doors.

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.

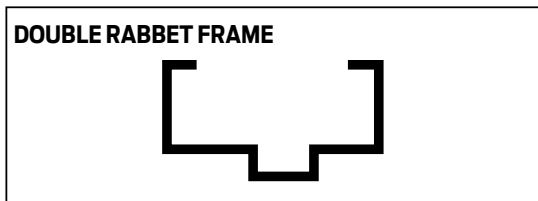
DOUBLE EGRESS ARM (DE) – Designed for pull side installation on double egress frames. Actual arm varies depending on selected closer.



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.

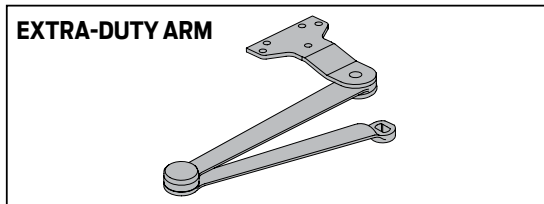
ELECTRIC STRIKE RELAY (ES) – An optional feature found in an LCN 7900 Series control box that can be used to control an electric strike.

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.

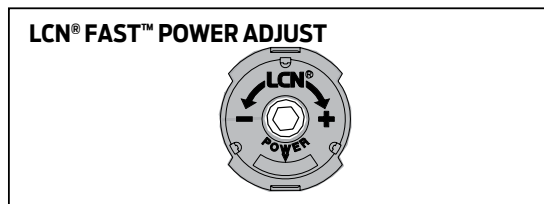
ESCUTCHEON – An optional, protective or decorative plate that can be installed with many surface mounted actuators.

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.



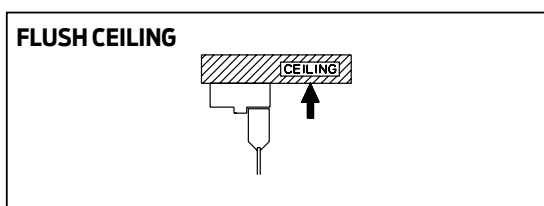
FIFTH SCREW – Mounting screw farthest from the door on a parallel arm shoe.

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

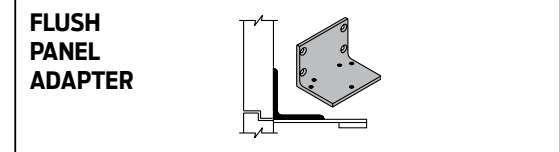
FINISH PLATE – Decorative plate applied to overhead concealed closer to conceal closer mounting plate and screws.

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.



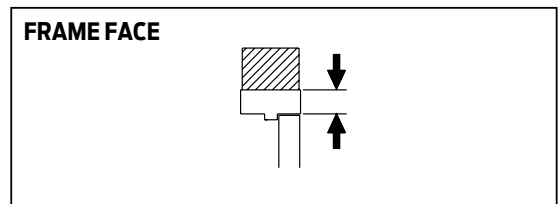
FLUSH PANEL ADAPTER – Adapter provides PA shoe mounting surface when door and frame are flush.



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.

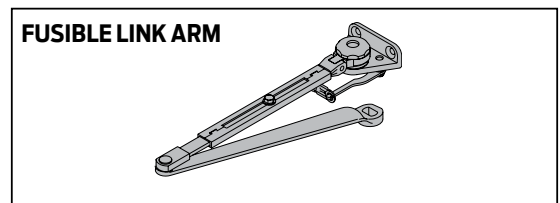
FRAME FACE – Exposed part of frame parallel to face of the wall.



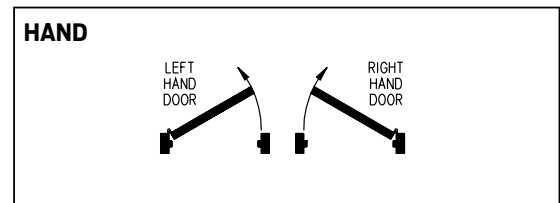
FULL COMPLIMENT BEARINGS – Low friction, high load needle bearings found in all LCN closers.

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.



H
HAND – Direction of a doors' swing, either right or left.



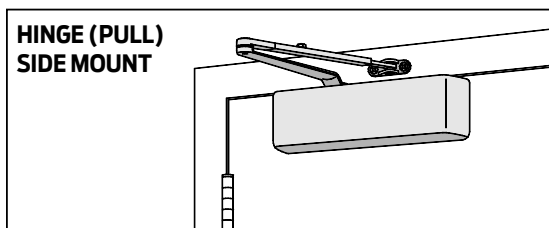
HANDED – Closer or part designed for ONLY right or left swinging doors.

HEAD FRAME – Member of the frame above the door.

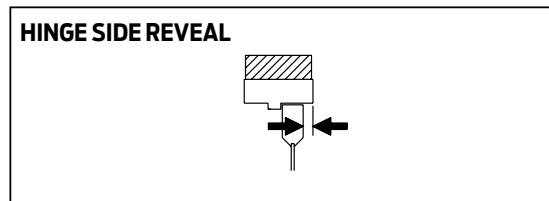
HEADER – Aluminum enclosure for motor gearbox & controller.

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 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.

I
INDEPENDENT PAIR – Two automatic doors that function separately.

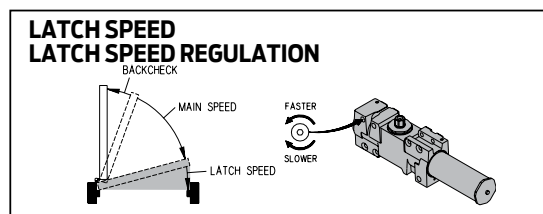
J

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.

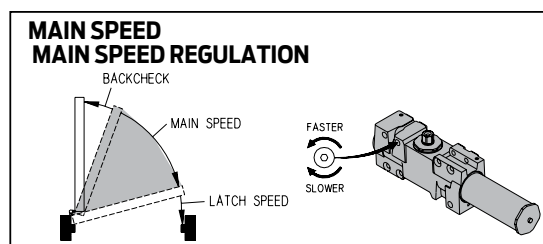
LONG ARM (LONG) – Extended arm for deep reveals or other special applications.

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.

METAL COVER (MC) – Stamped metal cover required for optional plated finishes and custom powder coat finishes. Standard cover with High Security Series closers.

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.

N

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.

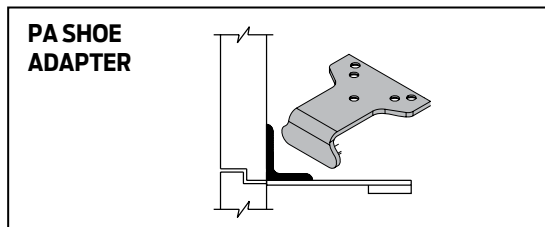
O

OPENING FORCE – Force required to open the door against the closers spring power.

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

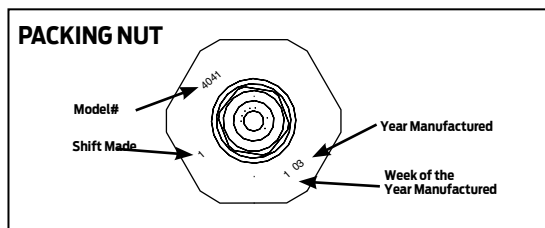
P

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



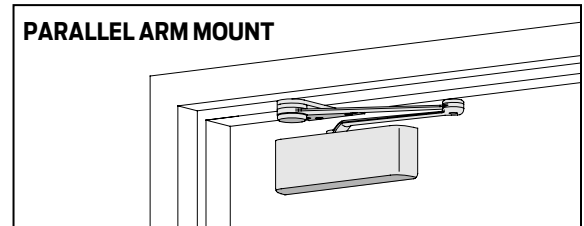
PA SHOE – Attaches the forearm to the soffit for a parallel arm system.

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 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.

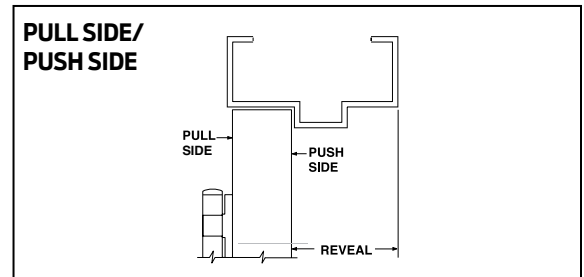
PNEUMATIC – This type of LCN Automatic Operator is driven by an air source. The air source can be built into the control box or provided separately within the building.

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.

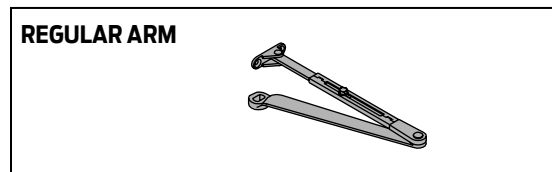
PUSH 'N GO – Provides power opening after partial (5°) manual opening of door.

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

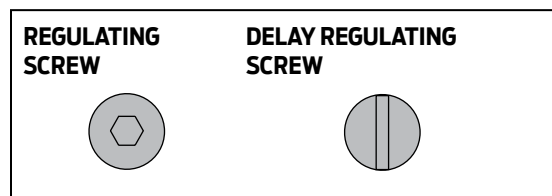
R
RABBET – Recess or offset formed in the face to receive a door.

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

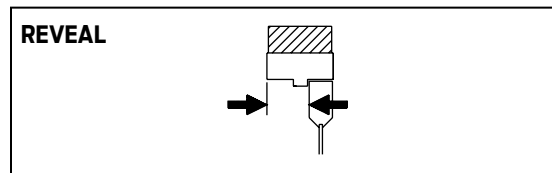
REGULAR ARM – A double lever, non hold-open arm.



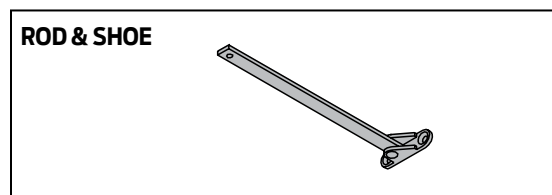
REGULATING SCREW – Valve that adjusts flow of hydraulic fluid within cylinder to control door closing speed.



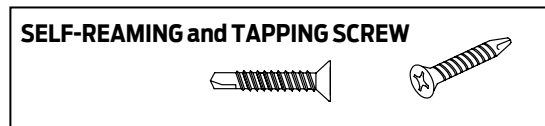
REVEAL – Depth measured from the frame face to the door face.



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



S
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.

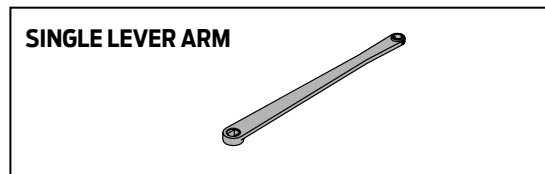
SEQUENCE – An option to the LCN series of automatic operators. This option allows a pair of vestibule doors to open one after the other.

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

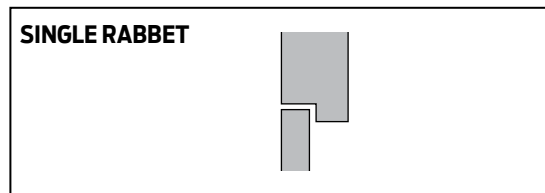
SIMULTANEOUS PAIR – Two automatic doors that open at the same time.

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.

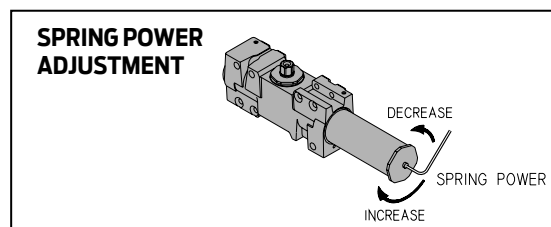
SPECIAL TEMPLATE (ST) – A special template is usually a modification to a standard product. Either the product itself changes location in the opening or a component is modified from the standard offering to accommodate other hardware or door and frame dimensions.

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.

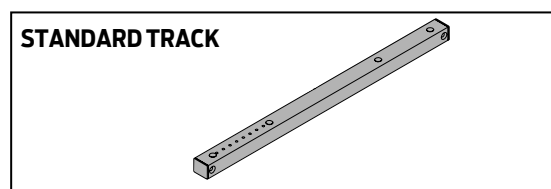
SPRING POWER ADJUSTMENT – Mechanical pre-loading of spring to adjust closing force.



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

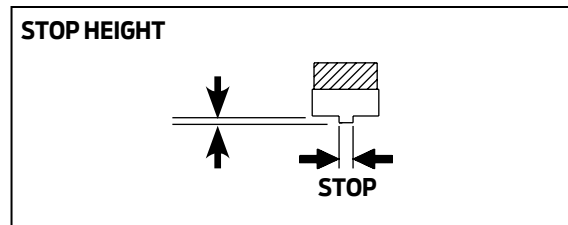
STANDARD CYLINDER – Cylinder with main speed, latch speed, and backcheck adjustments.

STANDARD TRACK – Non hold-open track.

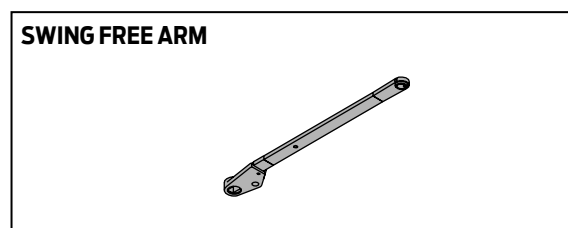


STOP – Part of frame against which the door closes.

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



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



T

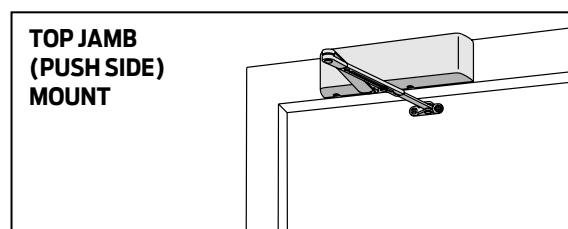
TBSRT – Thru bolts and self-reaming and tapping screw package.

TBTRX – Thru bolts and TORX security machine screw package.

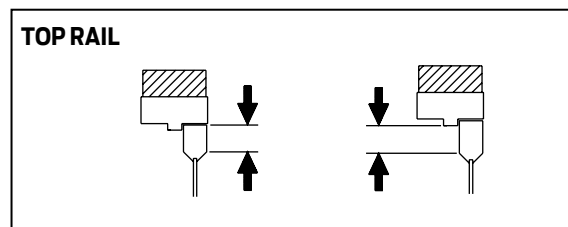
TBWMS – Thru bolt, wood and machine screw package.

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

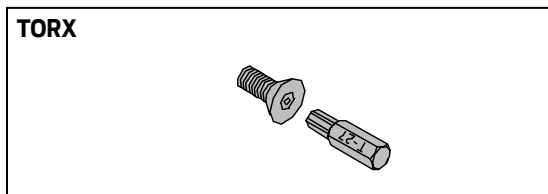
TOP JAMB – Mounting with closer installed on frame face.



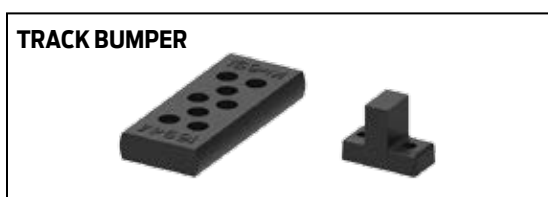
TOP RAIL – Horizontal top member of a door that connects the latch and hinge stiles. Height is measured from stop on push side.



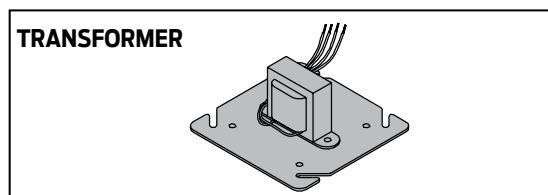
TORX – Security machine screw with TORX drive and security pin for tamper resistant applications.



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.

U

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.

V

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.

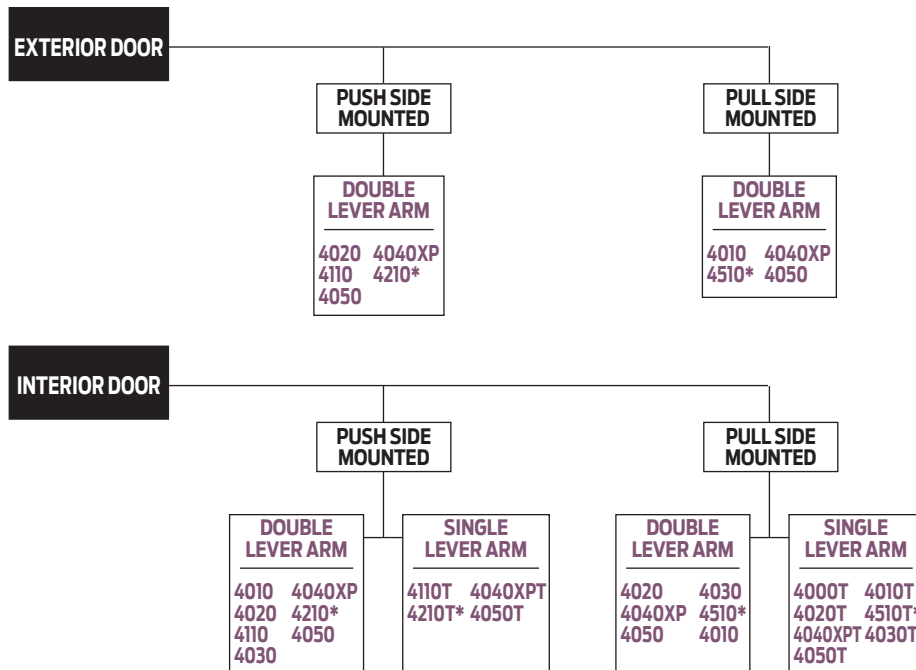
W

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.



* INDICATES HIGH SECURITY CLOSER. REFER TO THAT SECTION OF THE CATALOG.

Product comparison

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

CLOSER SERIES	MOUNTING					FINISH		COVER		CYLINDER			*ARM FUNCTION										
	HINGE (PULL/SIDE)	TOP JAMB (PULL)	TOP JAMB (PUSH)	PARALLEL ARM	STOP FACE	POWDER COAT	PLATED	PLASTIC	METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY	DELAYED ACTION***	AVB**	REGULAR (DOUBLE)	STANDARD (SINGLE)	HOLD-OPEN	FUSIBLE LINK	EDA/VEDA	CUSH/HCUSH	SCUSH/SHCUSH	DOUBLE EGRESS	
4010	●	○	○	○	○	●	●	●	●	○	●	○	○	○	140°	○	140°	140°	○	○	○	○	○
4010T	●	○	○	○	○	●	●	●	●	○	○	○	○	○	○	180°	120°	○	○	○	○	○	100°
4020	○	○	●	○	○	●	●	●	●	○	○	○	○	○	180°	○	140°	140°	○	○	○	○	○
4020T	○	●	○	○	○	●	●	●	●	○	○	○	○	○	○	180°	100°	○	○	○	○	○	○
4030	●	○	●	●	○	●	●	○	●	●	○	○	○	○	180°	○	180°	○	110°	100°	100°	○	○
4030T	●	●	○	○	●	●	●	○	●	●	○	○	○	○	○	180°	180°	○	○	○	○	○	○
4040XP	●	○	●	●	○	●	●	●	●	●	○	○	○	○	120°	○	120°	○	180°	110°	110°	○	○
4040XPT	●	○	○	○	○	●	●	●	●	●	○	○	○	○	120°	110°	○	○	○	○	○	○	95°
4050	●	○	●	●	○	●	●	●	●	●	○	○	○	○	180°	○	180°	○	180°	110°	110°	○	○
4050T	●	●	○	○	●	●	●	●	●	●	○	○	○	○	○	180°	180°	○	○	○	○	○	95°
4110	○	○	○	●	○	●	●	●	●	○	○	○	○	○	○	180°	180°	180°	110°	110°	○	○	○
4110T	○	○	○	○	●	●	●	●	●	○	○	○	○	○	○	110°	100°	○	○	○	○	○	○
4000T	●	○	○	○	○	●	●	●	●	●	○	○	○	○	○	90°	○	○	○	○	○	○	○

● 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.

** Advanced Variable Backcheck.

*** Delay Action for 4040XP incorporates standard 4041 cylinder.

4000 Series 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.
- Handed 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 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.
- 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 (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.

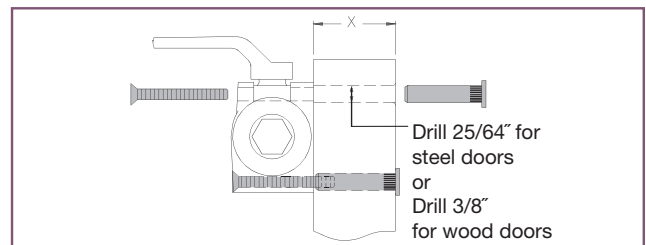
Consult factory for other listings such as; cUL, California State Fire Marshal, Bureau of Standards and Appeals.

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.

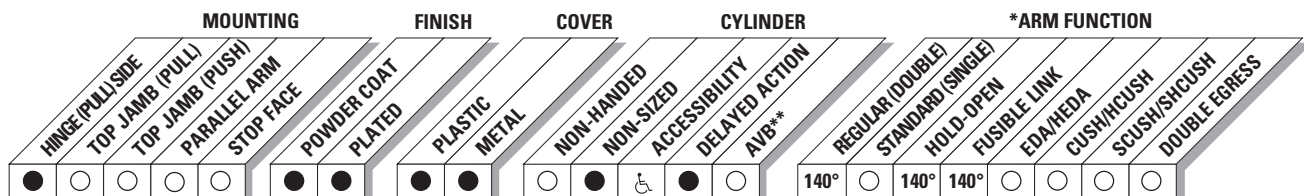


The 4010 is LCN's best performing heavy duty closer designed specifically for institutional and other rugged high traffic applications.

Certifications	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	<ul style="list-style-type: none"> ■ Plastic, Standard ■ Metal, Optional
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/2" Diameter Piston ■ 11/16" Diameter Double Heat Treated Pinion Journal 	Fasteners	Self Reaming and Tapping Screws (SRT)
Fluid	All Weather Fluid	Mounting	Hinge (Pull Side)
Handing	Handed	Arms	Regular Arm
Templating	Peel-n-Stick templates - 2-1/2" x 6" Mounting Hole Pattern	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Size	Adjustable 1-5 or Sized 6		<ul style="list-style-type: none"> ■ 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.



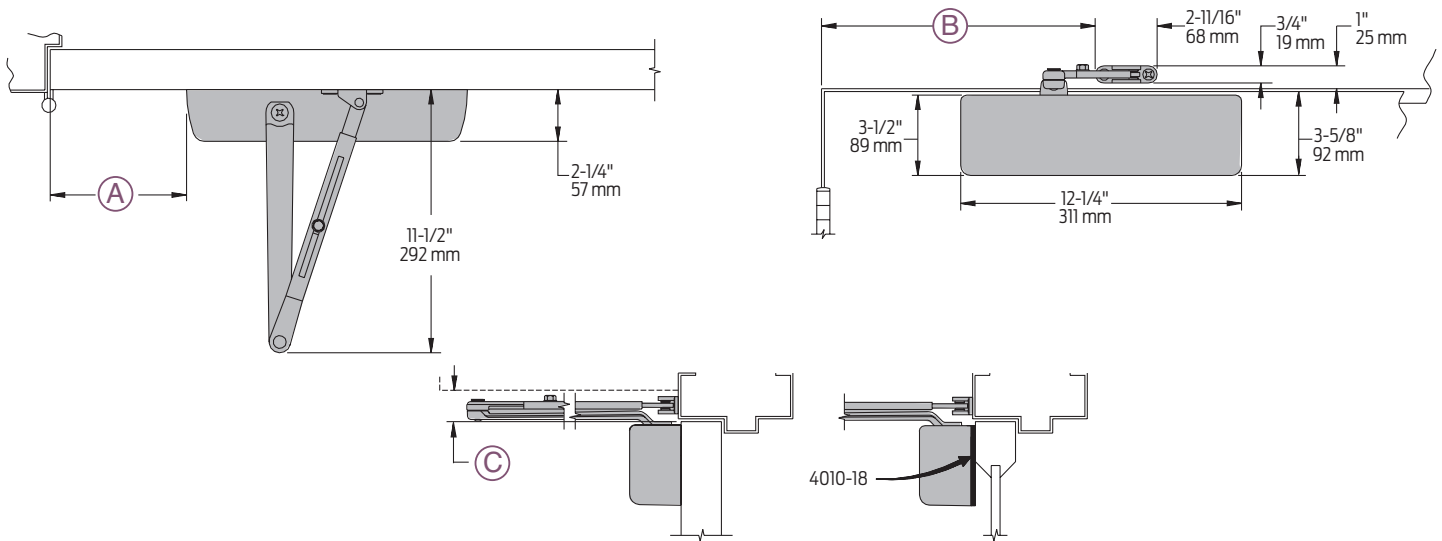
● AVAILABLE
○ NOT AVAILABLE

♿ Closer available with less than 5.0 lbs. opening force on 36" door.
* Maximum opening/hold-open point with standard template.
** Advanced Variable Backcheck.

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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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) 140°: A = 4-3/16" (106 mm) B = 11-15/16" (303 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



4011(6)-3071
Cast Iron Cylinder Assembly

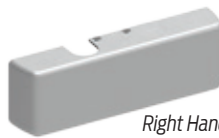
- Handed
- Standard

Covers



4010-72
Plastic Cover

- Non-handed
- Standard



Right Hand Shown

4010-72MC
Metal Cover

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

Installation Accessories



4010-18
Plate

- Required where top rail is less than 3-3/4" (95 mm)
- Requires minimum 2" (51 mm) top rail

Arms



4010-3077
Regular Arm

- Non-handed



4010-3049
Hold-Open Arm

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



4010-3049FL
Fusible Link Arm

- Handed
- Releases hold-open function when exposed to temperatures above 165° F. 1/8" (3 mm) maximum reveal
- Optional

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 will be shipped with:

- Standard cylinder
- Standard cover
- Regular arm
- Self-reaming and tapping screws unless options listed below are selected.

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

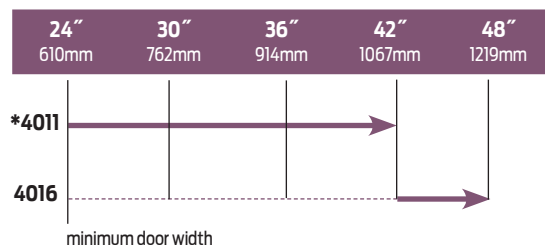
Special Template

- ST- _____

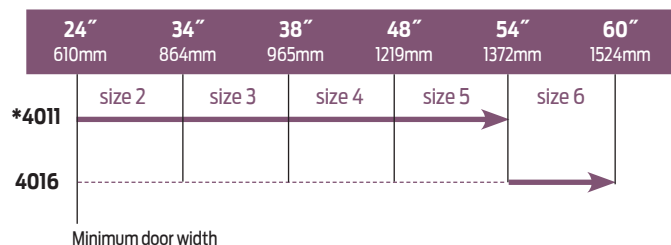
Table of sizes

- 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

Exterior (and Vestibule) door width



Interior door width



→ Indicates recommended range of door width for closer size.
* Adjustable Size 1 thru 5.

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.

DOOR WIDTH	36"	42"	48"
	8.5* lbs.	4011	4011
5.0* lbs.	4011	4011	4011

* Maximum opening force.

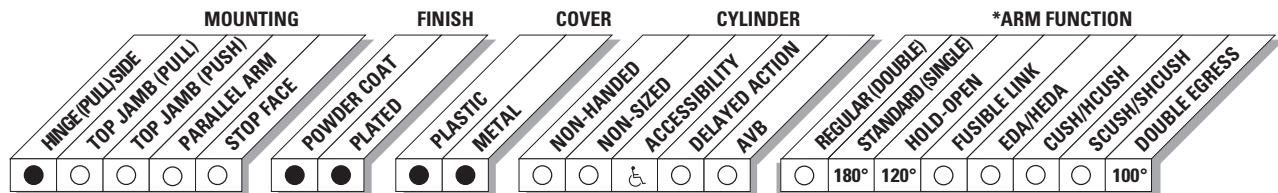


The 4010T is LCN's best performing heavy duty track closer designed specifically for interior doors in institutional and other rugged high traffic applications.

Certifications	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	<ul style="list-style-type: none"> Plastic, Standard Metal, Optional
Body Construction	<ul style="list-style-type: none"> Cast Iron Body Full Complement Bearing 1-1/2" Diameter Piston 11/16" Diameter Double Heat Treated Pinion Journal 	Fasteners	Self Reaming and Tapping Screws (SRT)
Fluid	All Weather Fluid	Mounting	Hinge (Pull Side)
Handing	Handed	Arms	Standard Arm and Track with Roller
Templating	Peel-n-Stick templates - 2-1/2" x 6" Mounting Hole Pattern	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> Aluminum (689) Statuary Bronze (690) Light Bronze (691) Black (693) Dark Bronze (695) Brass (696) Custom colors optional
Size	Sized 1, 3 or 4		<ul style="list-style-type: none"> 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.



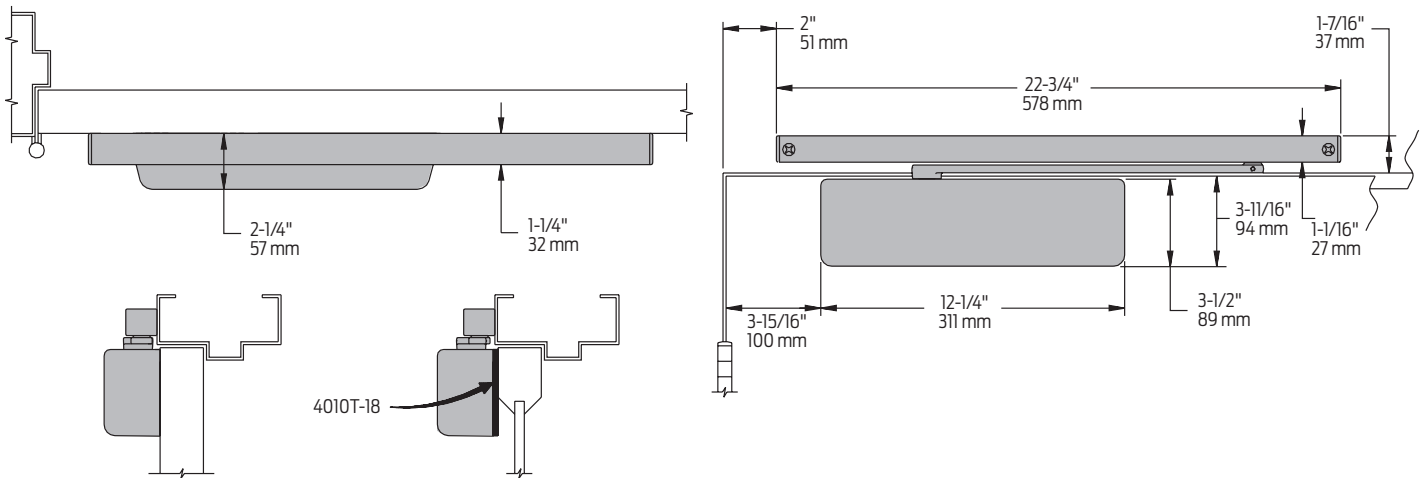
● AVAILABLE
○ NOT AVAILABLE

♿ Closer available with less than 5.0 lbs. Opening force @ 36"
* Maximum opening/hold-open point with standard template.

4010T 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° <i>Note: Optional track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop</i>
Reveal	<ul style="list-style-type: none"> Should not exceed 1/8" (3 mm) for standard arm Should not exceed 3-5/16" (84 mm) for double egress arm
Top Rail	<ul style="list-style-type: none"> Less than 3-3/4" (95 mm) requires PLATE, 4010T-18 <i>Note: Plate requires 2" (51 mm) minimum</i>
Head Frame	Requires 1-1/2" (38 mm) minimum
Clearance	<ul style="list-style-type: none"> 2-1/4" (57 mm) behind door required for 90° or 180° installation
Maximum Opening	<ul style="list-style-type: none"> Templating allows 180° with standard arm, limited to 120° when optional bumper is 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°

Cylinders



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

- Handed
- Standard

Covers



4010T-72
Plastic Cover

- Non-handed
- Standard



Right Hand Shown

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)



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

Cover

- Metal (MC)

Arm

- Double Egress (DE)**

Track

- Regular 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

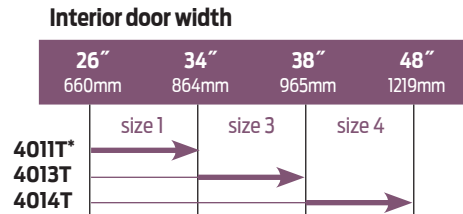
Special Template

- ST- _____

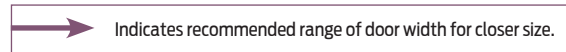
** Note: Using this closer on double-egress doors and frames requires the closer to be ordered with a "DE" suffix (i.e., 4014T DE). Standard "DE" option will accommodate pull side reveals up to 3-5/16". For deeper reveals, consult factory.

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%



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




** 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.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	N/A	N/A	N/A
	5.0* lbs.	4011T	4011T	4011T

* Maximum opening force.

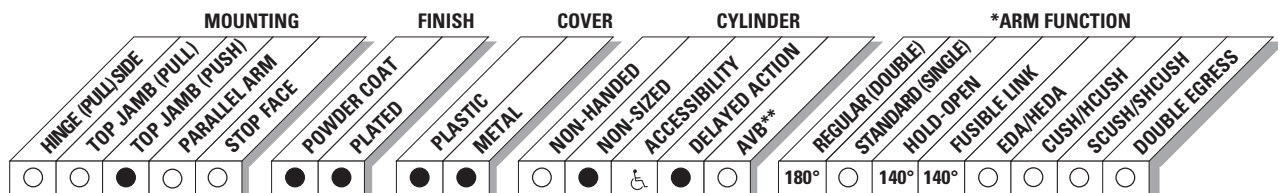


The 4020 is LCN's best performing heavy duty closer designed specifically for institutional and other rugged high traffic applications.

Certifications	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	<ul style="list-style-type: none"> ■ Plastic, Standard ■ Metal, Optional
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/2" Diameter Piston ■ 11/16" Diameter Double Heat Treated Pinion Journal 	Fasteners	Self Reaming and Tapping Screws (SRT)
Fluid	All Weather Fluid	Mounting	Top Jamb (Push Side)
Handing	Handed	Arms	Regular arm
Templating	Peel-n-Stick templates - 2-1-2" x 6" Mounting Hole Pattern	Finishes/Colors/Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Size	Adjustable 1-5 or Sized 6		<ul style="list-style-type: none"> ■ 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.



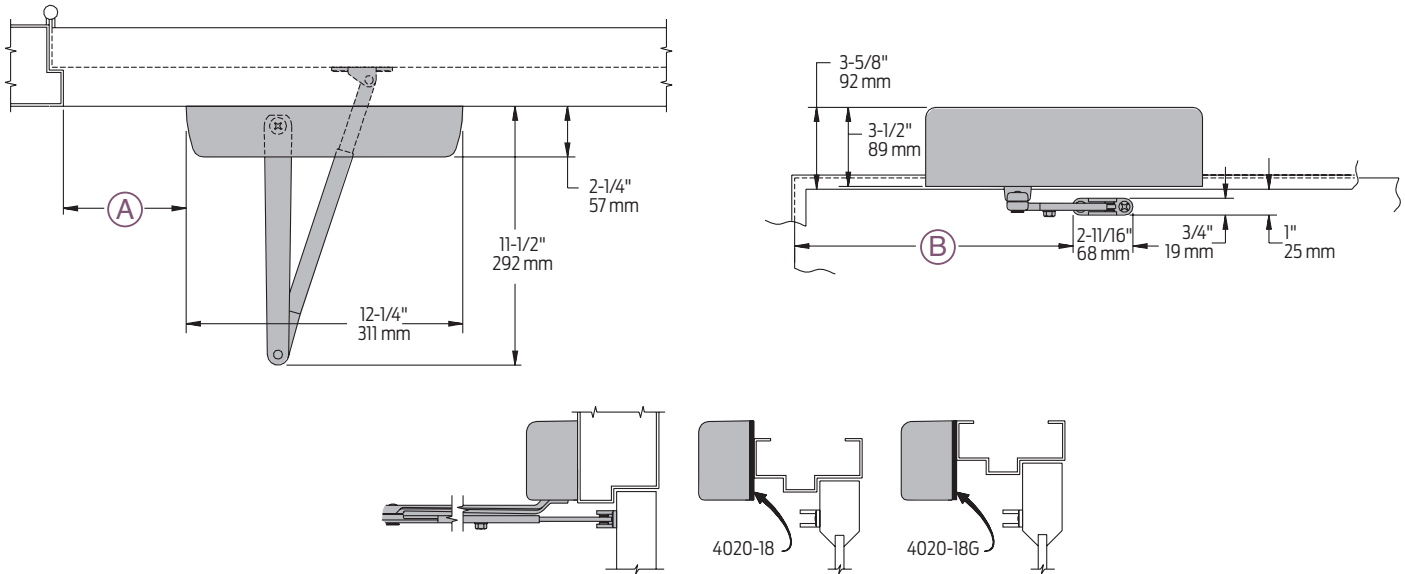
● AVAILABLE
○ NOT AVAILABLE

♿ 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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:												
	<table border="0"> <tr> <td>100°:</td> <td>A = 6" (152 mm)</td> <td>140°:</td> <td>A = 4" (102 mm)</td> <td>180°:</td> <td>A = 2" (51 mm)</td> </tr> <tr> <td></td> <td>B = 12 3/8" (314 mm)</td> <td></td> <td>B = 10 3/8" (264 mm)</td> <td></td> <td>B = 8 3/8" (213 mm)</td> </tr> </table>	100°:	A = 6" (152 mm)	140°:	A = 4" (102 mm)	180°:	A = 2" (51 mm)		B = 12 3/8" (314 mm)		B = 10 3/8" (264 mm)		B = 8 3/8" (213 mm)
100°:	A = 6" (152 mm)	140°:	A = 4" (102 mm)	180°:	A = 2" (51 mm)								
	B = 12 3/8" (314 mm)		B = 10 3/8" (264 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

Cylinders



4021(6)-3071
Cast Iron Cylinder Assembly

- Handed
- Standard

Covers



Left Hand Shown

4020-72
Plastic Cover

- Handed
- Standard



Right Hand Shown

4020-72MC
Metal Cover

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

Arms



4020-3077
Regular Arm

- Non-handed



4020-3077L
Long Arm

- Non-handed
- Includes 4020-79LR for deep reveals. (see page 14 for allowable reveals)
- Optional



4020-3049
Hold-Open

- Handed
- Provides hold-open function, adjustable at elbow
- 5-3/4" (146 mm) maximum reveal, 140° hold open
- Optional



4020-3049FL
Fusible Link

- Handed
- Releases hold-open function, adjustable at shoe, when exposed to temperatures above 165° F
- 3-7/8" (98 mm) maximum reveal
- Optional

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

Installation Accessories



4020-18
Plate

- Required where head frame is less than 3-7/16" (87 mm)
- Requires minimum 1-3/4" (44 mm) minimum head frame and 2" (51 mm) top rail
- 3-7/8" (98 mm) maximum reveal



4020-18G
Plate

- For flush ceiling condition
- Requires minimum 1-3/4" (44 mm) minimum head frame and 2-3/4" (70 mm) top rail

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 will be shipped with:

- Standard cylinder
- Standard cover
- Regular arm
- Self-reaming and tapping screws unless options listed below are selected.

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

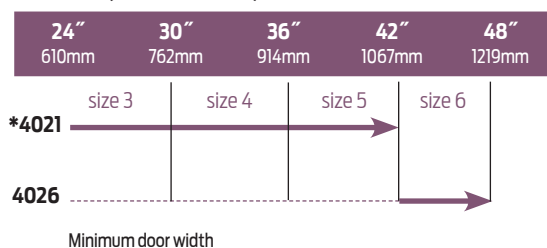
Special Template

- ST- _____

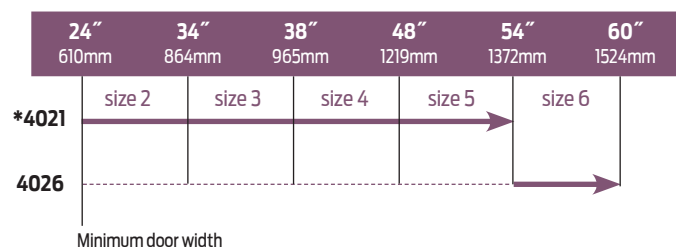
Table of sizes

- 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

Exterior (and Vestibule) door width



Interior door width




→ Indicates recommended range of door width for closer size.
* Adjustable Size 1 thru 5.

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.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	4021	4021	4021
5.0* lbs.	4021	4021	4021	

* Maximum opening force.

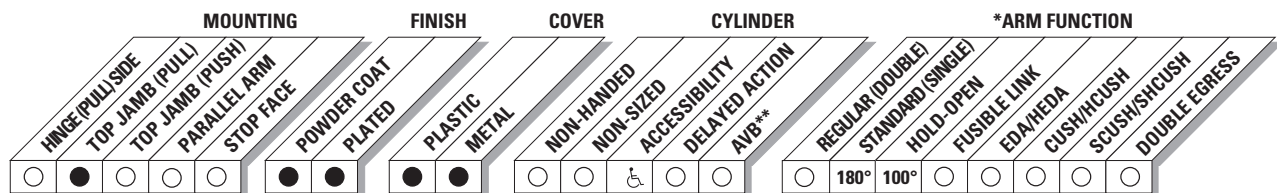


The 4020T is LCN's best performing heavy duty track closer designed specifically for interior doors in institutional and other high traffic applications.

Certifications	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	<ul style="list-style-type: none"> Plastic, Standard Metal, Optional
Body Construction	<ul style="list-style-type: none"> Cast Iron Body Full Complement Bearing 1-1/2" Diameter Piston 11/16" Diameter Double Heat Treated Pinion Journal 	Fasteners	Self Reaming and Tapping Screws (SRT)
Fluid	All Weather Fluid	Mounting	Top Jamb (Pull Side)
Handing	Handed	Arms	Standard arm, track with roller
Templating	Peel-n-Stick templates - 2-1/2" x 6" Mounting Hole Pattern	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> Aluminum (689) Statuary Bronze (690) Light Bronze (691) Black (693) Dark Bronze (695) Brass (696) Custom colors optional
Size	Sized 1, 3 or 4		<ul style="list-style-type: none"> 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.



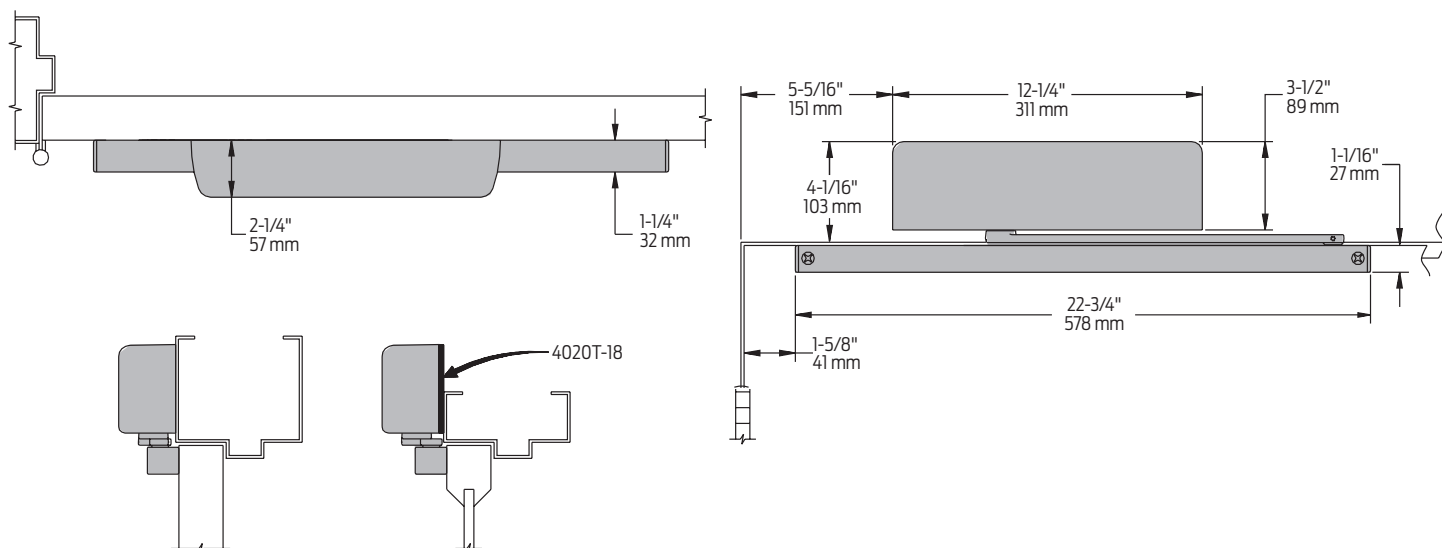
● AVAILABLE
○ NOT AVAILABLE

♿ 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

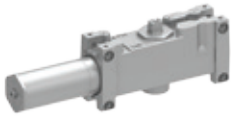


Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	Recommended at hold-open point or where a door cannot swing 180° <i>Note: Optional track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop</i>
Reveal	Should not exceed 1/8" (3 mm)
Head Frame	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ 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°

Cylinders



4021T(3)(4)-3071
Cast Iron Cylinder Assembly

- Handed
- Standard

Covers



Right Hand Shown

4020T-72
Plastic Cover

- Handed
- Standard



Left Hand Shown

4020T-72MC
Metal Cover

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

Arms



4020T-3077T
Standard Arm

- Handed
- Roller not included with arm

Tracks



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

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-3034
Track Roller

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



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

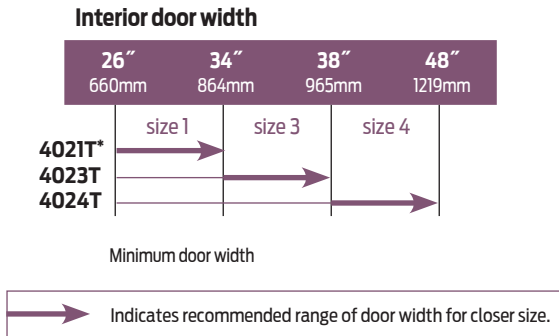
- Plate, 4010T-18

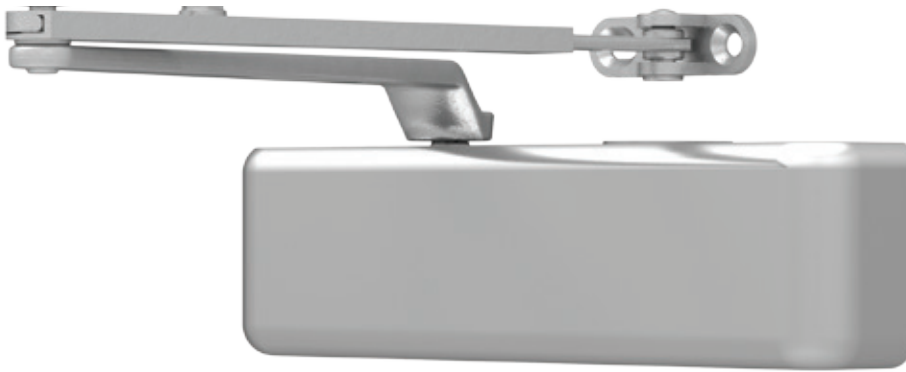
Special Template

- 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



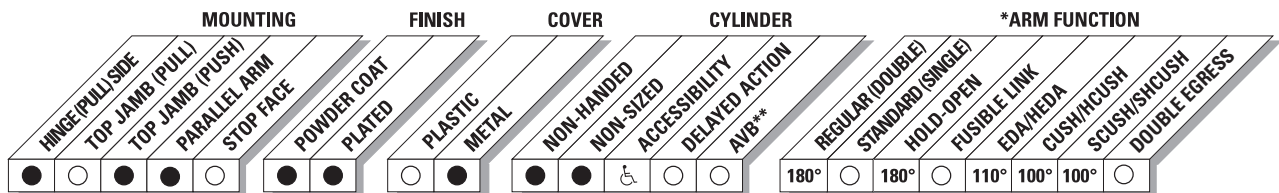


The 4030 is a cast iron, universal closer designed specifically for doors in moderate traffic conditions. This versatile closer compliments the rest of the heavy duty 4000 Series and offers the choice of three mountings and multiple arm options.

Certifications	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	Metal, Standard
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/8" Diameter Piston ■ 1/2" Diameter Single Heat Treated Pinion Journal 	Fasteners	Self Reaming and Tapping Screws (SRT)
Fluid	All Weather Fluid	Mounting	Hinge (Pull Side), Top Jamb (Push Side), Parallel Arm (Push Side)
Handing	Non-Handed	Arms	Regular arm
Templating	Peel-n-Stick templates - 1-23/32" x 6-17/16" Mounting Hole Pattern	Finishes/Colors/Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Size	Adjustable Spring Size 1-4		<ul style="list-style-type: none"> ■ 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.



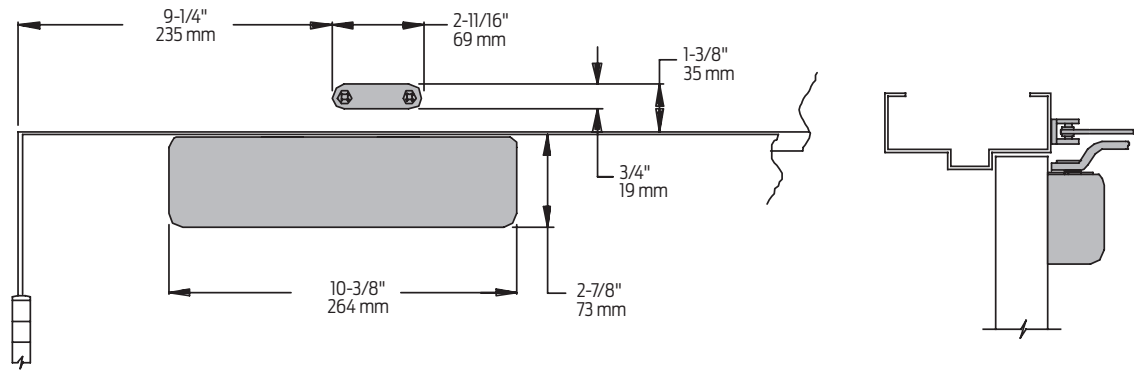
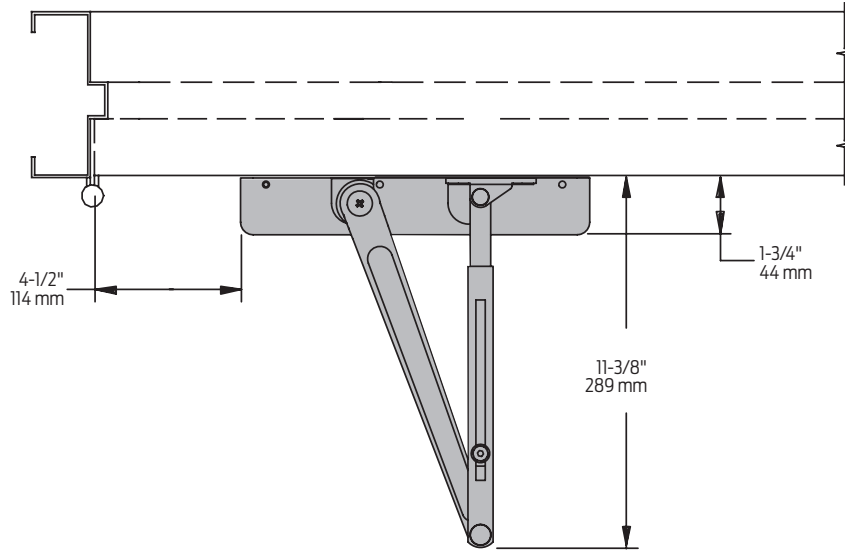
● AVAILABLE
○ NOT AVAILABLE

♿ 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.
** Advanced Variable Backcheck

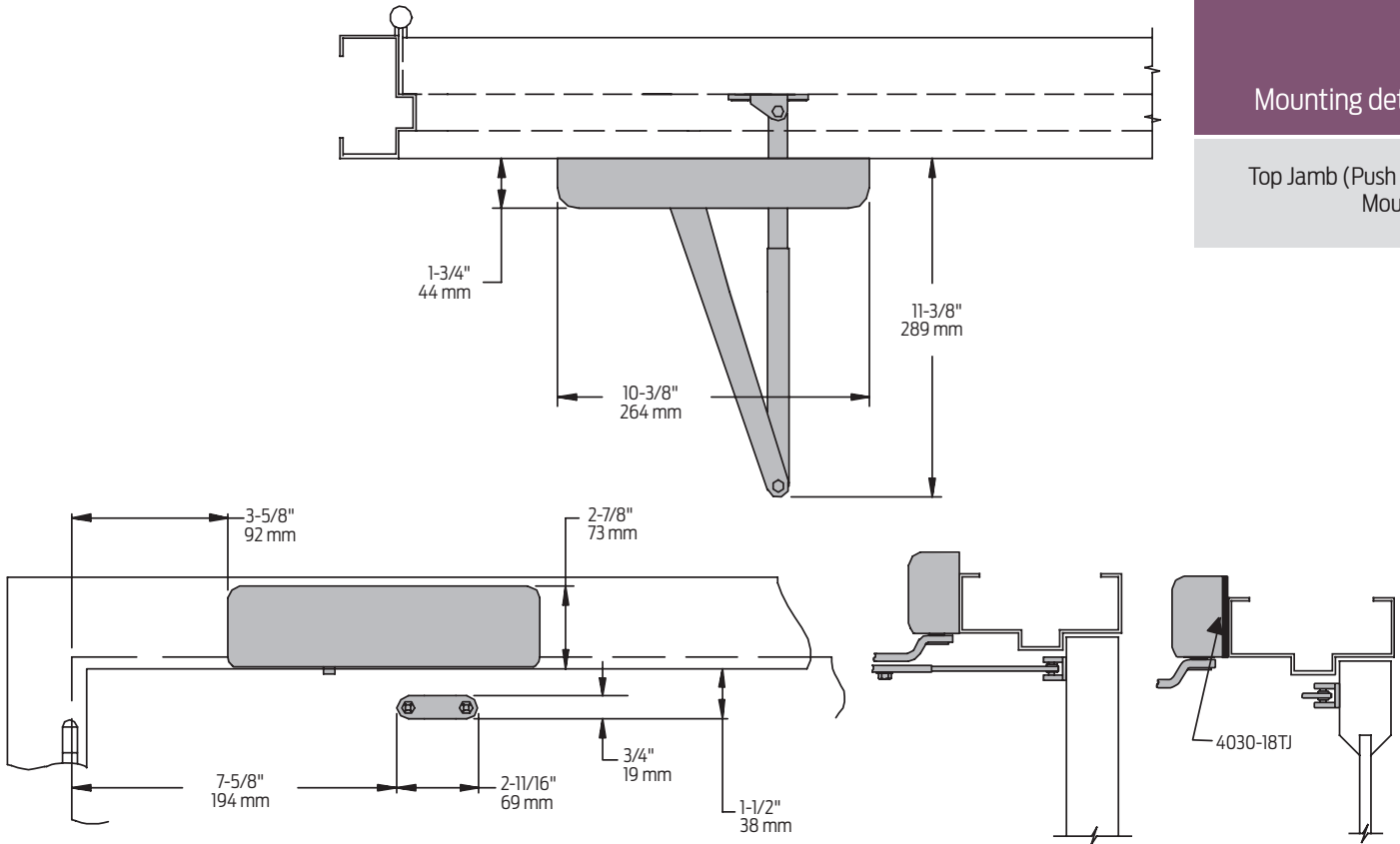
4030 Series

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	<ul style="list-style-type: none"> ■ Can be templated for 180° ■ Hold-open points up to maximum opening with hold-open arm



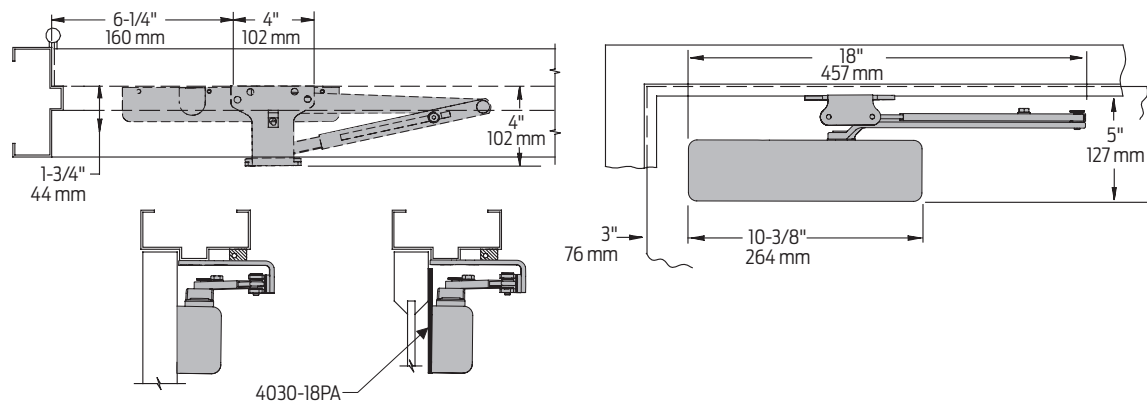
Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	Recommended at hold-open point or where the door cannot swing 180°
Reveal	<ul style="list-style-type: none"> ■ up to 3-1/2" (89 mm) allows 180° opening ■ up to 7-1/2" (191 mm) with long arm allows for 140° opening
Top Rail	Requires 1-1/2" (38 mm) minimum from stop
Head Frame	<ul style="list-style-type: none"> ■ Less than 2-1/4" (57 mm) requires PLATE, 4030-18TJ ■ Plate requires 1-1/2" (38 mm) minimum
Maximum Opening	<ul style="list-style-type: none"> ■ Can be templated for 180° ■ Hold-open points up to maximum opening with hold-open arm

4030 Series

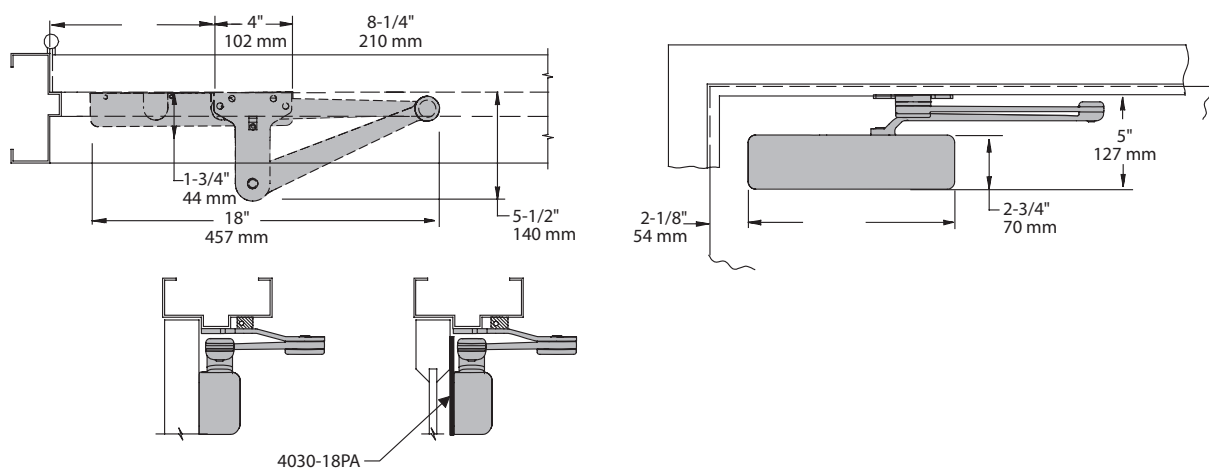
Mounting details

Parallel arm (Push Side) and EDA mounting

Parallel arm mount



EDA mount

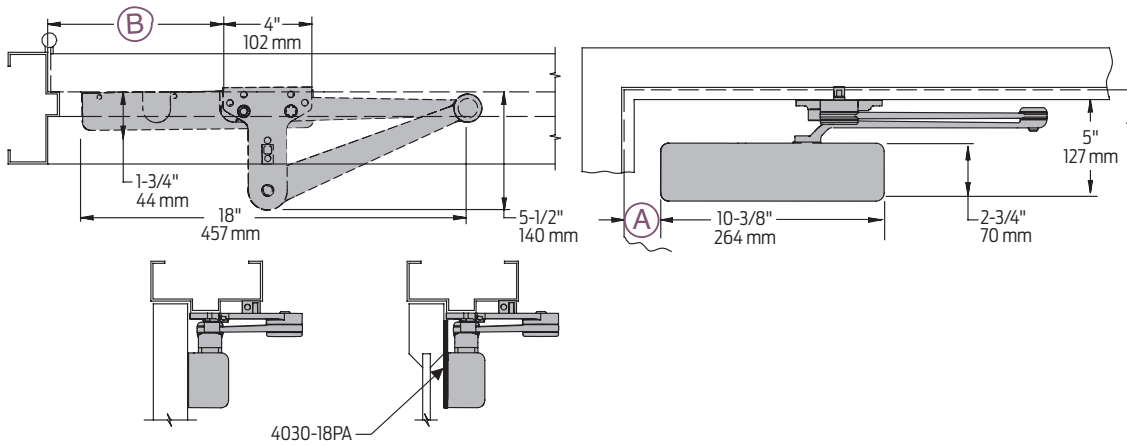


Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	Recommended at hold-open point or where a door cannot swing maximum opening
Clearance	<ul style="list-style-type: none"> For 4030-62PA shoe is 4" (102 mm) from door face EDA arm is 5-1/2" (140 mm) from door face
Top Rail	<ul style="list-style-type: none"> 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 rabbeted requires PA SHOE ADAPTER, 4030-419
Blade Stop	Clearance, requires 1/2" (13 mm) BLADE STOP SPACER, 4030-61
Auxiliary Shoe	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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:

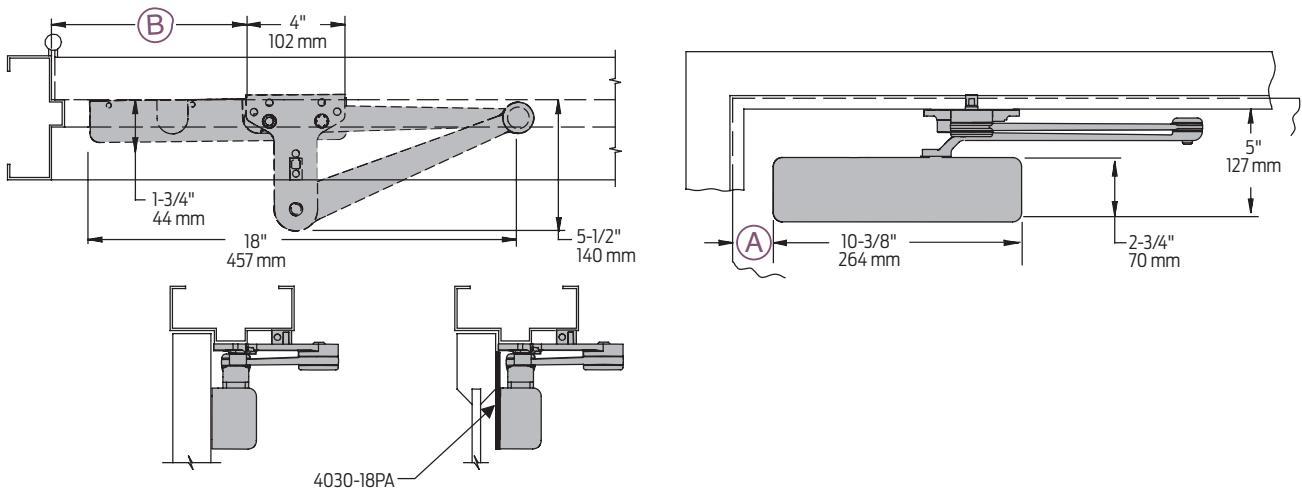
- 4030 closers ordered with EDA arms include 4030-201 FIFTH HOLE SPACER to support the shoe
- REGULAR or HOLD-OPEN arm mounting requires PA SHOE, 4030-62PA for regular or HOLD-OPEN arms. Add prefix "P" to closer description (eg. P4031.)
- P4031 closer includes 4030-201 FIFTH HOLE SPACER to support PA 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 rabbeted 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:		
	85°: A = 3-5/8 (92 mm) B = 9-3/4" (248 mm)	90°: A = 3" (76 mm) B = 9-1/8" (232 mm)	100°*: A = 1-7/8" (48 mm) B = 8" (203 mm)

*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

Cylinders



4031-3071
Cast Iron Cylinder Assembly

- Non-handed
- Standard

Covers



4030-72MC
Metal Cover

- 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



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 rabbetted 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



4030-3049
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
- 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)

Closer will be shipped with:

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

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

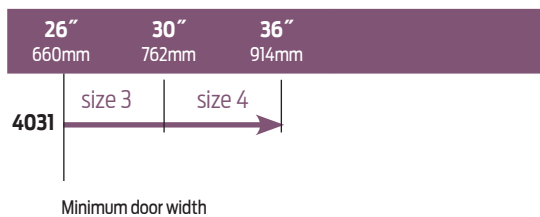
Special Template

- ST- _____

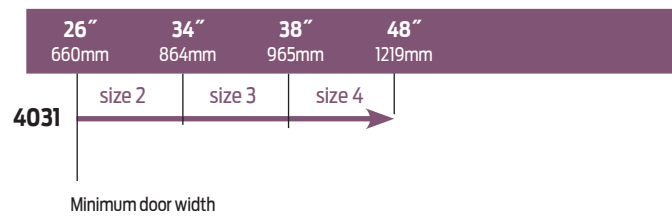
Table of sizes

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

Exterior (and Vestibule) door width



Interior door width



→ Indicates recommended range of door width for closer size.

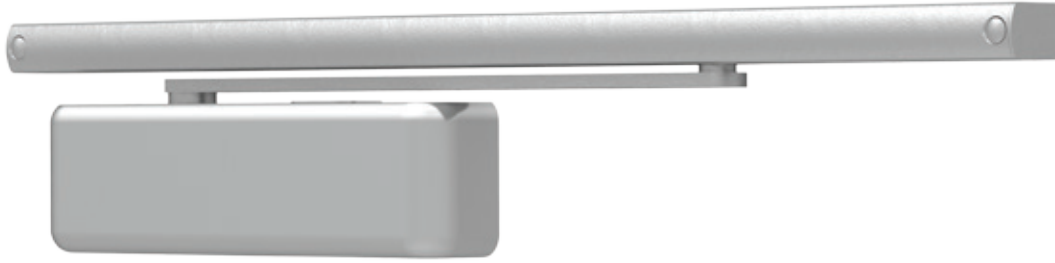
Reduced opening force 4030 Series closers

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.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	4031	4031	4031
	5.0* lbs.	4031	4031	4031

* Maximum opening force.

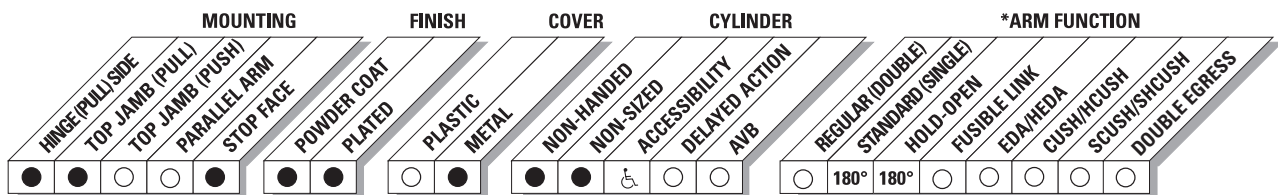


The 4031T is a single lever (track) arm, surface mounted closer designed for interior use on narrow head frames and top rails. The choice of three mountings and ease of installation offer a versatile solution to door control in moderate traffic applications. The 4030T compliments the heavy duty 4000 Series.

Certifications	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	Metal, Standard
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/8" Diameter Piston ■ 1/2" Diameter Single Heat Treated Pinion Journal 	Fasteners	Self Reaming and Tapping Screws (SRT)
Fluid	All Weather Fluid	Mounting	Pull side on door, pull side on frame and push side on door
Handing	Non-Handed	Arms	Standard arm and track
Size	Adjustable Spring Size 1-3	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Warranty	30 years		<ul style="list-style-type: none"> ■ 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.



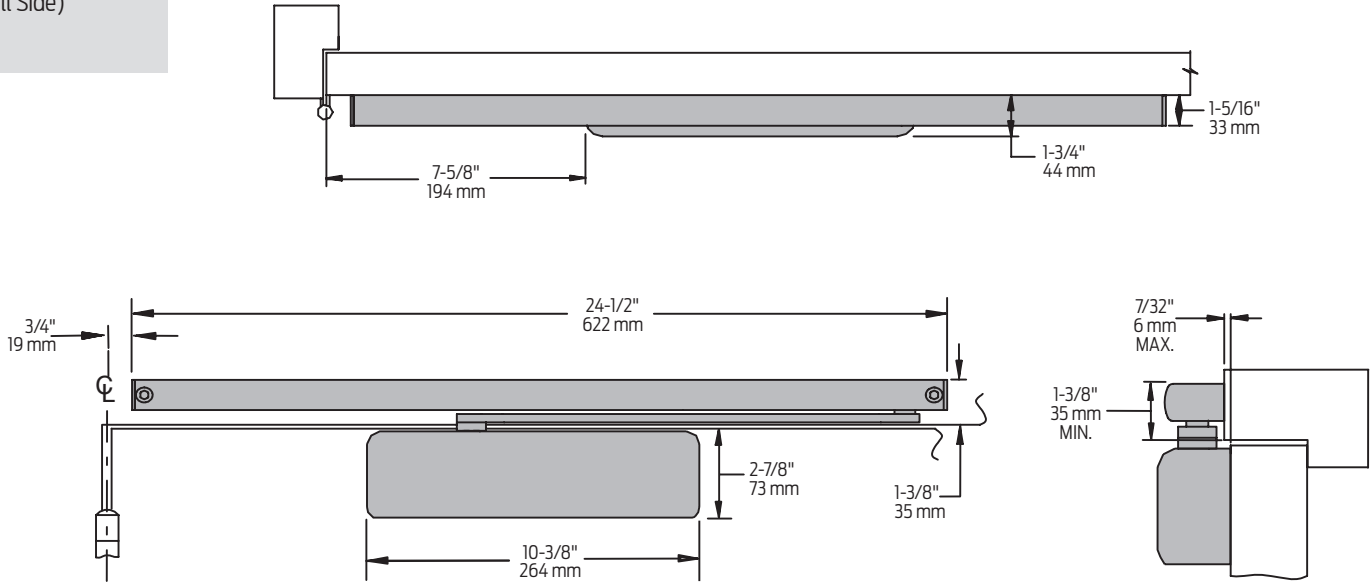
● AVAILABLE
○ NOT AVAILABLE

♿ 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.

4030T Series

Mounting details

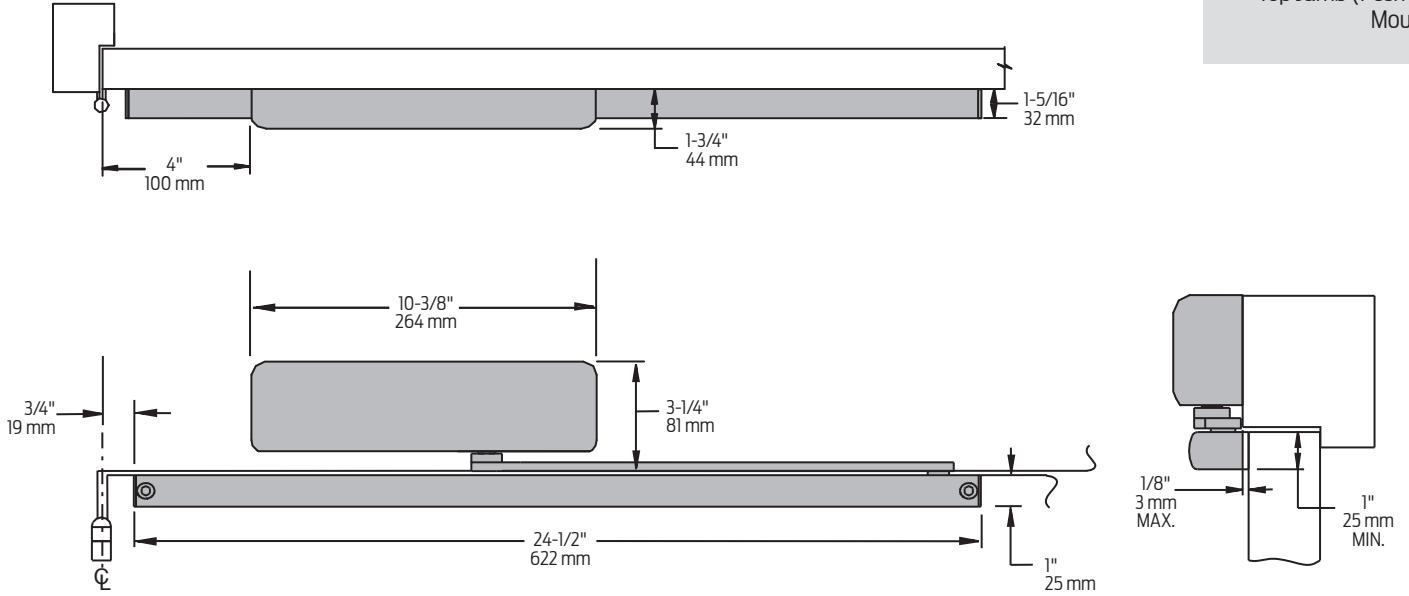
Hinge (Pull Side) Mounting



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 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	<ul style="list-style-type: none"> ■ 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°.



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	<ul style="list-style-type: none"> ■ 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

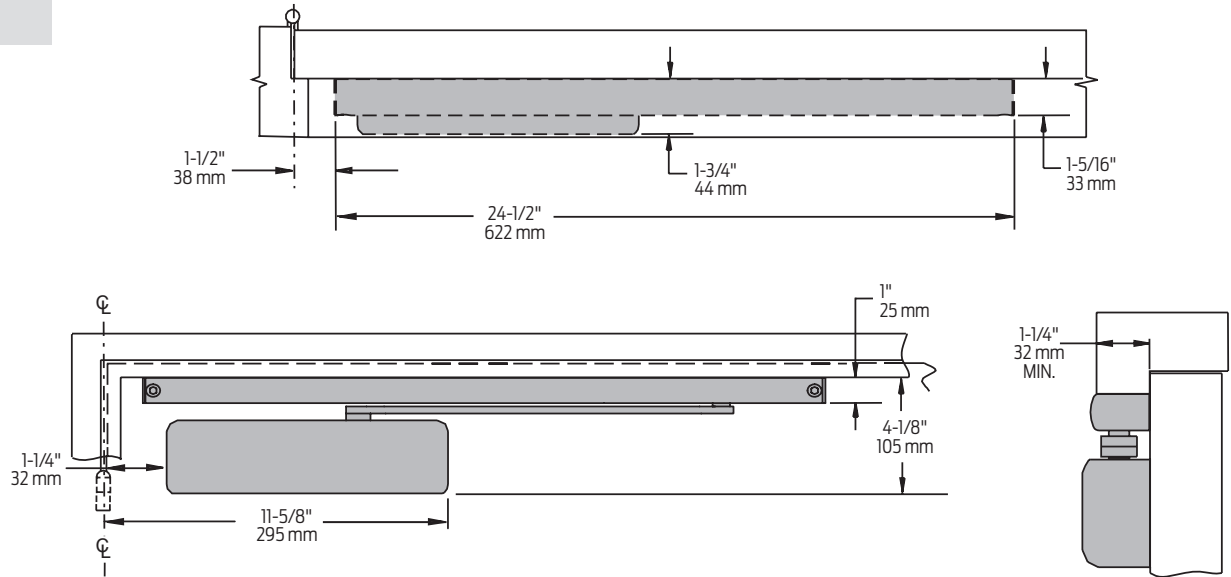
Notes:

- 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



Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	Recommended at hold-open point or where a door cannot swing 110°
Reveal	Should not exceed 1-3/4" (44 mm)
Top Rail	Requires 4-1/8" (105 mm) minimum measured from the stop
Head Frame	Minimum 1-1/4" (32 mm)
Maximum opening	<ul style="list-style-type: none"> ■ Can be templated for 110° ■ Hold-open points up to maximum opening 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°.

Cylinders



4031T-3071
Cast Iron Cylinder Assembly

- Non-handed
- Standard

Covers



4030T-72MC
Metal Cover

- Non-handed

Arms



4030T-3077T
Standard Arm

- Non-handed
- Single lever mounts hinge side, top jamb or stop face
- Track roller included

Tracks



4030T-3038
Standard Track

- Non-handed
- Non hold-open track mounts on either side of the door
- Will accept hold-open track
- Standard



4030T-3038H
Hold-Open Track

- Non-handed
- Hold-open track mounts on either side of the door
- Comes with 4030T-3054 Hold-open clip
- Optional

Installation Accessories



4030T-3054
Hold-Open Clip

- Mounts in track to provide hold-open function
- Hold-open point controlled by clip location
- Requires 4030T-3034H

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)

Closer will be shipped with:

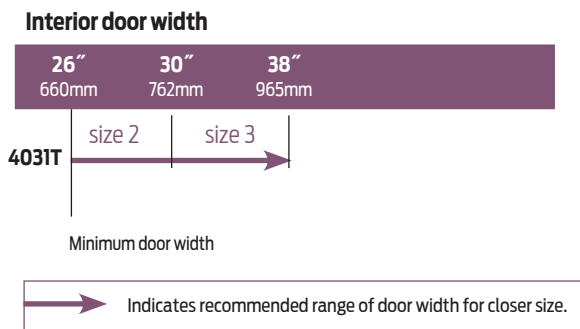
- Standard cylinder
- Standard metal cover
- Standard track
- Standard arm
- Track roller
- Wood and self-tapping machine screw pack unless options listed below are selected.

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.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	N/A	N/A	N/A
	5.0* lbs.	4031T	4031T	4031T

* Maximum opening force.

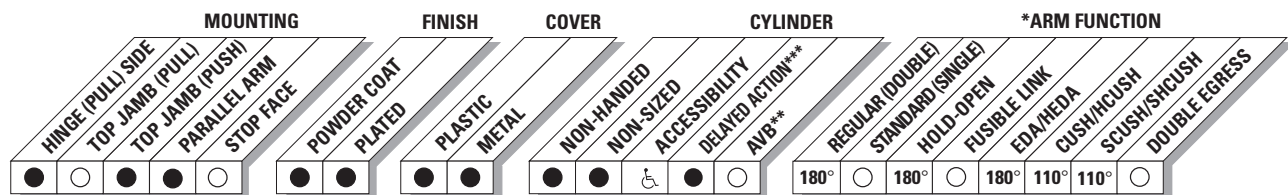


The 4040XP is LCN's most durable and flexible heavy duty closer designed for institutional and other demanding high traffic applications.

Certifications	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	<ul style="list-style-type: none"> Plastic, Standard Metal, Optional
Body Construction	<ul style="list-style-type: none"> Cast Iron Body Full Complement Bearings 1-1/2" Diameter Piston 3/4" Diameter Double Heat Treated Pinion Journal 	Fasteners	Self Reaming and Tapping Screws (SRT)
Fluid	All Weather Liquid X Fluid	Mounting	Hinge (Pull Side), Top Jamb (Push Side), Parallel Arm (Push Side)
Handing	Non-Handed	Arms	Regular Arm
Templating	Peel-n-Stick templates - 2-1/4" x 5" Mounting Hole Pattern	Finishes/Colors/Powder Coat	<ul style="list-style-type: none"> Aluminum (689) Statuary Bronze (690) Light Bronze (691) Black (693) Dark Bronze (695) Brass (696) Custom colors optional
Size	Adjustable Spring Size 1-6, includes Patented Green Dial		<ul style="list-style-type: none"> 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.



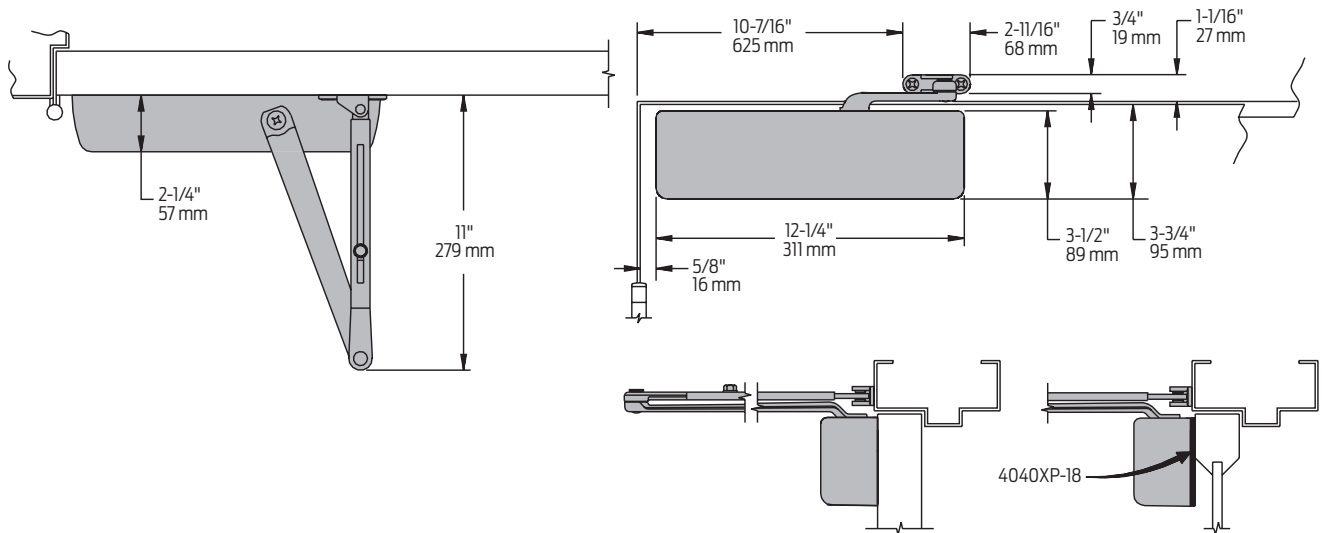
● AVAILABLE
○ NOT AVAILABLE

♿ Closer available with less than 5.0 lbs. opening force on 36" door.
 * Maximum opening/hold-open point with standard template.
 ** Advanced Variable Backcheck.
 *** Delay feature incorporates standard 4040 cylinder (not XP).

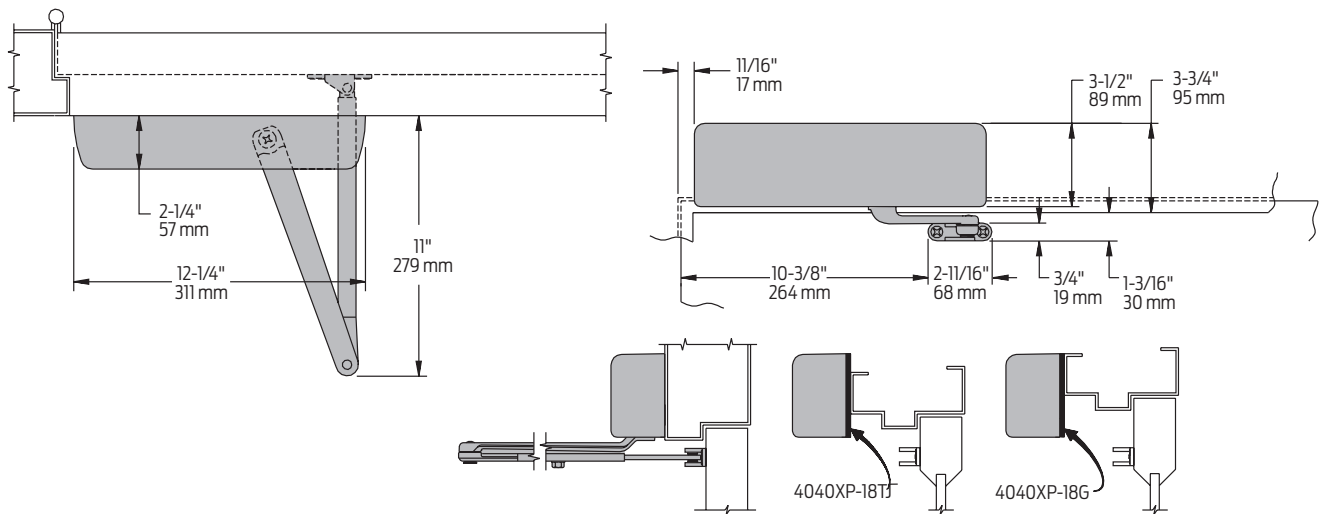
4040XP Series

Mounting details

Hinge (Pull Side) Mounting



Butt Hinges	<ul style="list-style-type: none"> Should not exceed 5" (127 mm) in width
Auxiliary Stop	<ul style="list-style-type: none"> Recommended at hold-open point or where a door cannot swing beyond 120°
Reveal	<ul style="list-style-type: none"> Should not exceed 3/4" (19 mm) for regular arm or hold-open arm
Top Rail	<ul style="list-style-type: none"> Less than 3-3/4" (95 mm) requires PLATE, 4040XP-18. Plate requires 2" (51 mm) minimum
Clearance	<ul style="list-style-type: none"> 2-3/8" (60 mm) behind door required for 90° installation
Delayed Action	<ul style="list-style-type: none"> Incorporates standard 4041 cylinder, without XP cylinder Delays closing from 120° to 70° Delay time adjustable up to approximately 1 minute
Maximum Opening	<ul style="list-style-type: none"> Templating allows up to 120°. Hold-open points 90° up to 120° with hold-open arm.

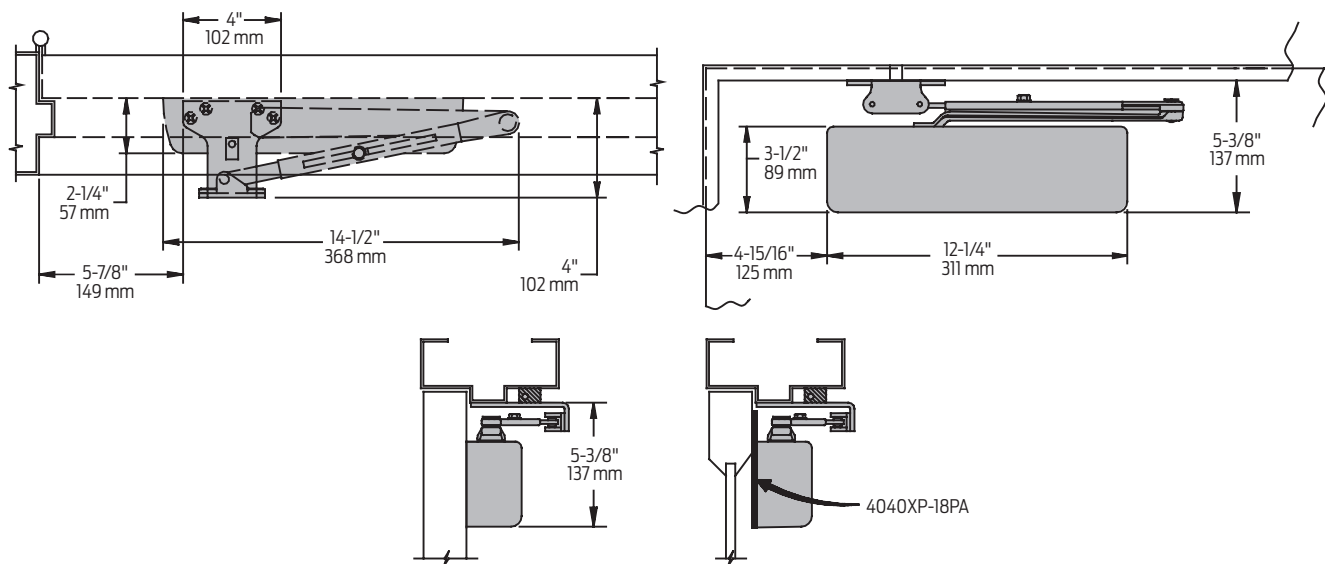


Butt Hinges	Should not exceed 5" (127 mm) in width		
Auxiliary Stop	Recommended at hold-open point or where a door cannot swing beyond 120°		
Reveal	Arm Type	Reveal	Max Opening
	Regular Arm	2-9/16"	Up to 120°
	Long	4-13/16"	Up to 120°
	Hold-Open	2-9/16"	Up to 120°
	Long Hold-Open Arm	8"	Up to 120°
Top Rail	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Templating allows up to 120°. Hold-open points 85° up to 120° with hold-open arm. 		
Delayed Action	<ul style="list-style-type: none"> Incorporates standard 4041 cylinder, without XP cylinder Delays closing from 120° to 70° Delay time adjustable up to approximately 1 minute 		

4040XP Series

Mounting details

Parallel Arm (Push Side) Mounting

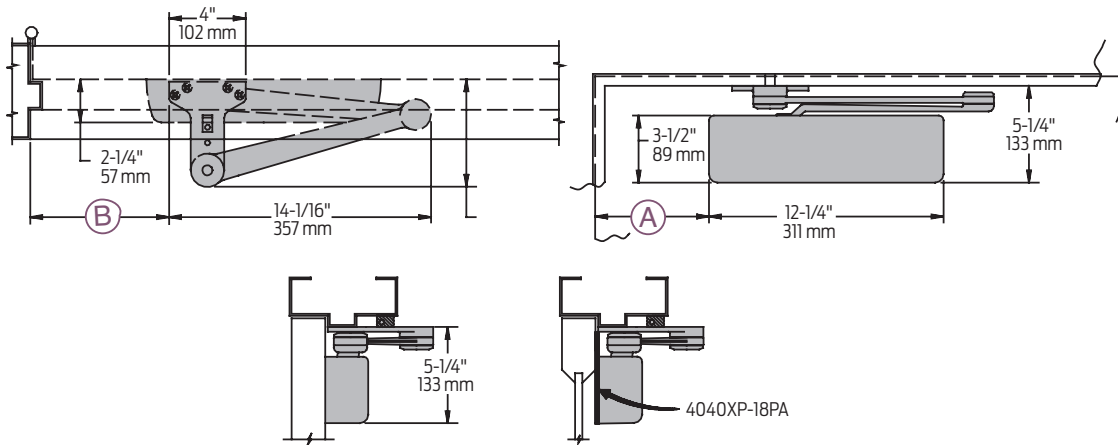


Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	Recommended at hold-open point, where the door cannot swing 180°, or where CUSH-N-STOP arm is not used
Reveal	Should not exceed 7/32" (6 mm)
Top Rail	Less than 5-3/8" (137 mm) measured from the stop requires PLATE, 4040XP-18PA. Plate requires 2" (51 mm) minimum from the stop
Head Frame	Flush or rabbeted 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Incorporates standard 4041 cylinder, without XP cylinder Delays closing from 120° to 70°. Delay time adjustable up to approximately 1 minute.
Maximum Opening	<ul style="list-style-type: none"> 180° opening/hold-open points with all except CUSH arms 110° opening/hold-open with CUSH arms

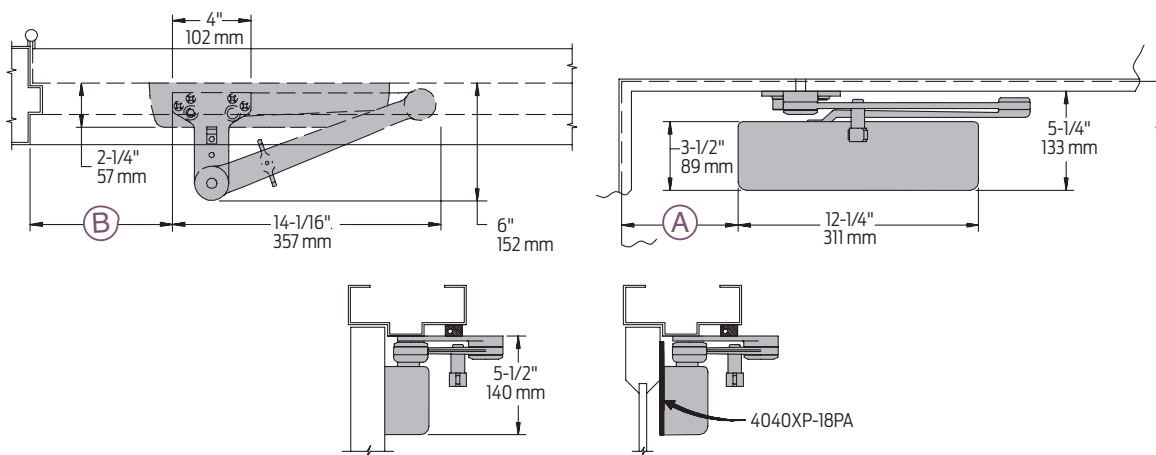
Notes:

- 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



CUSH mount



Clearance	4040XP-62EDA is 5-1/2" (140 mm) from door face. 6" (152 mm) for CUSH	
Head Frame	Flush or rabbeted requires CUSH FLUSH PANEL ADAPTER, 4040XP-419	
CUSH ARM	Requires SHOE SUPPORT, 4040XP-30 for fifth screw anchorage for narrow frames	
Delayed Action	<ul style="list-style-type: none"> ■ 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	EDA arm can be templated for points at:	CUSH arms can be templated for opening/hold-open point at:
	110°: A = 6-3/8" (162 mm) B = 7-3/4" (197 mm)	85°: A = 7-15/16" (202 mm) B = 9-1/8" (232 mm)
	or 180°: A = 2-7/8" (73 mm) B = 4-1/4" (108 mm)	90°: A = 7-3/16" (183 mm) B = 8-1/2" (216 mm)
	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

Cylinders



4040XP-3071
Cast Iron Cylinder Assembly

- Non-handed
- Heavy duty



4041-3071 DEL
Cast Iron Cylinder Assembly

- Used for delayed action closing
- Non-handed
- Heavy duty

Covers



4040XP-72
Plastic Cover

- Includes 4040XP-54 snap-on cover clip
- Non-handed
- Standard



4040XP-72MC
Metal Cover

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

Installation Accessories



4040XP-18
Plate

- Required for hinge side mount where top rail is less than 3-3/4" (95 mm)
- Requires minimum 2" (51 mm) minimum top rail



4040XP-18G
Plate

- 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



4040XP-18TJ
Plate

- 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



4040XP-18PA
Plate

- 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



4040XP-62PA
PA Shoe

- Required for parallel arm mounting

Arms

4040XP Series

Accessories



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-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-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-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. Hold-open function is adjusted at the shoe
- Optional



4040XP-3077CNS
Cush-N-Stop[®] Arm

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



4040XP-3049CNS
HCUSH Arm

- Non-handed
- Hold-open function with templated stop/hold-open points
- Handle controls hold-open function
- 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-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 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 rabbeted 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.

Closer will be shipped with:

- Standard cylinder
- Standard cover
- Regular arm
- Self-reaming and tapping screws
unless options listed below are selected.

Closer options

Cylinder

- Delayed Action (4041 DEL)

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)

Arm

- Regular (REG)
- Regular w/62PA (Rw/PA)
- Regular w/62A (R/62A)
- Long (LONG)
- Extra Long (XLONG)
- Hold-Open (H)
- Hold-Open w/62PA (Hw/PA)
- Long Hold-Open (HLONG)
- Extra Duty Arm (EDA)
- Extra Duty Arm with 62G (EDA/62G)
- Hold Open Extra Duty Arm (HEDA)
(Handed)
- Hold Open Extra Duty Arm with 62
(HEDA/62G)(Handed)
- Cush-N-Stop (CUSH)
- HCush-N-Stop (HCUSH)
- Spring Cush (SCUSH)
- Spring HCush (SHCUSH)

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

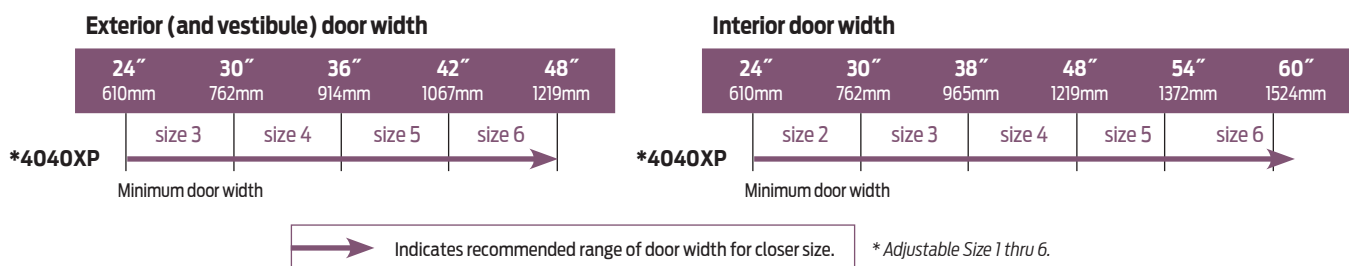
- Plate, 4040XP-18
- Plate, 4040XP-18TJ
- Plate, 4040XP-18G
- Plate, 4040XP-18PA
- CUSH Shoe Support, 4040XP-30
- Blade Stop Spacer, 4040XP-61
- Auxiliary Shoe, 4040XP-62A
- PA Flush Panel Adapter, 4040XP-419

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%



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.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	4040XP	4040XP	4040XP
5.0* lbs.	4040XP	4040XP	4040XP	

* 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.

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

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

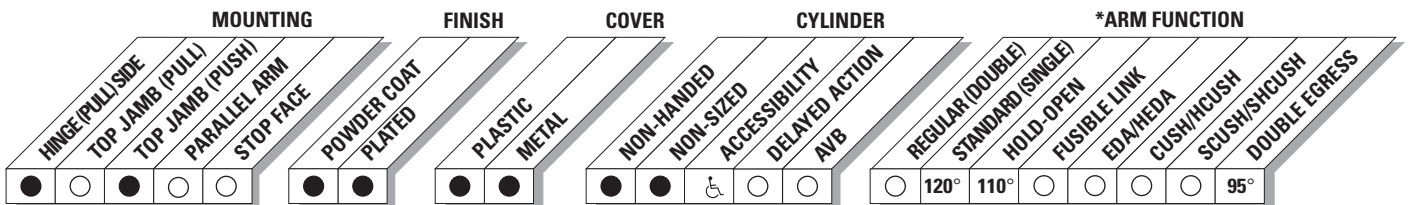
**Finishes/Colors/
Powder Coat**

- 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.



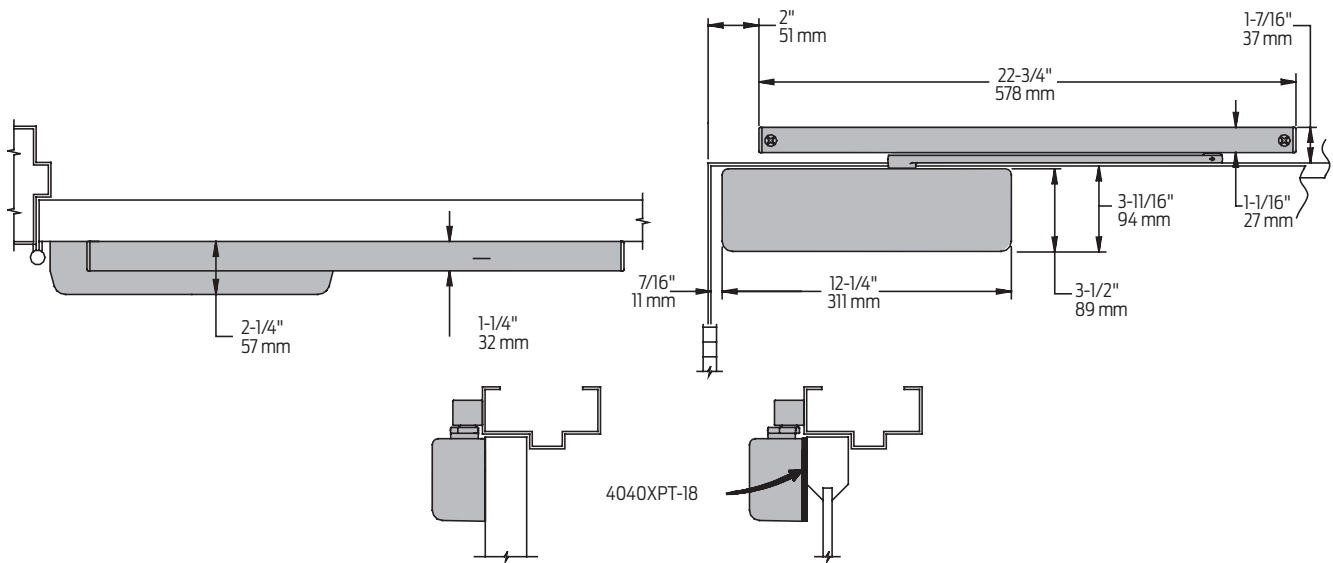
● AVAILABLE
○ NOT AVAILABLE

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

4040XPT Series

Mounting details

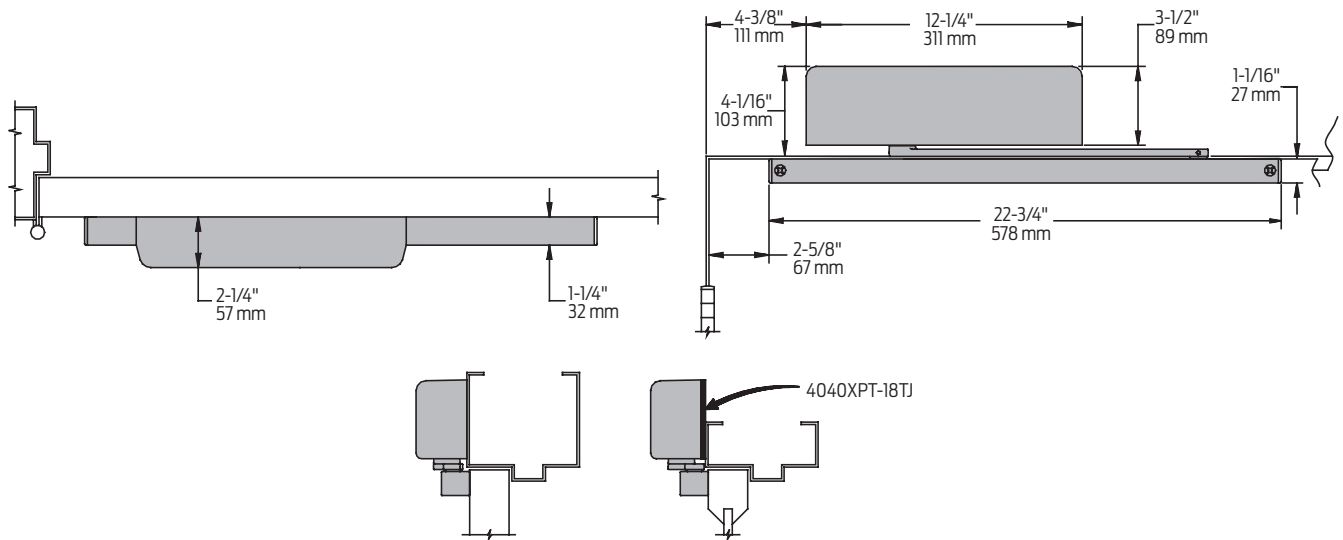
Hinge (Pull Side) Mounting



Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ Templating allows 120° with standard arm, limited to 110° when optional bumper is installed ■ Hold-open points at 85°, 90°, 95°, 100°, 105°, or 110°, depending on the clip location in track

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	<ul style="list-style-type: none"> ■ 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
Clearance	1-1/4" (32 mm) behind door required for 180° installation
Maximum Opening	<ul style="list-style-type: none"> ■ 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

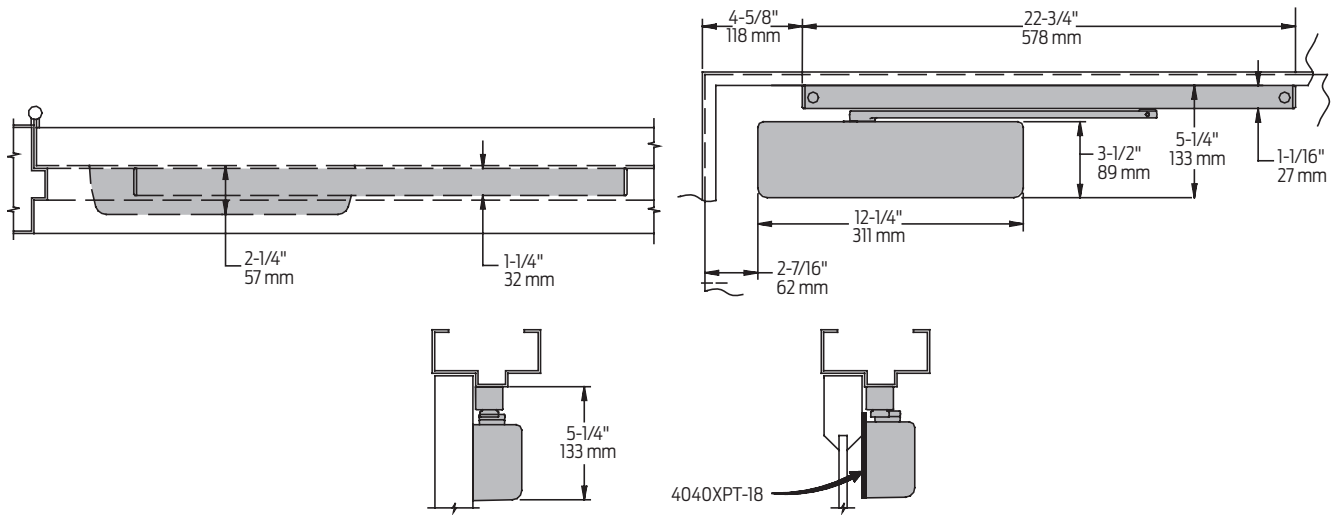
Notes:

- 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	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ 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°

Cylinder



4040XPT-3071
Cast Iron Cylinder Assembly

- Non-handed
- Standard

Covers



4040XPT-72
Plastic Cover

- Non-handed
- Snap-on
- Standard



4040XPT-72MC
Metal Cover

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

Arms



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

Tracks



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

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" (3mm)



4040XPT-3034H
Hold-Open Track Roller

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

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)

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.

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

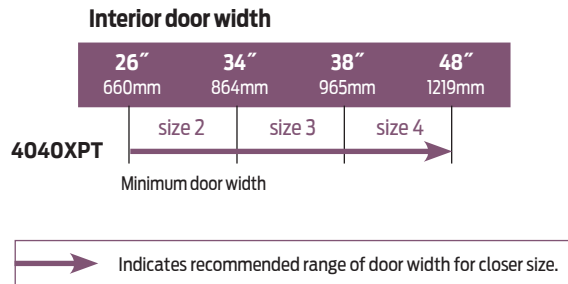
- Plate, 4040XPT-18
- Plate, 4040XPT-18TJ

Special Template

- ST- _____

Table of sizes

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



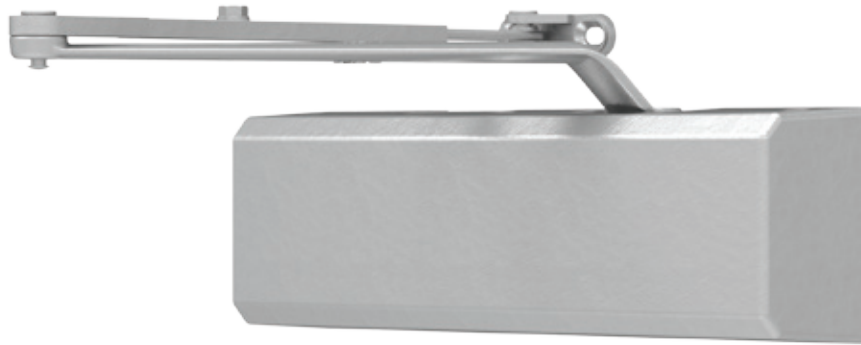
Reduced opening force 4040XPT Series closers

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.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	N/A	N/A	N/A
	5.0* lbs.	4040XPT	4040XPT	4040XPT

* Maximum opening force.

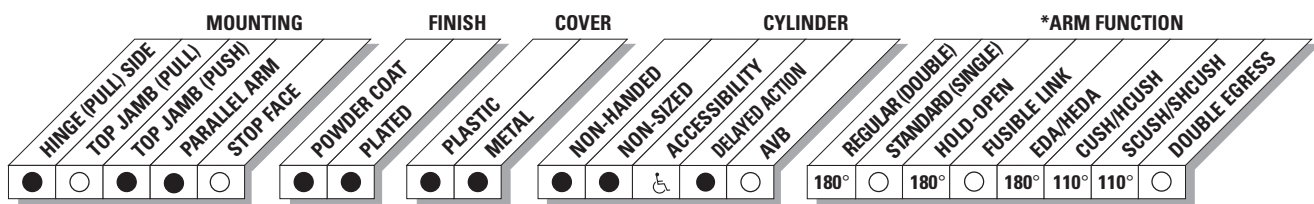


The 4050 Series cast aluminum closer is engineered for durability and built tough to excel in the harsh environments of high frequency, high abusive traffic areas. Ideal for commercial building applications and competitive specification situations that demand a combination of quality, reliability and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

Certifications	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	<ul style="list-style-type: none"> Plastic, Standard Metal, Optional
Body Construction	<ul style="list-style-type: none"> Cast Aluminum Body Full Complement Bearings 1-1/2" Diameter Piston 11/16" Diameter Double Heat Treated Pinion Journal 	Fasteners	Self Reaming and Tapping Screws (SRT)
Fluid	All Weather Liquid X Fluid	Mounting	Hinge (Pull Side), Top Jamb (Push Side), Parallel Arm (Push Side)
Handing	Non-Handed	Arms	Standard Regular Arm
Templating	Peel-n-Stick templates - 2-3/8" x 6-3/4" Mounting Hole Pattern	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> Aluminum (689) Statuary Bronze (690) Light Bronze (691) Black (693) Dark Bronze (695) Brass (696) Custom colors optional
Size	Adjustable spring size 1-6		<ul style="list-style-type: none"> Optional SRI primer - powder coat only Optional plated finishes
Warranty	25 years		

Special Templates

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



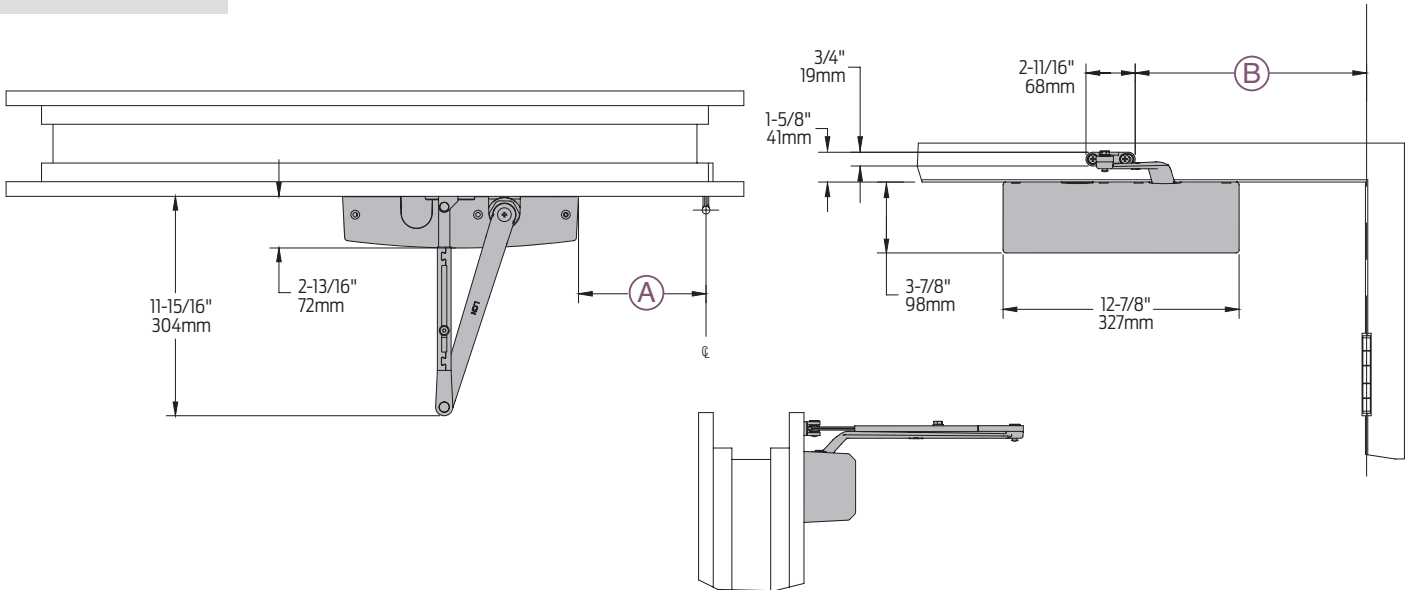
● AVAILABLE
○ NOT AVAILABLE

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

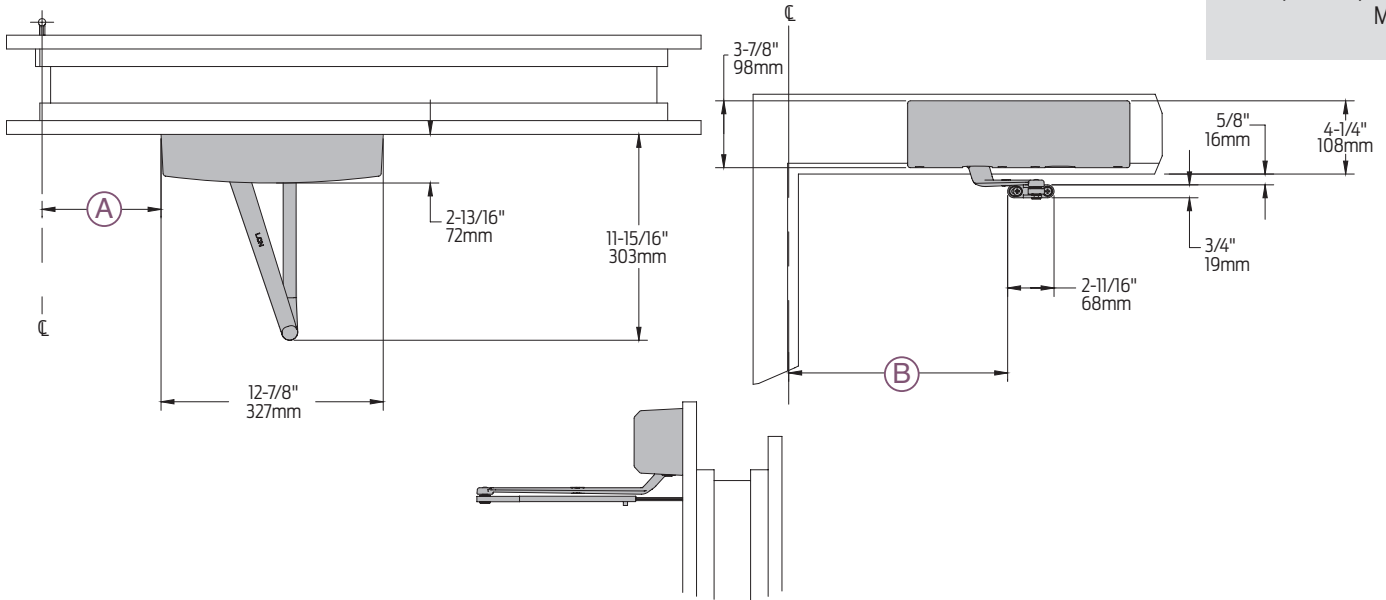
4050 Series

Mounting details

Hinge (Pull Side) Mounting

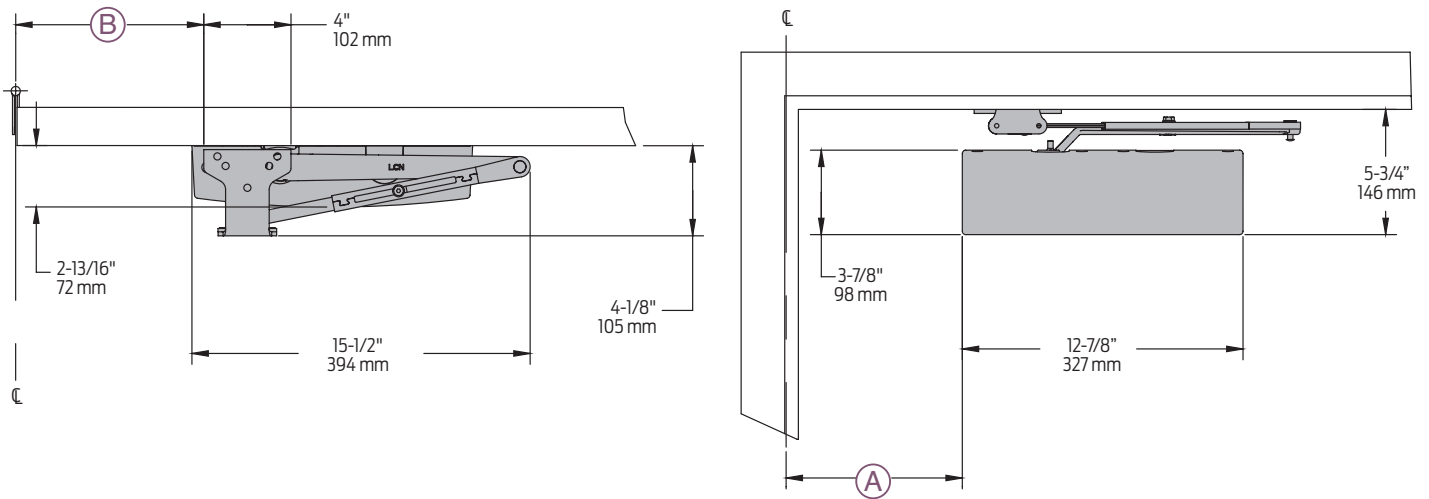


Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	Recommended at hold-open point or where a door cannot swing beyond templated maximum opening
Reveal	Should not exceed 3/4" (19 mm) for regular arm or hold-open arm
Top Rail	<ul style="list-style-type: none"> ■ Less than 3-7/8" (98 mm) 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	<ul style="list-style-type: none"> ■ Templating allows up to 180° ■ Hold-open points up to maximum opening with hold-open arm
To 100°:	A = 6-15/16" (176mm) B = 12-5/8" (321 mm)
100° to 120°:	A = 5-15/16" (151mm) 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" (87mm) 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.

Butt 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	Arm Type	Reveal	Max Opening
	Regular Arm	4"	Up to 180°
	Long	9"	Up to 150°
	Hold-Open	4"	Up to 170°
	Long Hold-Open Arm	8-3/4"	Up to 155°
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	<ul style="list-style-type: none"> ■ 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)	



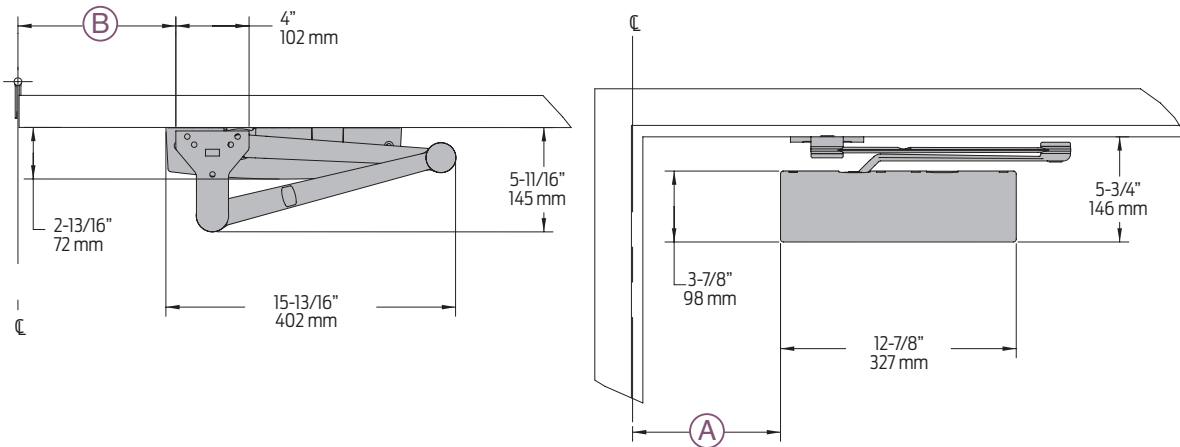
The 'A' dimension refers to the edge of the closer body to the center line of pivot or hinge.
 The 'B' dimension refers to the edge of the closer shoe bracket to the center line of pivot or hinge.

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" (146mm) 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 rabbeted requires PA SHOE ADAPTER, 4050-419																
Stop Width	Minimum 1-3/16" (30 mm)																
Blade Stop	Clearance requires 1/2" (13mm) 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	<table border="0"> <tr> <td>To 100°:</td> <td>A = 8-1/16" (205 mm)</td> </tr> <tr> <td></td> <td>B = 8-5/8" (219 mm)</td> </tr> <tr> <td>100° to 130°:</td> <td>A = 6-9/16" (167 mm)</td> </tr> <tr> <td></td> <td>B = 7-1/8" (181 mm)</td> </tr> <tr> <td>130° to 150°:</td> <td>A = 5-9/16" (141 mm)</td> </tr> <tr> <td></td> <td>B = 6-1/8" (156 mm)</td> </tr> <tr> <td>150° to 180°:</td> <td>A = 4-9/16" (116 mm)</td> </tr> <tr> <td></td> <td>B = 5-1/8" (130 mm)</td> </tr> </table>	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)
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																

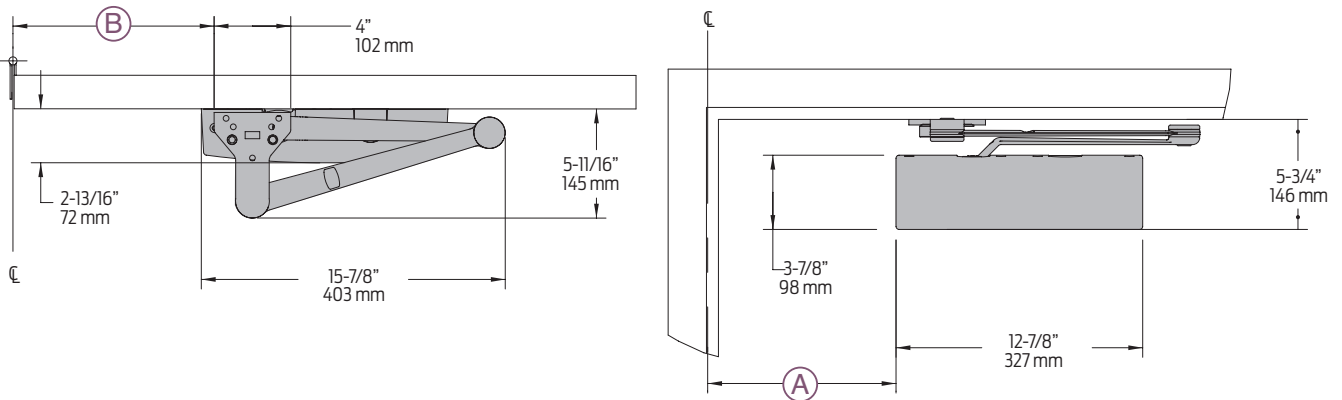
Note:

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

EDA mount



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 rabbeted requires FLUSH PANEL ADAPTER, 4050-419	
CUSH ARM	Requires CUSH SHOE SUPPORT, 4050-30 for fifth screw anchorage for narrow frames	
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°	CUSH arms can be templated for opening/hold-open point at:
	100°: A = 8-1/16" (205 mm) B = 8-5/8" (219 mm)	85°: A = 9-13/16" (250 mm) B = 10-1/2" (267 mm)
	100° to 130°: A = 6-9/16" (167 mm) B = 7-1/8" (181 mm)	90°: A = 8-15/16" (227 mm) B = 9-5/8" (244 mm)
	130° to 150°: A = 5-9/16" (141 mm) B = 6-1/8" (156 mm)	95°: A = 8-5/16" (212 mm) B = 9" (229 mm)
	150° to 180°: A = 4-9/16" (116 mm) B = 5-1/8" (130 mm)	100°: A = 7-11/16" (196 mm) B = 8-3/8" (213 mm)
	Hold-open points up to maximum opening with HEDA arm	105°: A = 7-1/16" (180 mm) B = 7-3/4" (197 mm)
		110°: A = 6-9/16" (167 mm) B = 7-1/4" (184 mm)

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



4050-3071
Cast Aluminum Cylinder Assembly

- Non-handed
- Heavy duty



4050-3071 DEL
Cast Aluminum Cylinder Assembly

- Cylinder used for delayed action closing
- Non-handed
- Heavy duty

Covers



4050-72
Plastic Cover

- Non-handed
- Standard



4050-72MC
Metal Cover

- Non-handed
- Required for plated finishes and custom powder coat finishes
- Optional

Installation Accessories



4050-18
Plate

- 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



4050-18G
Plate

- 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.



4050-18PA
Plate

- 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



4050-30
Cush Shoe Support

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



4050-61
Blade Stop Spacer

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



4050-419
Flush Panel Adapter

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



4050-62A
Auxiliary Shoe

- Requires a top rail of 7-13/16" (198 mm)
- Replaces -62PA for parallel arm mounting of regular arm with overhead holder/stop
- Optional



4050-62PA
PA Shoe

- Required for parallel arm mounting

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



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

Arms cont.



4050-3077SCNS
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



4050-3049SCNS
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 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-reaming and tapping screws
unless options listed below are selected.

Closer options

Cylinder

- Delayed Action (4050 DEL)

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)

Arm

- Regular (REG)
- Long (LONG)
- Hold-Open (H)
- Hold-Open w/62PA (Hw/PA)
- Long Hold-Open (HLONG)
- Extra Duty Arm (EDA)
- Extra Duty Arm with 62G (EDA/62G)
- Hold Open Extra Duty Arm (HEDA)
(Handed)
- Hold Open Extra Duty Arm with 62
(HEDA/62G)(Handed)
- Cush-N-Stop (CUSH)
- HCush-N-Stop (HCUSH)
- Spring Cush (SCUSH)
- Spring HCush (SHCUSH)

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- _____

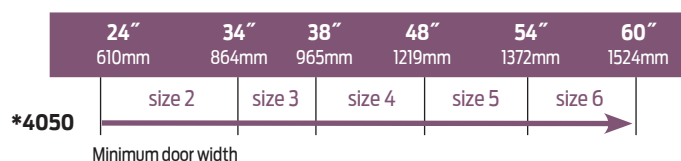
Table of sizes

- 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



Interior door width




→ Indicates recommended range of door width for closer size. * Adjustable Size 1 thru 6.

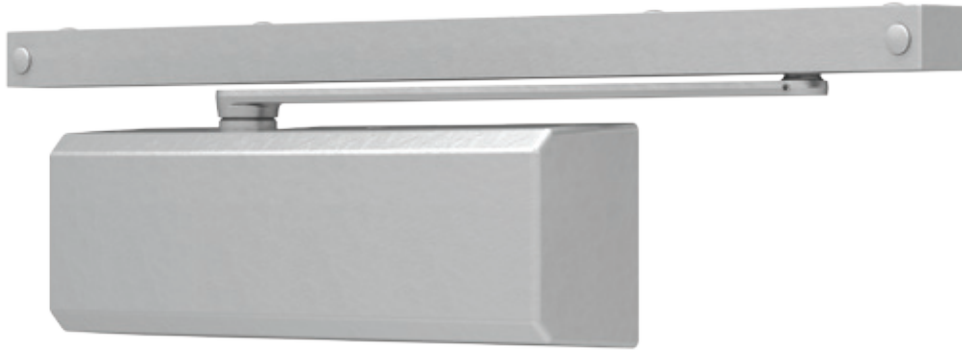
Reduced opening force 4050 Series closers

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.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	4050	4050	4050
5.0* lbs.	4050	4050	4050	

* Maximum opening force.

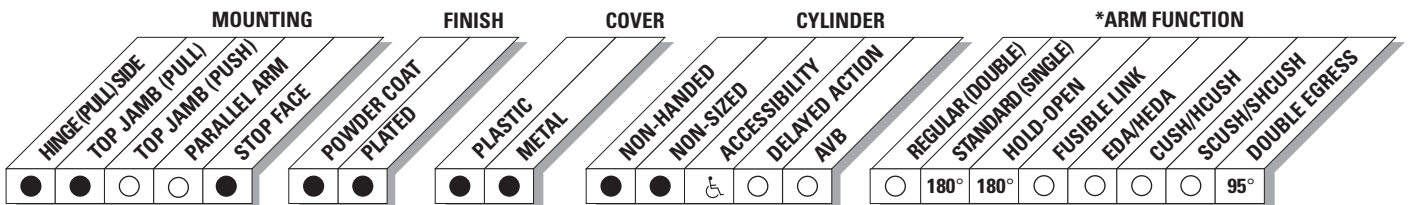


The 4050T cast aluminum heavy duty track closer is designed for rugged high frequency traffic areas. Ideal for commercial building applications and competitive specification situations that demand a combination of quality, reliability and value.

Certifications	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	<ul style="list-style-type: none"> ■ Plastic, Standard ■ Metal, Optional
Body Construction	<ul style="list-style-type: none"> ■ Cast Aluminum Body ■ Full Complement Bearings ■ 1-1/2" Diameter Piston ■ 11/16" Diameter Double Heat Treated ■ Pinion Journal 	Fasteners	Self Reaming and Tapping Screws (SRT)
Fluid	All Weather Fluid	Mounting	Pull side on door, pull side top jamb, push side on door
Handing	Non-Handed	Arms	Standard Arm and Track with Roller
Size	Adjustable Spring Size 1-4	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Warranty	25 years		<ul style="list-style-type: none"> ■ 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.



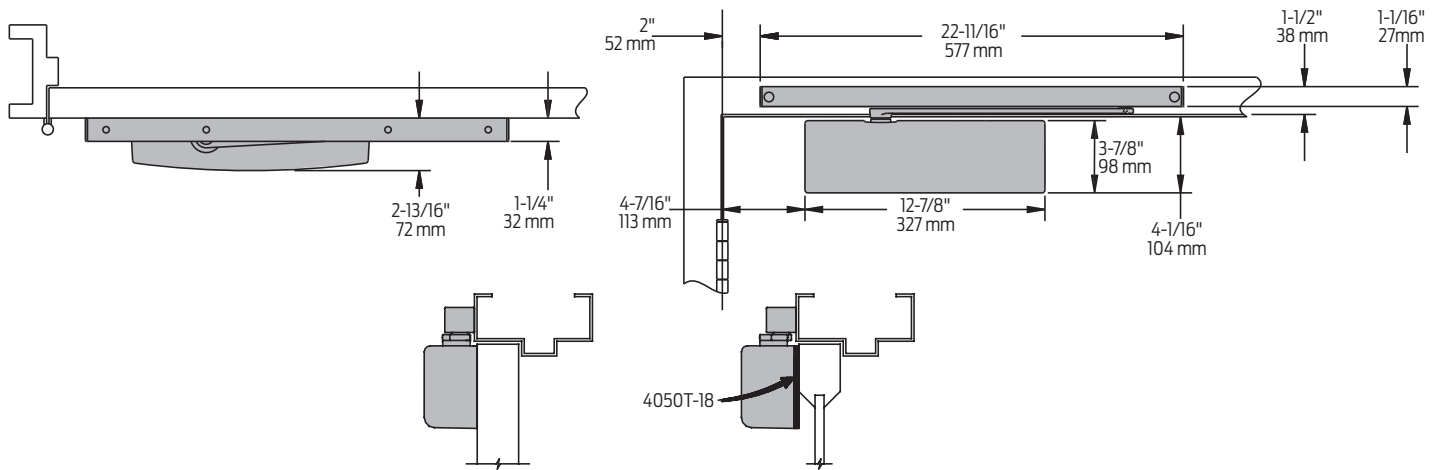
● AVAILABLE
○ NOT AVAILABLE

♿ Closer 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

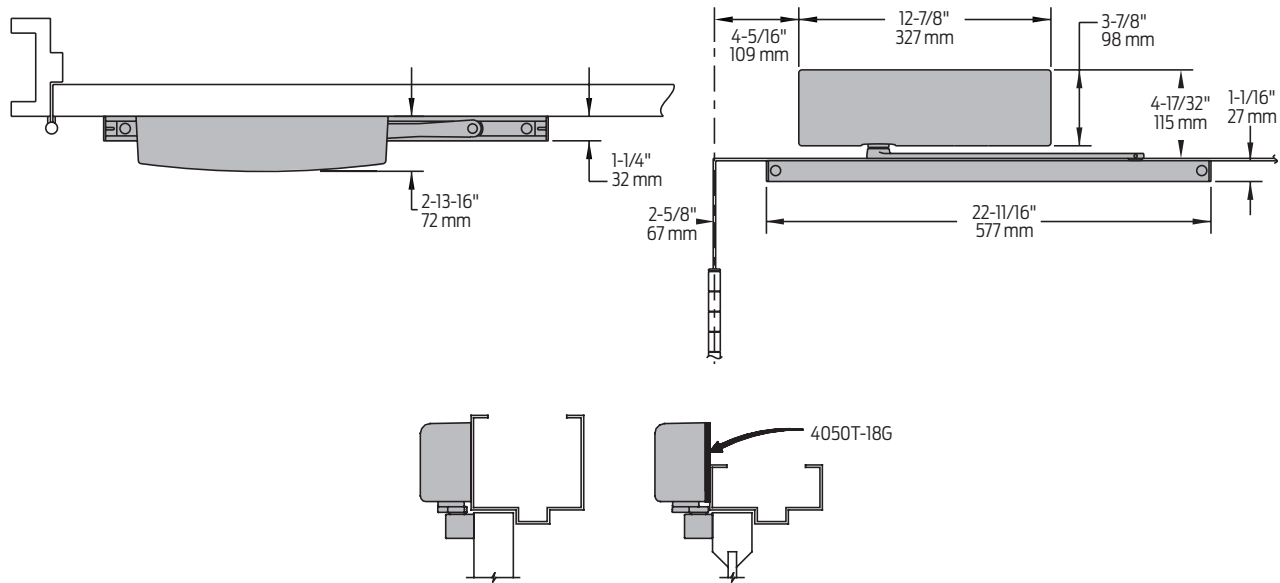
Hinge (Pull Side) Mounting



Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ 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°



Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	<ul style="list-style-type: none"> ■ 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 4-1/2" (114 mm), requires PLATE, 4050T-18G. Plate requires 2-1/16" (52 mm) minimum
Clearance	1-1/4" (32 mm) behind door required for 180° installation
Maximum Opening	<ul style="list-style-type: none"> ■ Templating allows 180°

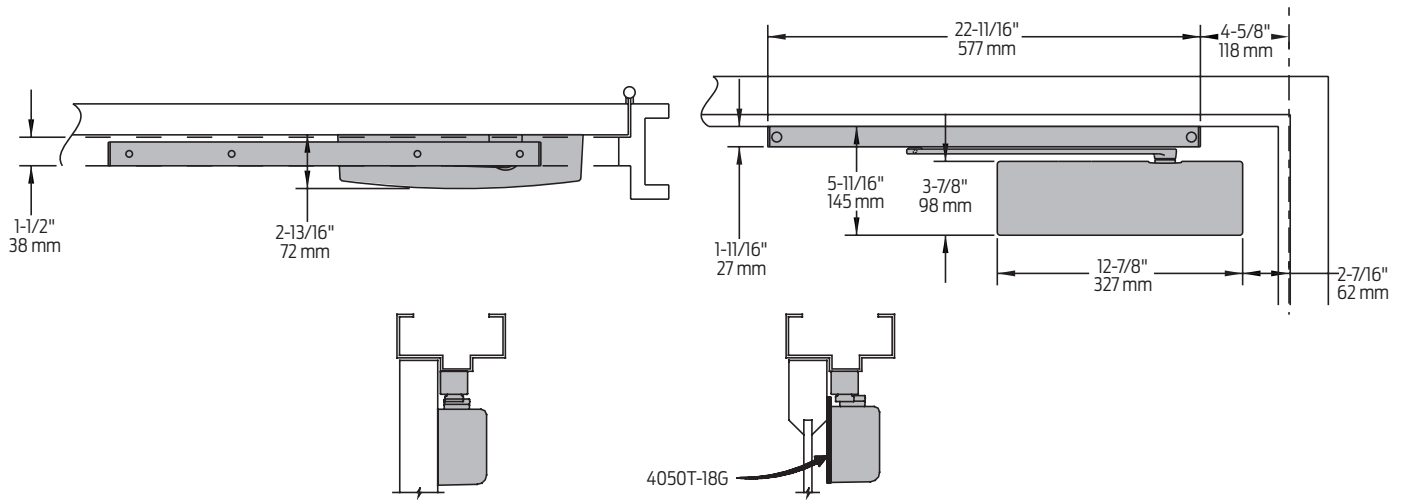
Notes:

- 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 an exterior or large/heavy door must swing 180°

4050T Series

Mounting details

Stop Face (Push Side) Mounting



Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ 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



4050T-3071
Cast Aluminum Cylinder
Assembly

- Non-handed
- Standard

Covers



4050T-72
Plastic Cover

- Non-handed
- Standard



4050T-72MC
Metal Cover

- Non-handed
- Required for plated finishes and custom powder coat finishes
- Optional

Arms



4050T-3077T
Standard Arm

- Non-handed
- Arm does not include track roller



4050T-3077DE
Double Egress Arm

- Handed
- For double egress doors and frames
- Does not include track roller
- Maximum reveal is 3" (76 mm)
- Optional

Tracks



4050T-3038
Standard Track

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



4050T-3038B
Standard Track with Bumper

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



4050T-3038H
Hold-Open Track

- Non-handed
- With hold-open clip installed
- Will accept bumper assembly
- Optional



4050T-3038HB
Hold-Open Track with Bumper

- Non-handed
- With hold-open clip and bumper assembly installed
- Optional

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)
- 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)

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.

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

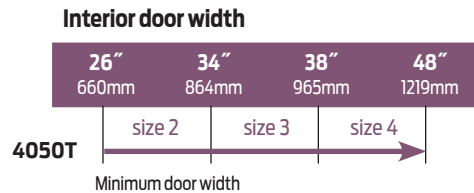
- Plate, 4050T-18
- Plate, 4050T-18G

Special Template

- ST- _____

Table of sizes

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



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.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	N/A	N/A	N/A
	5.0* lbs.	4050T	4050T	4050T

* Maximum opening force. Applies to pull side and top jamb only.

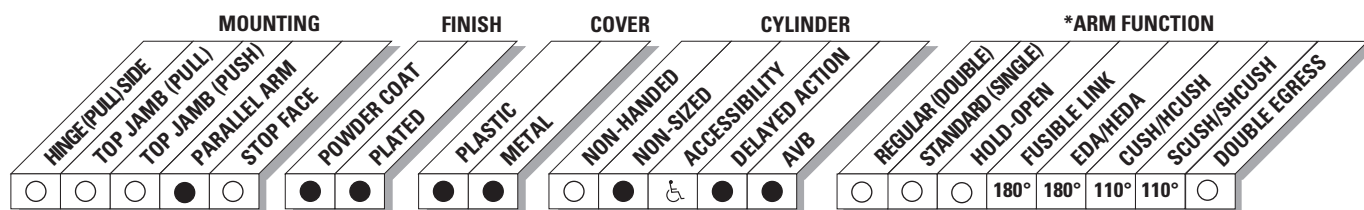


The 4110 is LCN's best performing heavy duty closer designed specifically for institutional and other rugged high traffic applications.

Certifications	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	<ul style="list-style-type: none"> ■ Plastic, Standard ■ Metal, Optional
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/2" Diameter Piston ■ 11/16" Diameter Double Heat Treated Pinion Journal 	Fasteners	Self Reaming and Tapping Screws (SRT)
Fluid	All Weather Fluid	Mounting	Parallel Arm (Push Side)
Handing	Handed	Arms	Extra-Duty arm
Templating	Peel-n-Stick templates - 2-1/2" x 6" Mounting Hole Pattern	Finishes/Colors/Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Size	Adjustable Spring Size 1-5, or Sized 6, Includes Patented Green Dial		<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes
Warranty	30 years		

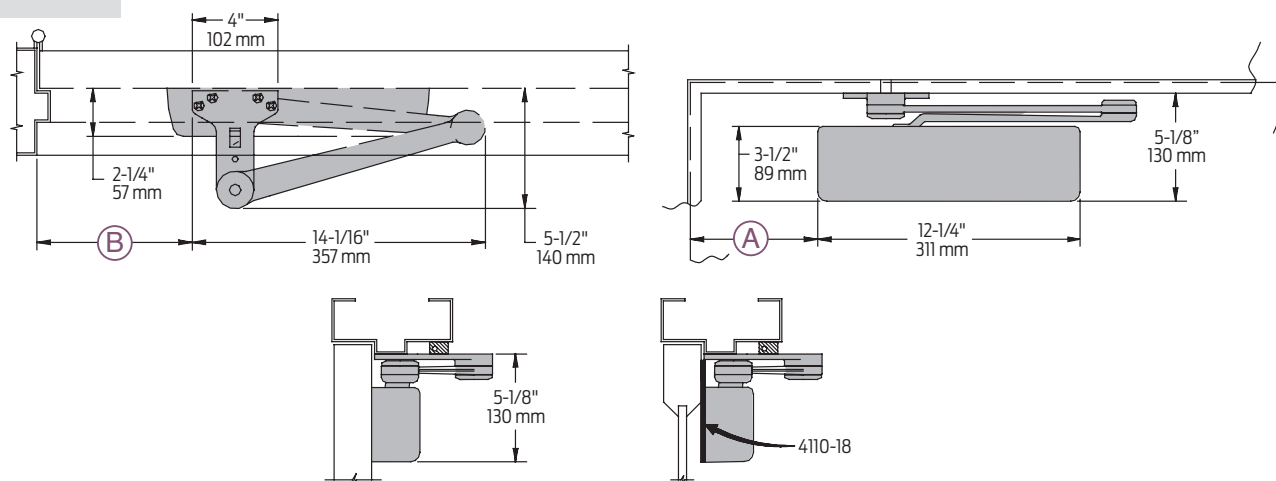
Special Templates

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



● AVAILABLE
○ NOT AVAILABLE

♿ Closer 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, 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	<ul style="list-style-type: none"> 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 rabbeted 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	
Crush Arm	Requires CUSH SHOE SUPPORT, 4110-30 for fifth screw anchorage with CUSH arms	
Delayed Action	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Cylinder starts backcheck at approximately 45° instead of the normal 75° Add suffix "AVB" to selected cylinder 	
Maximum opening	EDA or Fusible Link arm can be templated for	CUSH 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)
	or 180° A = 2-15/16" (75 mm) B = 2-15/16" (75 mm)	or 110° A = 5-9/16" (141 mm) B = 6-7/8" (175 mm)
	<ul style="list-style-type: none"> Hold-open points up to maximum opening with HEDA or Fusible Link arm 	<ul style="list-style-type: none"> Hold-open point at maximum opening with HCUSH arm Spring Cush hold-open points are approximately 5° less than templated stop point

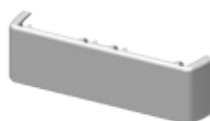
Cylinder



4111(6)-3071
Cast Iron Cylinder Assembly

- Handed
- Standard

Covers



4110-72
Plastic Cover

- Non-handed
- Standard



Left hand shown

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



4110-3049FL
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!



4110-3077CNS
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



4110-3077EDA/ 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

Arms



4110-3049CNS
HCUSH Arm

- Non-handed
- Provides hold-open function with templated stop/ hold-open points.
- Handle controls hold-open function



4110-3077SCNS
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



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 rabbeted 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 _____
Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass

Closer will be shipped with:

- Standard cylinder
- Standard cover
- Extra duty arm
- Self-reaming and tapping screws unless options listed below are selected.

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) (HCUSH)
- Spring Cush (SCUSH)
- Spring H-Cush (n/a with 4116 cylinder) (SHCUSH)
- 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- _____

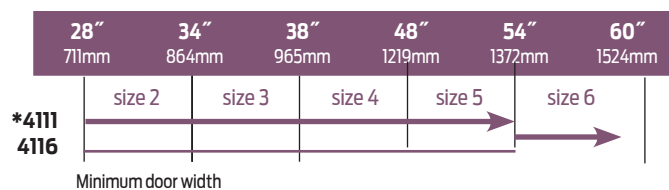
Table of sizes

- 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.

Exterior (and vestibule) door width



Interior door width




→ Indicates recommended range of door width for closer size. * Adjustable Size 1 thru 5.

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.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	4111	4111	4111
5.0* lbs.	4111	4111	4111	

* Maximum opening force.

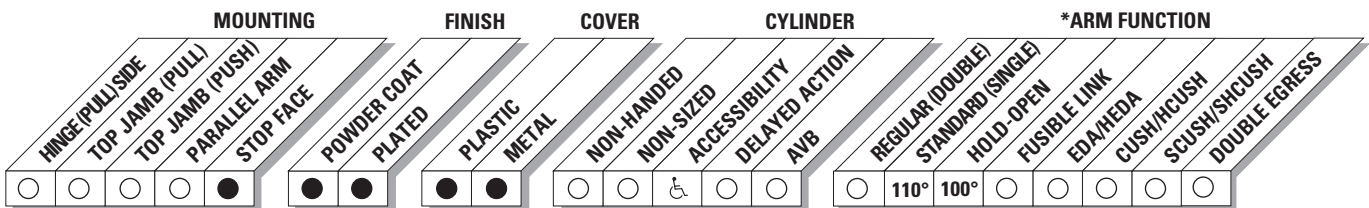


The 4110T is LCN's best performing heavy duty track closer designed specifically for interior doors in institutional and other high traffic applications.

Certifications	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	<ul style="list-style-type: none"> ■ Plastic, Standard ■ Metal, Optional
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/2" Diameter Piston ■ 11/16" Diameter Double Heat Treated Pinion Journal 	Fasteners	Self Reaming and Tapping Screws (SRT)
Fluid	All Weather Fluid	Mounting	Stop Face (Push Side)
Handing	Handed	Arms	Standard Arm and Track with Roller
Size	Adjustable Spring Size 1-5, or Sized 6. Includes Patented Green Dial	Finishes/Colors/Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Warranty	30 years		<ul style="list-style-type: none"> ■ 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.



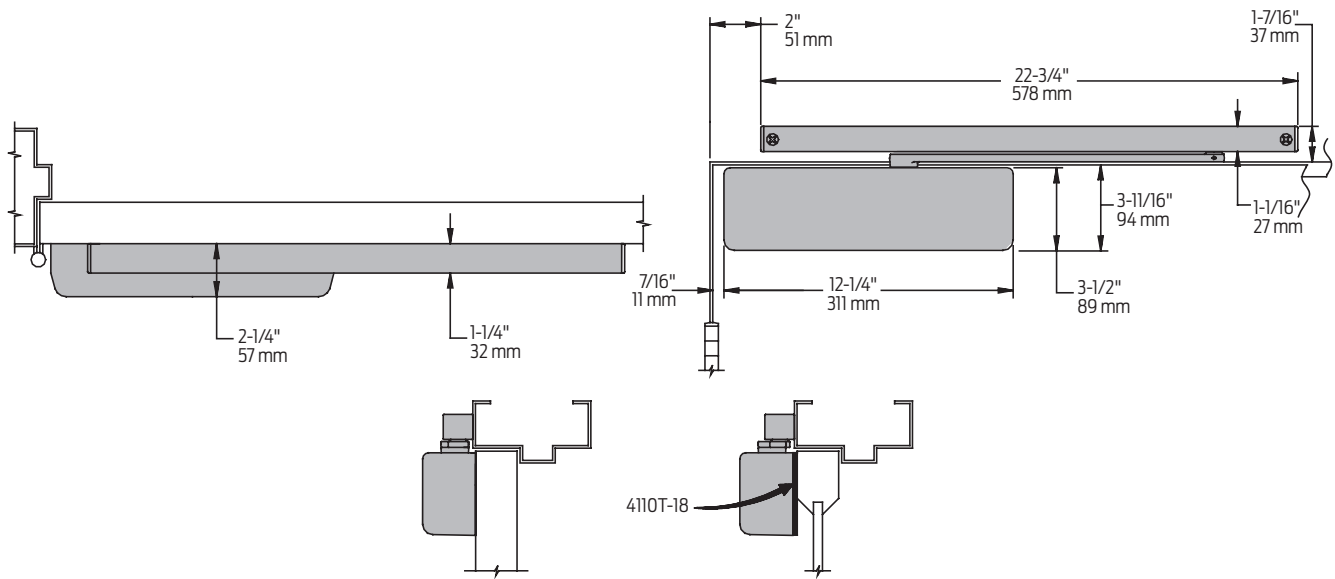
● AVAILABLE
○ NOT AVAILABLE

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

4110T Series

Mounting details

Stop face (Push Side) Mounting

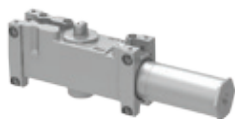


Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	<ul style="list-style-type: none"> ■ Recommended at hold-open point or where a door cannot swing 110°. ■ Optional track bumper assembly assists backcheck in cushioning the opening swing of the door ■ It is not intended to replace an auxiliary stop
Clearance	Projects 2-1/4" (57 mm) from face of door
Top Rail	<ul style="list-style-type: none"> ■ Less than 5-1/4" (133 mm) measured from the stop, requires PLATE, 4110T-18 ■ Plate requires 2-1/4" (57 mm) minimum
Stop Width	Minimum 1-1/4" (32 mm)
Maximum Opening	<ul style="list-style-type: none"> ■ 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

Installation Accessories



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-3034
Track Roller

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



4110T-3034H
Track Roller

- Quiet, low friction roller assembly
- Shoulder dimension "X" = 1/16" (2mm)
- Spring-loaded hold-open mechanism

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 will be shipped with:

- Standard cover
- Standard arm
- Track roller
- Standard track
- Self-reaming and tapping screws
unless options listed below are selected.

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

Installation Accessories

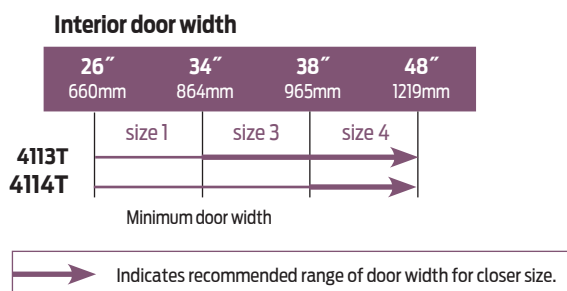
- Plate, 4110T-18

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



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.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	N/A	N/A	N/A
	5.0* lbs.	4111T	4111T	4111T

* Maximum opening force.



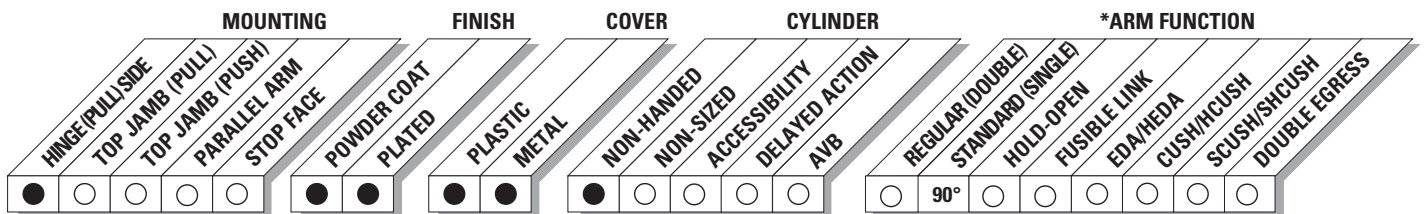
The 400T is a heavy duty closer to reliably control fire and smoke barrier doors with maximum swing of 90°. Designed for use with an SEM 7850 wall magnet.

Certifications	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/2" Diameter Piston ■ 3/4" Diameter Double Heat Treated Pinion Journal
Fluid	All Weather Fluid
Handing	Non-Handed
Size	Sized 3 or 4
Warranty	30 years

Cover	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
	<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes

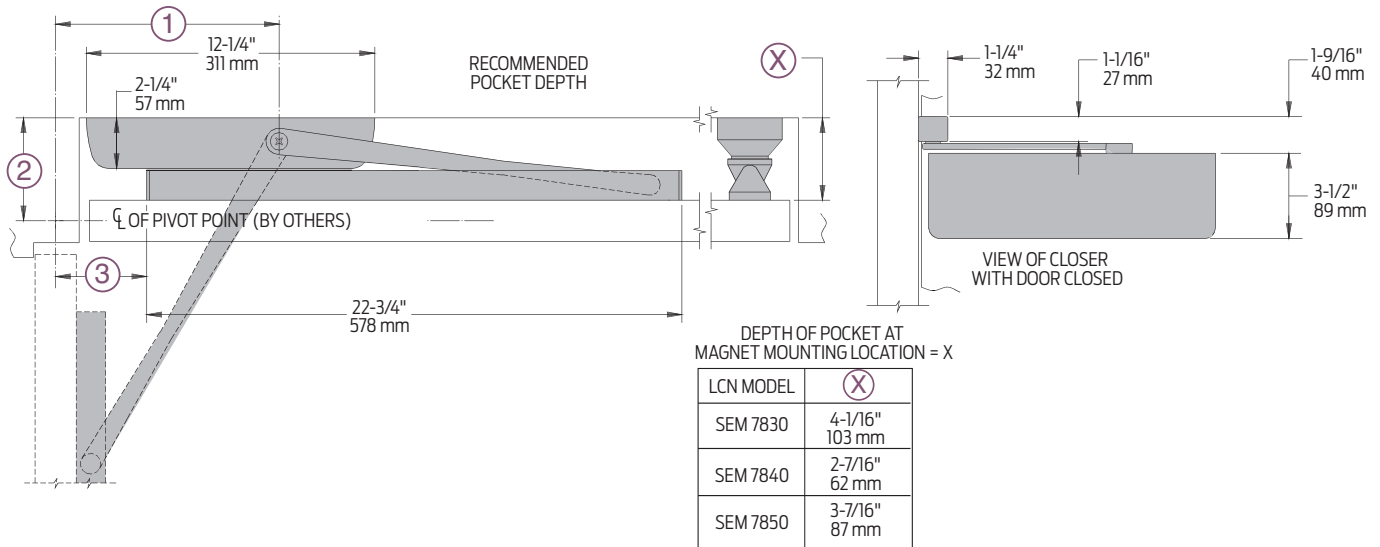
Special Templates

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.



Butt Hinges	<ul style="list-style-type: none"> ■ Pocket Pivot, Total Door Hinge or Center Pivot are door mounting options ■ Should not exceed 5" (127 mm)
Pocket Depth	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ Templating allows 90° only ■ Hold-open point 90° with magnet

Notes:

- Cylinder mounts on wall
- Track mounts on hinge side of door

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 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)

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

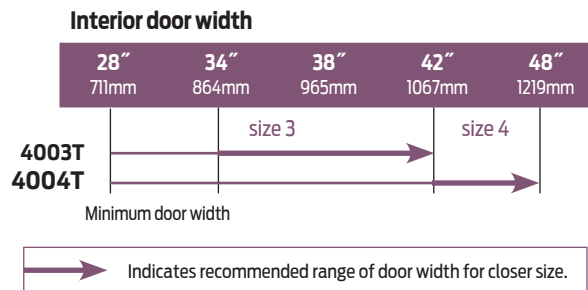
- TB*, Wood & Machine Screw (TBWMS)
- TORX Machine Screw (TORX)
- TB* & TORX Machine Screw (TBTRX)
* Specify door thickness if other than 1-3/4".

Special Template

- ST- _____

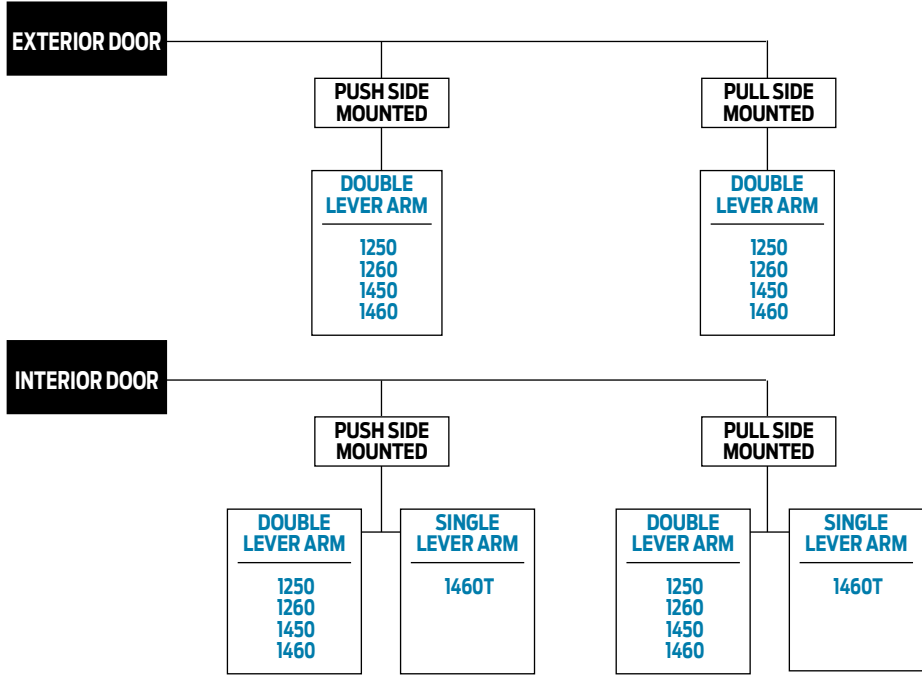
Table of sizes

- 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



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.

	MOUNTING					FINISH			COVER			CYLINDER			*ARM FUNCTION							
	HINGE (PULL SIDE)	TOP JAMB (PULL)	TOP JAMB (PUSH)	PARALLEL ARM	STOP FACE	PAINT	POWDER COAT	PLATED	PLASTIC	METAL	DESIGNER SERIES	NON-HANDED	NON-SIZED	ACCESSIBILITY	DELAYED ACTION	REGULAR (DOUBLE)	STANDARD (SINGLE)	HEAVY DUTY	HOLD-OPEN	EDA/HEDA	CUSH/H/CUSH	SCUSH/SH/CUSH
1250	●	○	●	●	○	●	●	○	●	○	○	●	●	♿	○	180°	○	○	180°	180°	110°	110°
1260	●	○	●	●	○	○	●	○	●	○	○	●	●	♿	○	180°	○	○	180°	120°	110°	110°
1450	●	○	●	●	○	●	●	●	●	●	○	●	●	♿	●	180°	○	○	180°	180°	110°	110°
1460	●	○	●	●	○	○	●	● ^D	●	○	●	●	●	♿	●	180°	○	180°	180°	110°	100°	100°
1460T	●	●	○	○	●	○	●	● ^D	●	○	●	●	●	♿	○	○	180°	○	115°	○	○	○

● 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.

^D = For designer series only.

1000 Series surface mounted closers

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

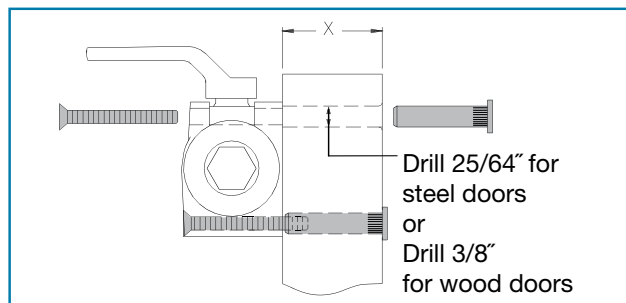
UL listed for self-closing doors without hold-open under "SWINGING DOOR CLOSERS" (GVEV) file R 1943. Tested and certified under ANSI Standard A156.4 grade one. Consult factory for details. Consult factory for other listings such as; cUL, California State Fire Marshal, Bureau of Standards and Appeals.

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 Philips 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.

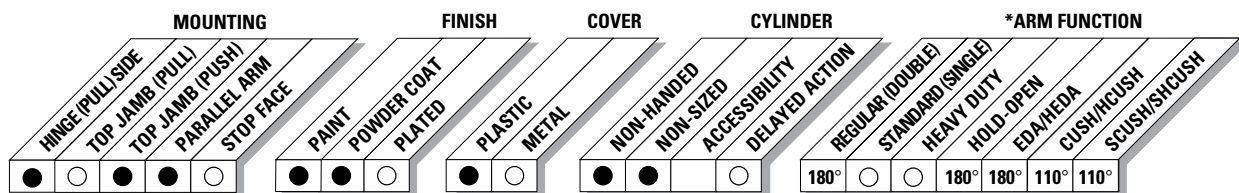


The 1250 Series cast aluminum closer is designed for low-frequency and low abusive traffic areas. This cast aluminum closer is ideal for aluminum storefronts, interior offices and many other applications. Combining dependable operation, low maintenance and a patented stylish look - with or without the 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	Cover	<ul style="list-style-type: none"> ■ Slim Line Cover, Optional
Body Construction	<ul style="list-style-type: none"> ■ Cast Aluminum Body ■ Full Complement Bearing ■ 1-3/8" Diameter Piston ■ 5/8" Diameter Single Heat Treated Pinion Journal 	Fasteners	Universal Screw Pack (UNIV)
Fluid	All Weather Fluid	Mounting	Hinge (Pull Side), Top Jamb (Push Side), Parallel Arm (Push Side)
Handing	Non-Handed	Arms	Tripack includes Regular, Top Jamb, and Parallel Arm (Rw/PA)
Templating	Peel-n-Stick templates - 3/4" x 9-1/16" Mounting Hole Pattern	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Size	Adjustable Spring Size 1-5		<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only
Warranty	15 years		

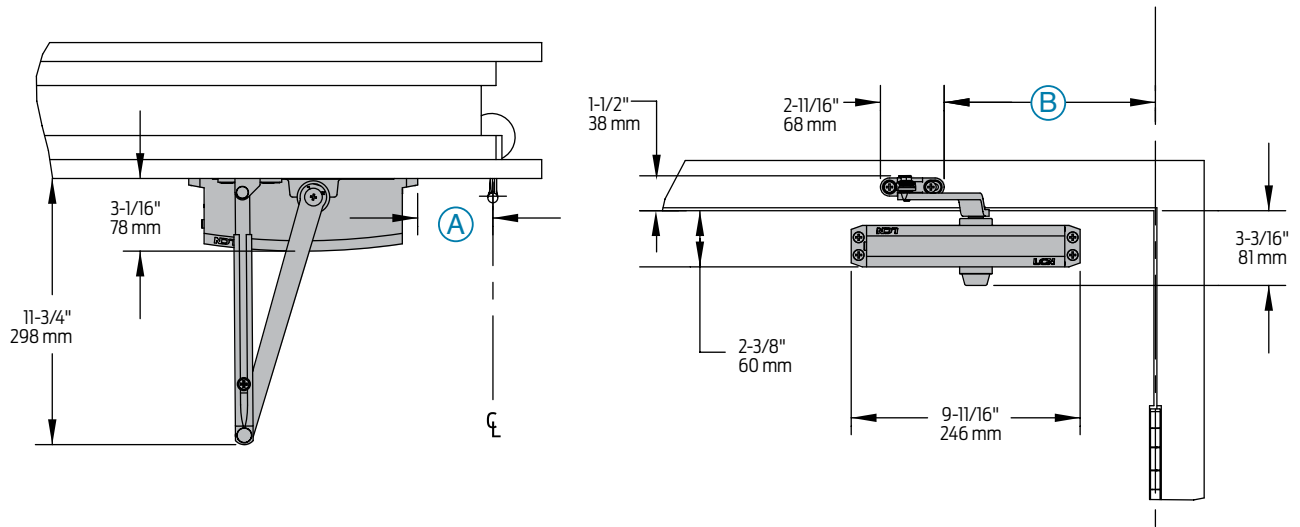
Special Templates

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

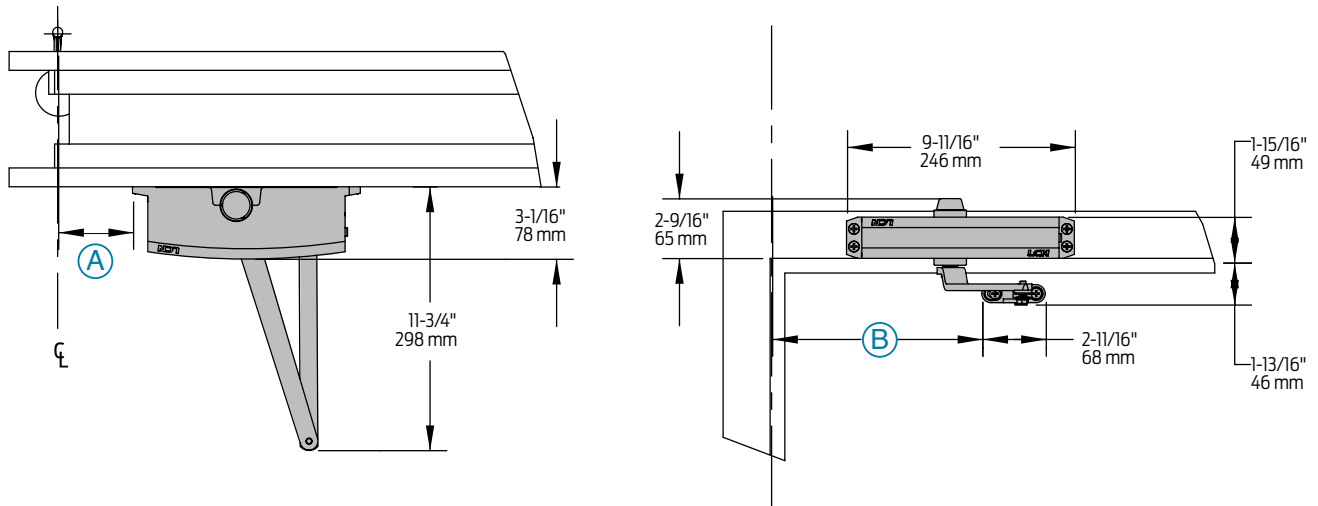


● AVAILABLE
○ NOT AVAILABLE

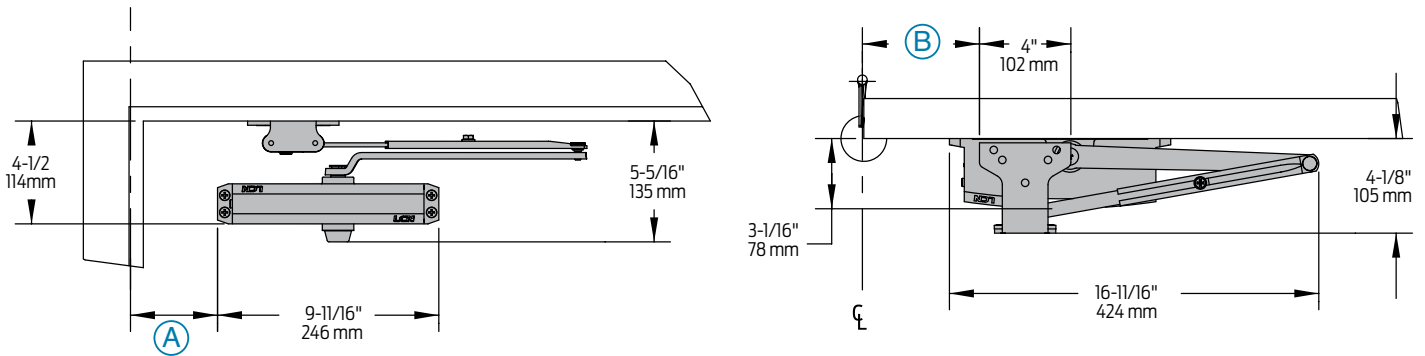
♿ Closer available with less than 5.0 lbs. opening force on 36" door.
* Maximum opening/hold-open point with standard template.



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 2-3/8" (60 mm) requires PLATE, 1250-18
Clearance	3-1/16" (78mm) behind door required for installation.
Maximum opening	100°: A = 6-11/16" (170mm) B = 12-7/16" (316 mm)
	101° to 120°: A = 5-11/16" (144mm) 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°		
Reveal	Arm Type	Maximum Reveal	Opening
	Regular Arm	0" to 5"	180°
	Long Arm	4" to 8"	165°
	Hold-Open Arm	0" to 2-3/4"	180°
	Long Hold-Open Arm	2" to 6-1/2"	180°
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.		



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

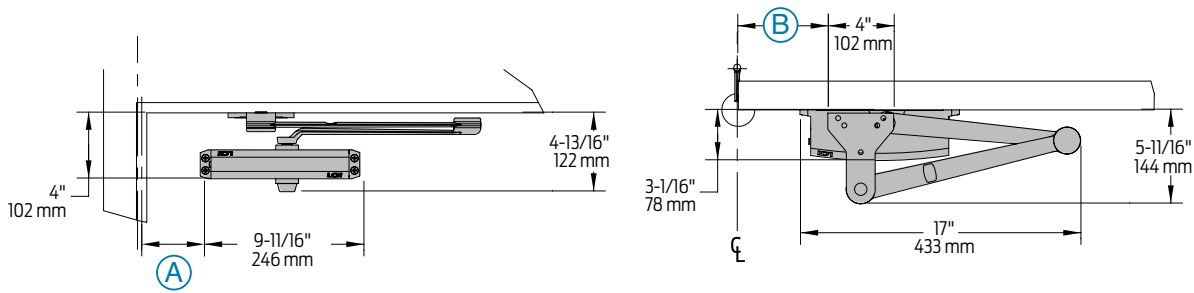
The 'B' dimension refers to the edge of the closer shoe bracket to the center line of pivot or hinge.

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 4-1/2" (114 mm) measured from the stop requires PLATE, 1250-18PA
Clearance	1250-62PA shoe projects 4-1/8" (105 mm) from door face
Stop Width	Minimum 1" (25 mm)
Blade Stop	Clearance, requires 1/2" (13 mm) BLADE STOP SPACER, 1250-61
Auxiliary Shoe	1250-62A allows installation of regular arm with overhead holder/stop
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

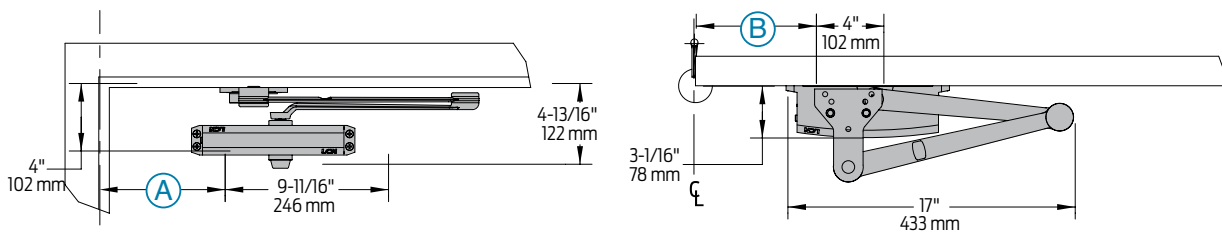


1250
Series

Mounting details

EDA and CUSH -N-STOP
mounting

CUSH/SCUSH 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	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	CUSH arms can be templated for maximum opening/hold-open point at 85°
	100°: A = 7-5/16" (186mm) B = 9" (229 mm)	85°: A = 8-13/16" (224 mm) B = 10-1/2" (267 mm)
	or 130°: A = 5-13/16" (148 mm) B = 7-1/2" (191 mm)	90°: A = 8-1/16" (205 mm) B = 9-3/4" (248 mm)
	or 180°: A = 3-13/16" (97 mm) B = 5-1/2" (140 mm)	100°: A = 6-11/16" (170 mm) B = 8-3/8" (213 mm)
		105°: A = 6-1/16" (154 mm) B = 7-3/4" (197 mm)
		110°: A = 5-7/16" (138 mm) B = 7-1/8" (181 mm)

Note:

• 1250 closers ordered with EDA, CUSH or SPRING CUSH arms include 1250-201 FIFTH HOLE SPACER to support the shoe

Cylinders



1250-3071
Cast Aluminum Cylinder Assembly

- Non-Handed
- Standard

Covers



1250-72
Slim Line Plastic Cover

- Non-Handed
- Optional

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



1250-30
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



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

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



1250-3077EDA
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



1250-3049
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



1250-3077CNS
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 will be shipped with:

- Standard cylinder
- Tri pack arm (Rw/PA)
- Universal screw pack
unless options listed below are selected.

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

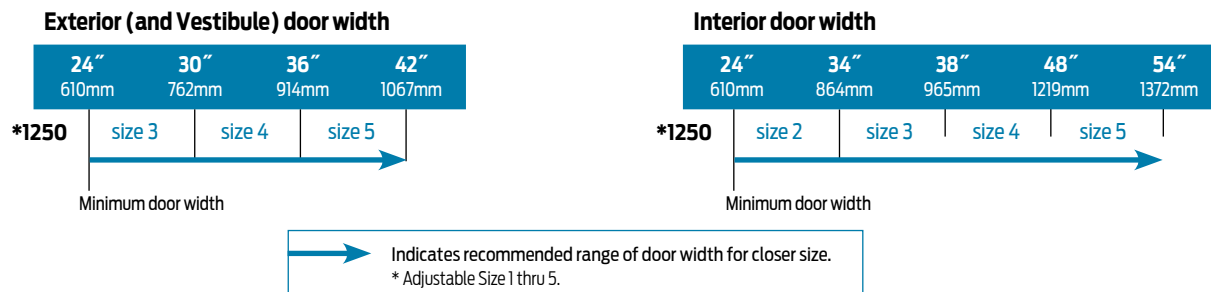
- ST- _____

Meets Buy American Act

- BAA

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.




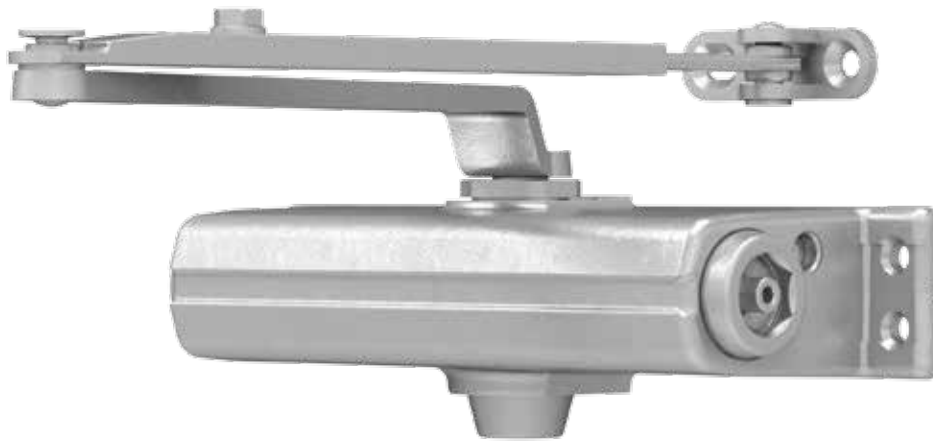
Reduced opening force 1250 Series closers

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.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	1250	1250	1250
	5.0* lbs.	1250	1250	1250

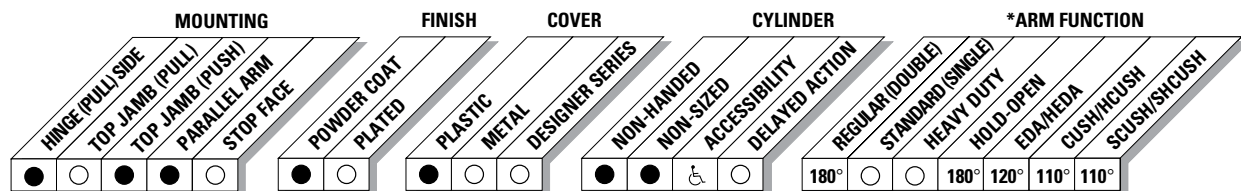


The 1260 is a light to medium duty cast iron closer designed to fit into the most common commercial foot print. The 1260 is adjustable for spring sizes 1-5. The 1260 also features a complete line of regular and extra duty arms, LCN's peel-n-stick installation templates, a convenient spring adjust pointer, 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	Cover	<ul style="list-style-type: none"> ■ Slim Line Cover, Optional
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-3/8" Diameter Piston ■ 5/8" Diameter Single Heat Treated Pinion Journal 	Fasteners	Self Reaming and Tapping Screws (SRT)
Fluid	All Weather Fluid	Mounting	Hinge (Pull Side), Top Jamb (Push Side), Parallel Arm (Push Side)
Handing	Non-Handed	Arms	Regular Arm
Templating	Peel-n-Stick templates - 3/4" x 9-1/16" Mounting Hole Pattern	Finishes/Colors/Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Size	Adjustable Spring Size 1-5		<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only
Warranty	20 years		

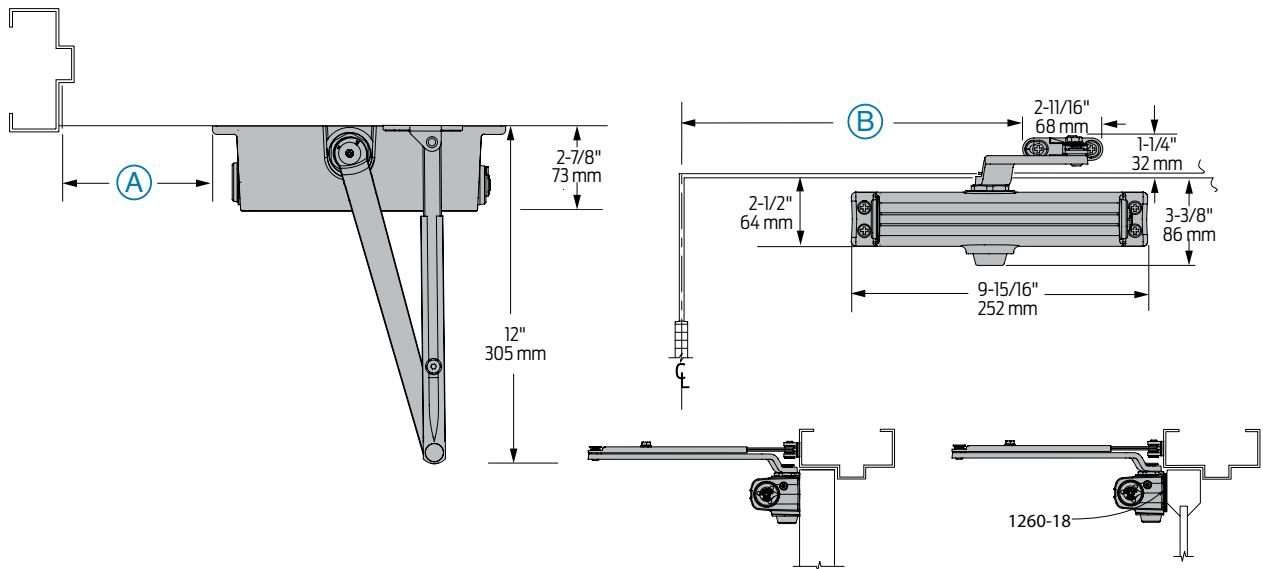
Special Templates

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

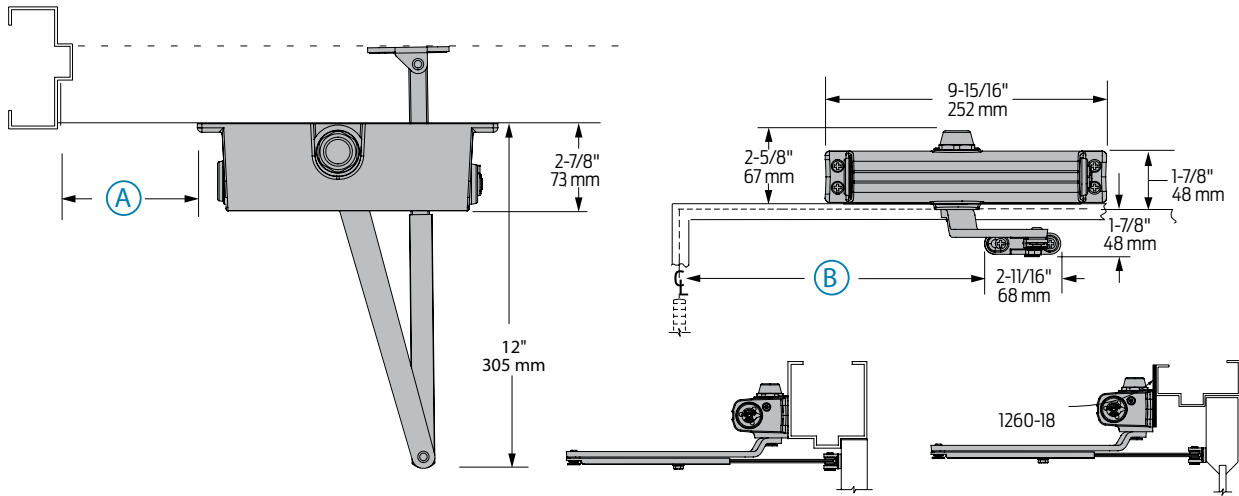


● AVAILABLE
○ NOT AVAILABLE

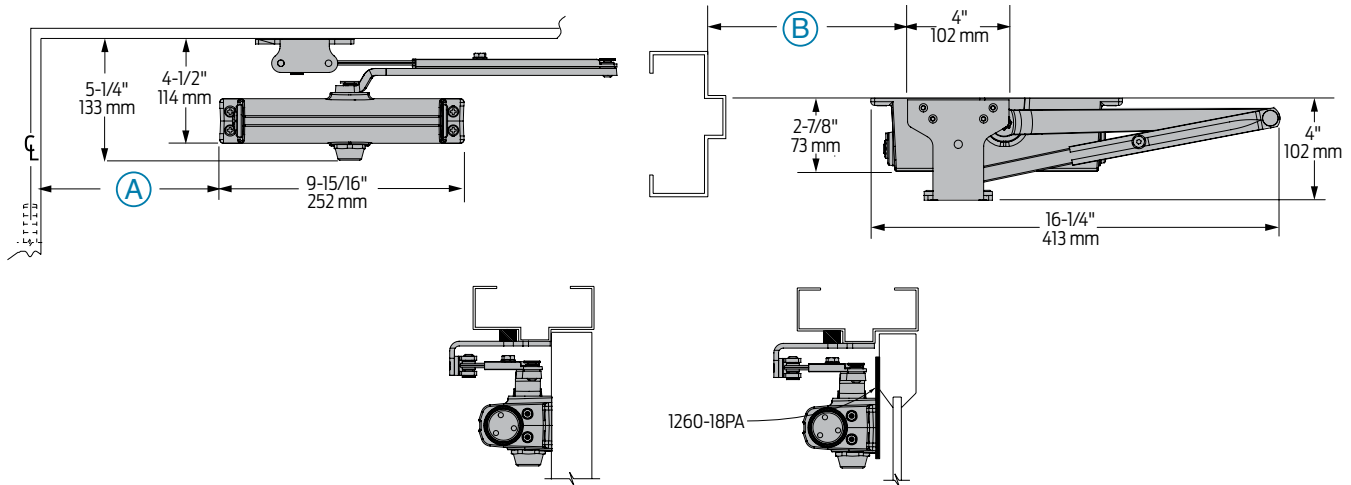
♿ Closer available with less than 5.0 lbs. opening force on 36" door.
* Maximum opening/hold-open point with standard template.



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	110°: A = 6-9/16" (167 mm) B = 12-7/16" (316 mm)
	101° to 120°: A = 5-9/16" (141 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°		
Reveal	Arm Type	Maximum Reveal	Opening
	Regular Arm	3-1/2"	Up to 120°
	Regular Arm	2-1/4"	121° to 180°
	Long Arm	7-1/2"	Up to 120°
	Long Arm	3-1/2"	121° to 180°
	Hold-Open Arm	2"	Up to 120°
	Hold-Open Arm	2-1/4"	121° to 180°
	Long Hold-Open Arm	4-1/2"	Up to 120°
	Long Hold-Open Arm	4-1/2"	121° to 160°
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.)		
Maximum opening	110°:	A = 7-1/16" (179 mm) B = 12-15/16" (329 mm)	
	101° to 120°:	A = 5-9/16" (141 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.		

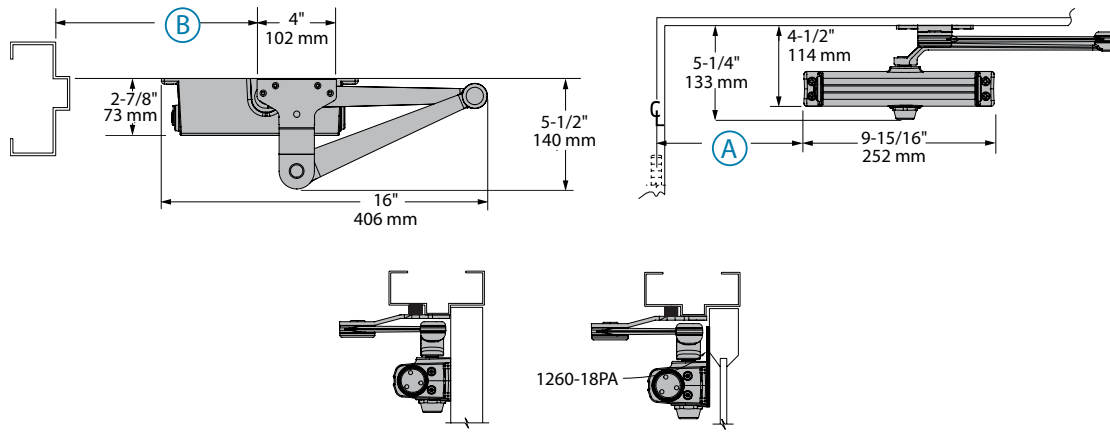


Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	Recommended at hold-open point, where a door cannot swing 180°, or where CUSH-N-STOP arm is not used
Top Rail	Less than 4-3/8" (111 mm) measured from the stop requires PLATE, 1260-18PA
Clearance	1260-62PA shoe projects 4" (102 mm) from door face
Stop Width	Minimum 1" (25 mm)
Blade Stop	Clearance, requires 1/2" (13 mm) BLADE STOP SPACER, 1260-61
Auxiliary Shoe	1260-62A allows installation of regular arm with overhead holder/stop. Special templating required
Maximum opening	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)
	Hold-open points up to maximum opening with hold-open arm. *Frame and trim permitting.

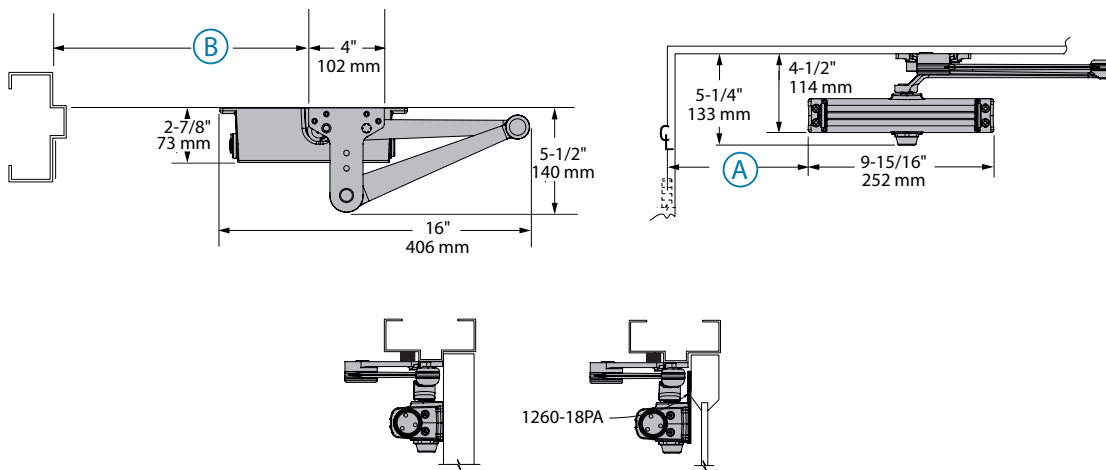
Notes:

- 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

EDA mount



CUSH mount



Clearance	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	EDA template allows 120°. Hold-open point up to maximum opening	CUSH arms can be templated for maximum opening/hold-open point at
	90°: A = 4-13/16" (122 mm) B = 9-1/2" (241 mm)	85°: A = 5-5/16" (135 mm) B = 10" (254 mm)
	or 120°: A = 3-5/16" (84 mm) B = 8" (203 mm)	90°: A = 4-11/16" (119 mm) B = 9-3/8" (238 mm)
	Hold-open points up to maximum opening with HEDA arm	100°: A = 3-9/16" (90 mm) B = 8-1/4" (210 mm)
		110°: A = 2-13/16" (71 mm) B = 7-1/2" (191 mm)

Note:

• 1260 closers ordered with EDA, CUSH or SPRING CUSH arms include 1260-201 FIFTH HOLE SPACER to support the shoe.

Cylinders



1261(2)(3)(4)(5)-3071
Cast Iron Cylinder Assembly

- Non-handed
- Standard

Covers



1260-72
Slim Line Plastic Cover

- Non-handed
- Optional

Installation Accessories



1260-18
Plate

- 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



1260-18PA
Plate

- 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



1260-18QF
Quick Fix™ Bracket Kit

- Optional kit includes retro-fit mounting plates for 1371 closer cylinder and shoe
- Useful in applications when previously drilled holes are damaged



1260-30
CUSH Shoe Support

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



1260-61
Blade Stop Spacer

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



1260-62A
Auxiliary Shoe

- Requires a top rail of 7" (178 mm)
- Optional shoe replaces-62PA for parallel arm mounting of regular arm with overhead holder/stop



1260-419
PA Flush Panel Adapter

- Provides horizontal mounting surface for PA, EDA or CUSH shoe on single rabbeted or flush frame



1260-62PA
PA Shoe

- Required for parallel arm mounting

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



1260-3077EDA/62G
Extra Duty Arm w/ 62G

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



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 will be shipped with:

- Standard cylinder
- Regular arm
- Self-reaming and tapping screws
unless options listed below are selected.

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)
- Long Hold-Open (HLONG)
- 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

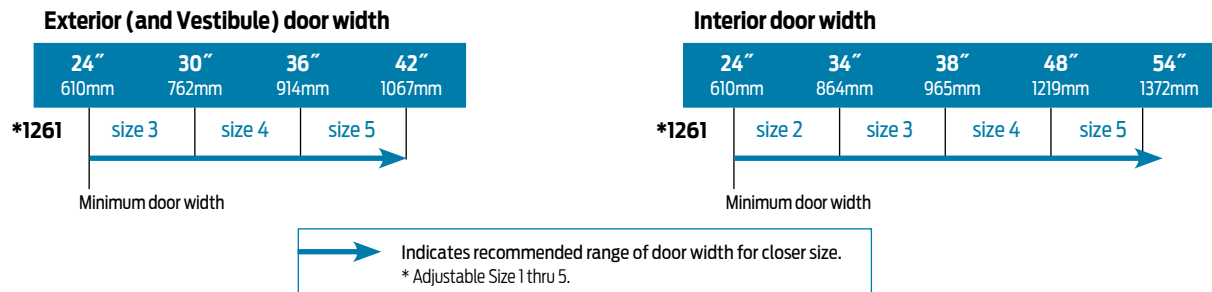
- Plate, 1260-18
- Plate, 1260-18PA
- CUSH Shoe Support, 1260-30
- Blade Stop Spacer, 1260-61
- Auxiliary Shoe, 1260-62A
- PA Flush Panel Adapter, 1260-419
- Quick Fix™ Bracket Kit, 1260-18QF

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.




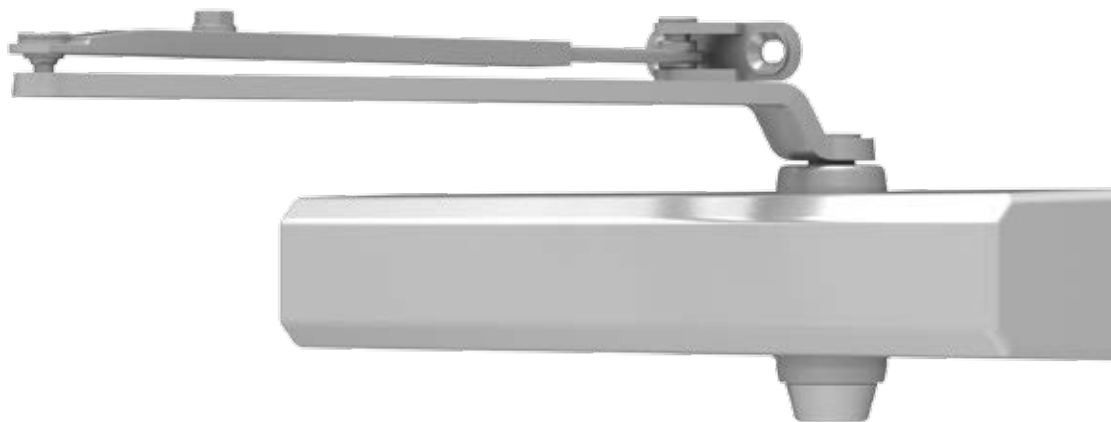
Reduced opening force 1260 Series closers

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.

* Maximum opening force.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	1261	1261	1261
	5.0* lbs.	1261	1261	1261

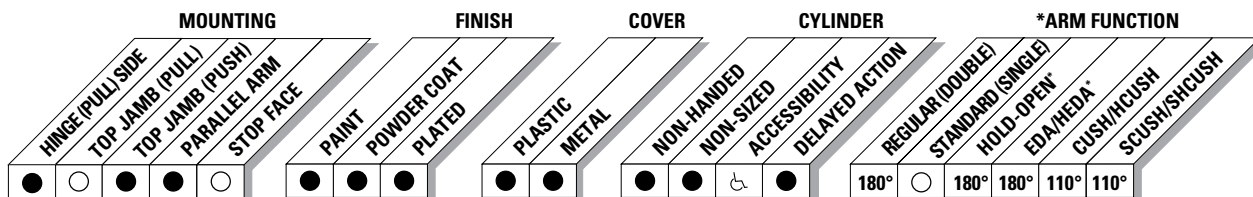


The 1450 Series cast aluminum closer was specially designed to deliver consistent, dependable, long-term performance in frequently-used, low-abusive traffic areas. The patented design, featuring the industry's most common hole pattern, is an excellent choice for a range of applications - from aftermarket 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	Cover	<ul style="list-style-type: none"> ■ Slim Line Plastic, Standard ■ Full Plastic and Metal, Optional
Body Construction	<ul style="list-style-type: none"> ■ Cast Aluminum Body ■ Full Complement Bearing ■ 1-1/4" Diameter Piston ■ 5/8" Diameter Single Heat Treated Pinion Journal 	Fasteners	Universal Screw Pack (UNIV)
Fluid	All Weather Fluid	Mounting	Hinge (Pull Side), Top Jamb (Push Side), Parallel Arm (Push Side)
Handing	Non-Handed	Arms	Standard regular pull side, and top jamb
Templating	Peel-n-Stick templates - 3/4" x 12" Mounting Hole Pattern	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Size	Adjustable Spring Size 1-6		<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes
Warranty	25 years		

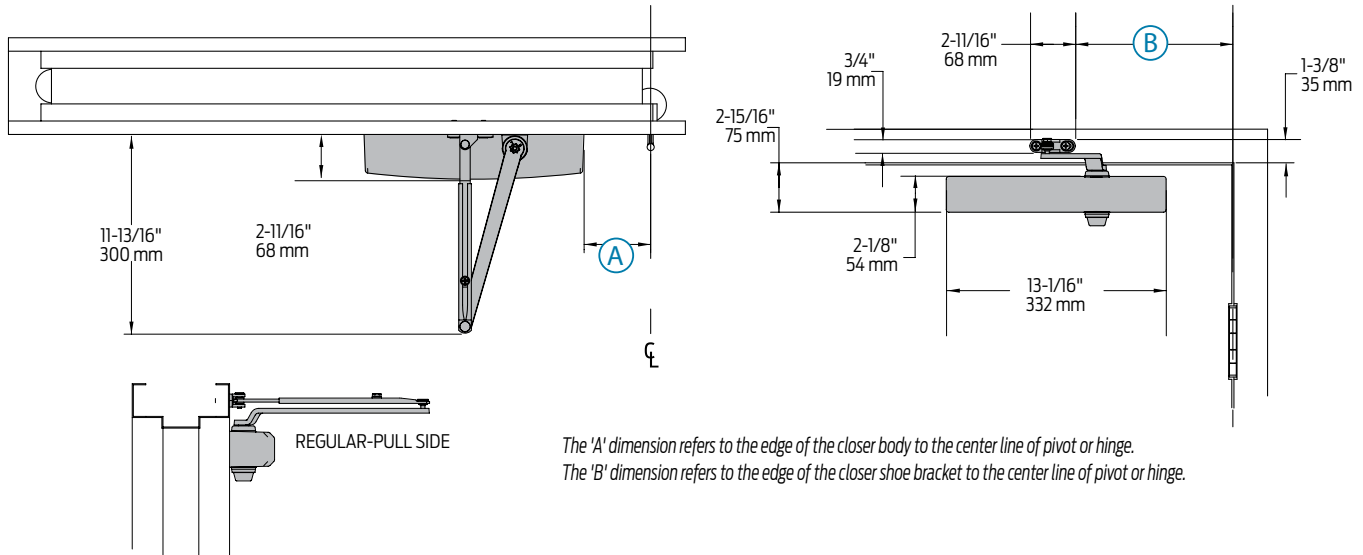
Special Templates

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

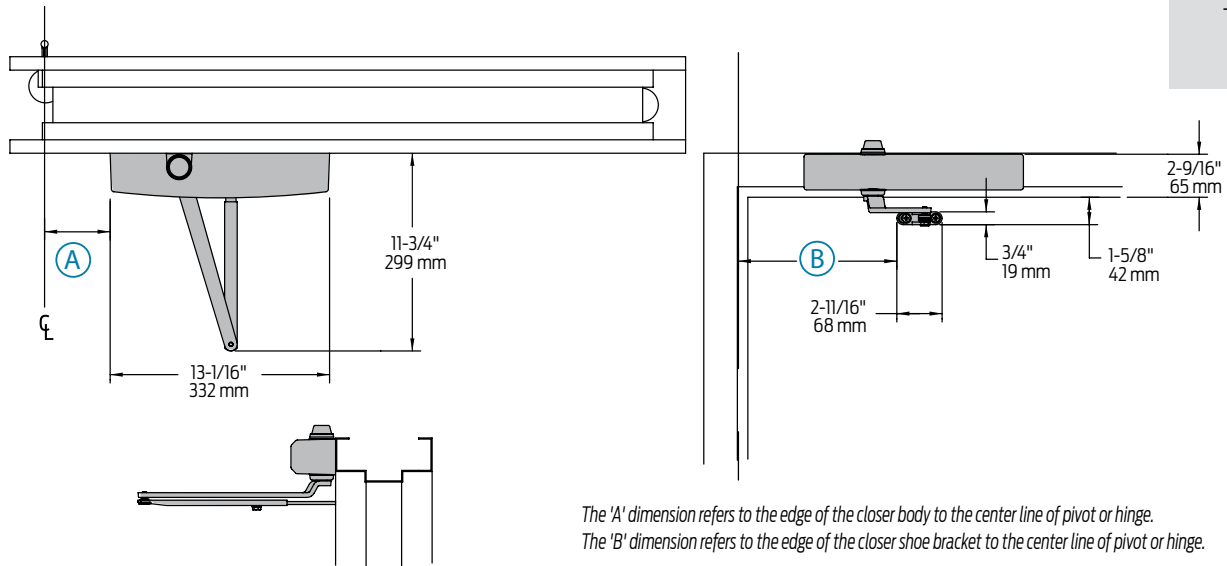


● AVAILABLE
○ NOT AVAILABLE

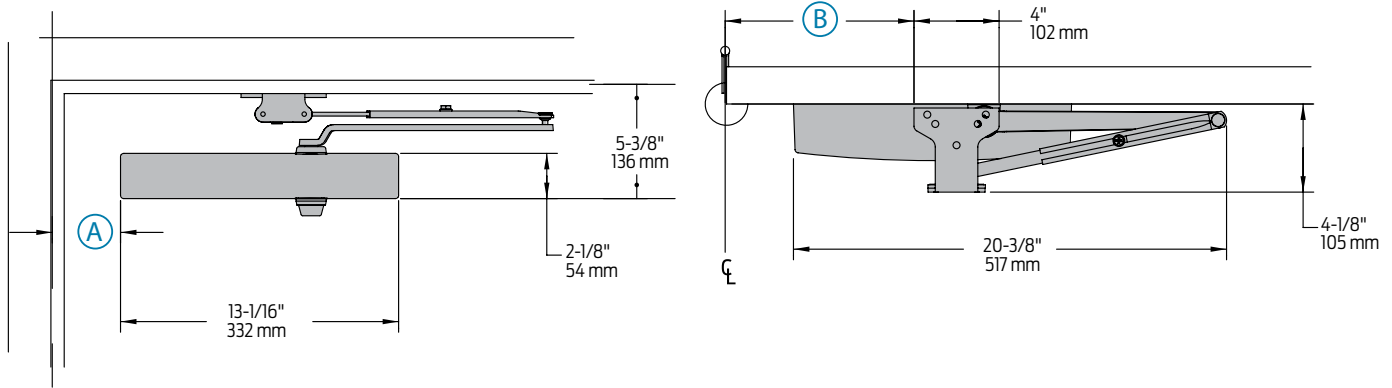
♿ Closer available with less than 5.0 lbs. opening force on 36" door.
* Maximum opening/hold-open point with standard template.
D = For designer series only.



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	<ul style="list-style-type: none"> 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
Delayed Action	Delays closing from 180°-70°. Delay time adjustable up to approximately 1 minute
Maximum opening	<p>100°: A = 7" (102 mm) B = 12-3/8" (314 mm)</p> <p>101° to 130°: A = 5-1/2" (140 mm) B = 10-7/8" (276 mm)</p> <p>131° to 180°: A = 4" (102 mm) B = 9-3/8" (238 mm)</p> <p>Hold-open points up to maximum opening with hold-open arm *Frame and trim permitting.</p>



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	Arm Type	Reveal	Max Opening
	Regular Arm	5"	Up to 170°
	Regular Arm	3-3/4"	Up to 180°
	Long Arm	8"	Up to 155°
	Hold-Open Arm	2-3/4"	Up to 180°
	Long Hold-Open Arm	4-7/8"	Up to 140°
Top Rail	Requires 2-1/8" (54 mm) minimum. 3-3/8" (86 mm) minimum with closer on PLATE, 1450-18.		
Head Frame	Less than 1-3/4" (44 mm) requires PLATE, 1450-18. For flush ceiling condition with 1-3/4" (45 mm) head frame, use PLATE, 1450-18		
Delayed Action	Delays closing from 180°-70°. Delay time adjustable up to approximately 1 minute		
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.		

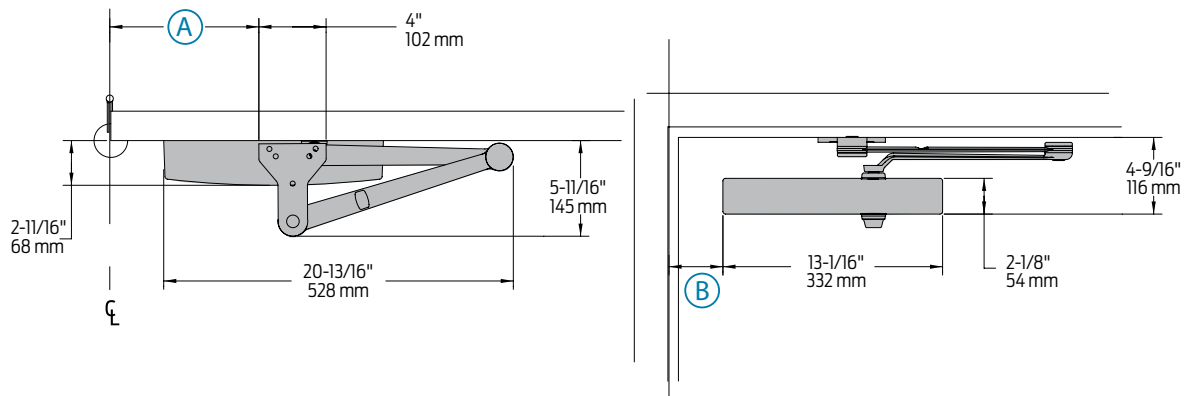


Butt Hinges	Should not exceed 5" (127 mm) in width		
Auxiliary Stop	Recommended at hold-open point, where a door cannot swing 180°, or where CUSH-N-STOP arm is not used		
Top Rail	<ul style="list-style-type: none"> Less than 5-1/4" (133 mm) measured from the soffit requires Plate requires 1-1/4" (32 mm) minimum. 		
	Cover	Minimum Top Rail (measured from soffit)	Plate Required
	Plastic	3-1/2" (89 mm)	1450-18
		2-1/4" (57 mm)	1450-18PA
	Metal	3-1/2" (89 mm)	1450-18FC
		2-1/4" (57 mm)	1450-18PAFC
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		
Delayed Action	Delays closing from 180°-70°. Delay time adjustable up to approximately 1 minute		
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.		

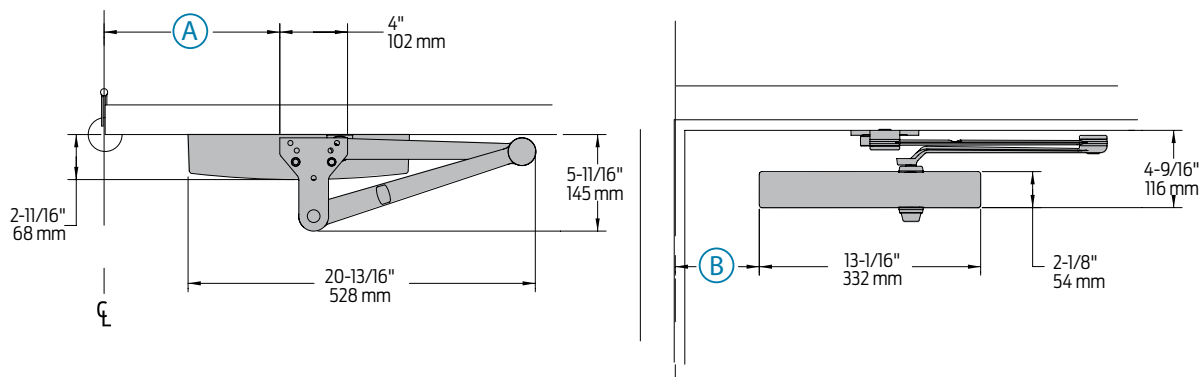
Notes:

- PA shoe is included with Rw/PA Arm
- 1450 closer includes 1450-201 FIFTH HOLE SPACER to support PA SHOE

EDA/HEDA mount



CUSH/HCUSH/SCUSH /SHCUSH 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	1450-62EDA or CUSH shoe projects 5-11/16" (144mm) from door face	
Head Frame	Flush or rabbeted requires CUSH FLUSH PANEL ADAPTER, 1450-419	
EDA or CUSH ARM	Requires soffit SHOE SUPPORT, 1450-30 for fifth screw anchorage where reveal is less than 3-1/16" (78 mm)	
Spring CUSH	Dead stop points are approximately 5° more than templated stop points	
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 85°
	120°: A = 8-7/8" (225 mm) B = 3-3/16" (81 mm)	85°: A = 10-3/8" (279 mm) B = 4-15/16" (140 mm)
	over 120°: A = 6-3/8" (162 mm) B = 11/16" (17 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



1450-3071
Cast Aluminum Cylinder Assembly

- Non-Handed
- Standard



1450-3071DEL
Cast Aluminum Cylinder Assembly with Delay Action

- Optional

Covers



1450-72
Slim Line Plastic Cover

- Non-Handed
- Standard



1450-72MC
Metal Cover

- Handed
- Optional



1450-72FC
Full Plastic Cover

- Non-Handed
- Optional

Installation Accessories



1450-18 / 1450-18FC
Plate

- 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, 1450-18FC



1450-18PA / 1450-18PAFC
Plate

- Required for parallel arm mounting where top rail is less than 4-3/8" (111mm), measured from the stop
- Requires 1-3/4" (44 mm) minimum top rail
- With full cover, use PLATE, 1450-18FC



1450-30
CUSH Shoe Support

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



1450-61
Blade Stop Spacer

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



1450-62PA
PA Shoe

- Required for parallel arm mounting



1450-62A
Auxiliary Shoe

- Requires a top rail of 7" (178mm). Optional shoe replaces -62PA for parallel arm mounting of regular arm with overhead holder/stop



1450-419
PA Flush Panel Adapter

- Provides horizontal mounting surface for PA, EDA or CUSH shoe on single rabbeted or flush frame

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/G 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 stop in 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.

Closer options

Cylinder

- Delayed Action (DEL)

Finish

- Custom Powder Coat (RAL)
(Metal cover required)
- Plated Finish, US _____
(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- _____

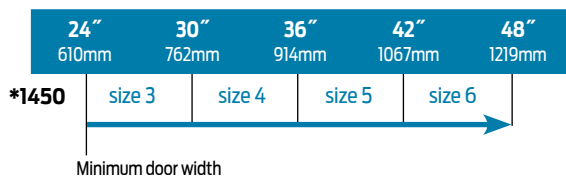
Meets Buy American Act

- BAA

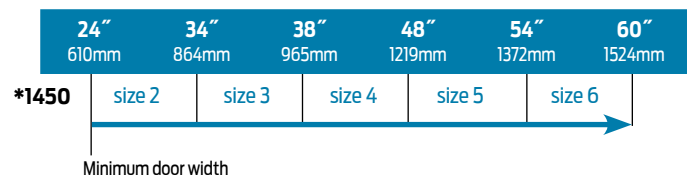
Table of sizes

- 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.

Exterior (and Vestibule) door width



Interior door width




→ Indicates recommended range of door width for closer size.
* Adjustable Size 1 thru 6.

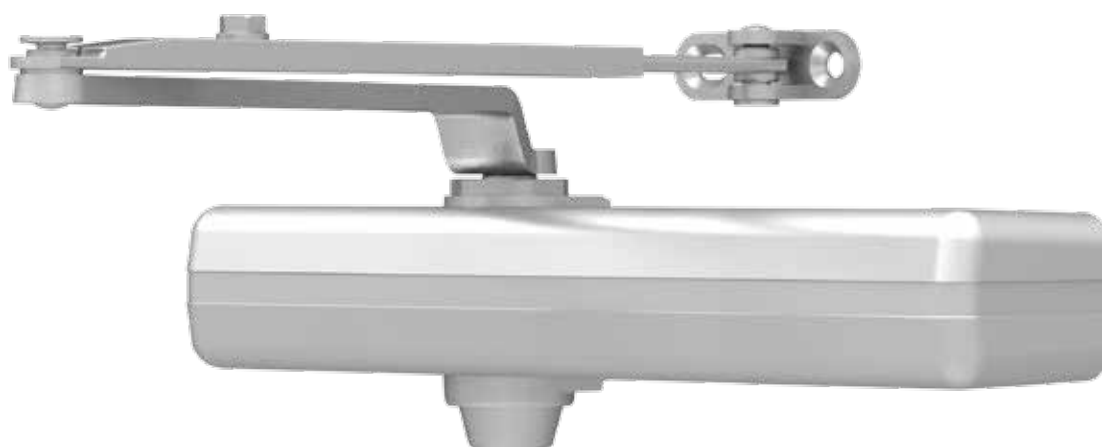
Reduced opening force 1450 Series closers

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.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	1450	1450	1450
	5.0* lbs.	1450	1450	1450

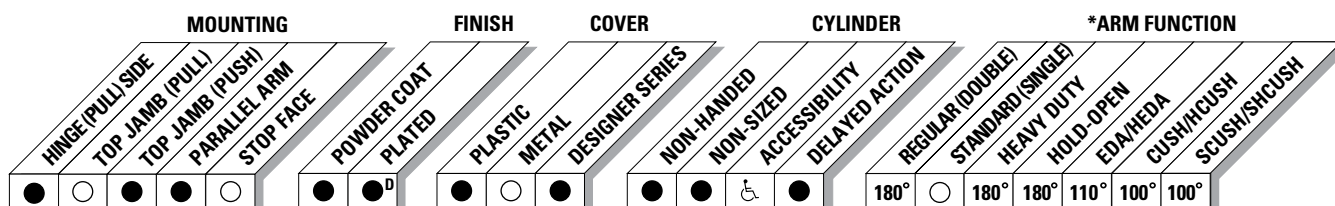


Designed for maximum versatility, the 1460, available with multiple cover options, can be used for both commercial and institutional applications. This fully universal closer offers a wide variety of options and fast and accurate installation.

Certifications	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	<ul style="list-style-type: none"> ■ Slim Line Plastic, Standard ■ Full Plastic and Metal Designer Series, Optional
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/4" Diameter Piston ■ 3/4" Diameter Single Heat Treated Pinion Journal 	Fasteners	Self Reaming and Tapping Screws (SRT)
Fluid	All Weather Fluid	Mounting	Hinge (Pull Side), Top Jamb (Push Side), Parallel Arm (Push Side)
Handing	Non-Handed	Arms	Standard regular pull side, and top jamb
Templating	Peel-n-Stick templates - 1" x 7-1/2" Mounting Hole Pattern	Finishes/Colors/Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Size	Adjustable Spring Size 1-6. Includes Patented Green Dial		<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes
Warranty	30 years		

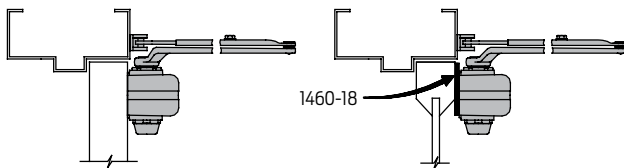
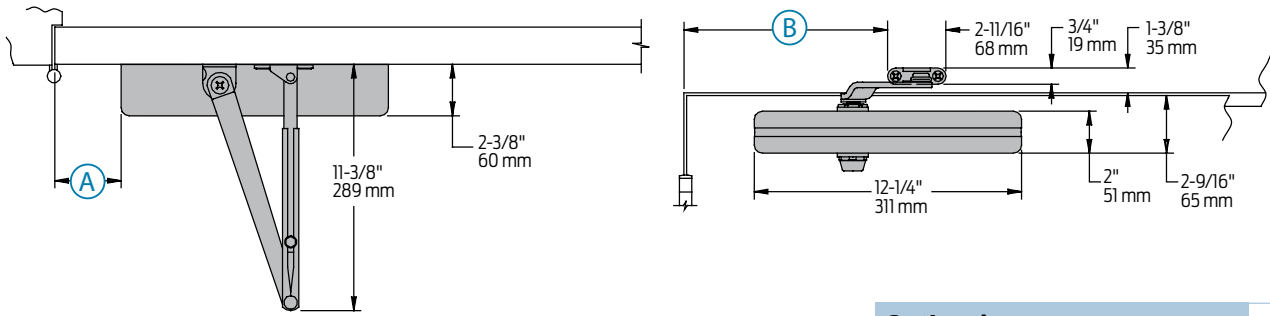
Special Templates

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



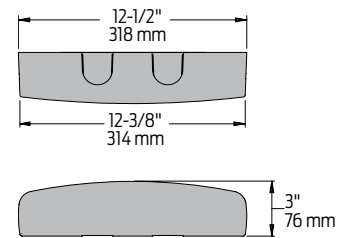
● AVAILABLE
○ NOT AVAILABLE

♿ 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.

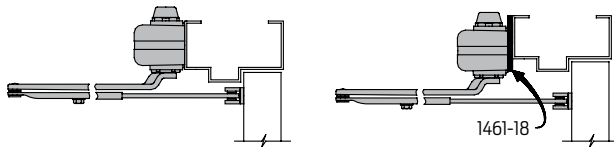
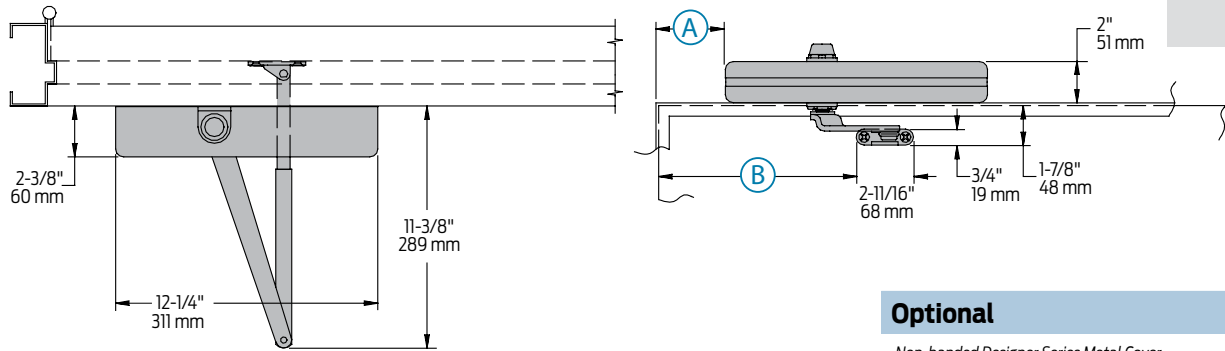


Optional

Non-handed Designer Series Metal Cover

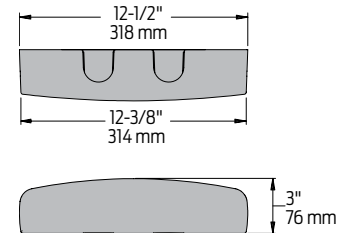


Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	Recommended at hold-open point or where a door cannot swing 180°
Reveal	Should not exceed 3/4" (19 mm) for regular arm or 1/2" (13 mm) for hold-open arm
Top Rail	<ul style="list-style-type: none"> Less than 2-1/2" (64 mm) requires PLATE, 1460-18 With Full cover, use PLATE, 1460-18FC. Plate requires 1-1/2" (38 mm) minimum With Designer Series metal cover, use PLATE, 1460-18DSI
Clearance	2-3/8" (60 mm) behind door required for installation
Delayed Action	<ul style="list-style-type: none"> Add suffix "DEL" to selected cylinder (eg. 1461 DEL) Delays closing from: <ul style="list-style-type: none"> 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.

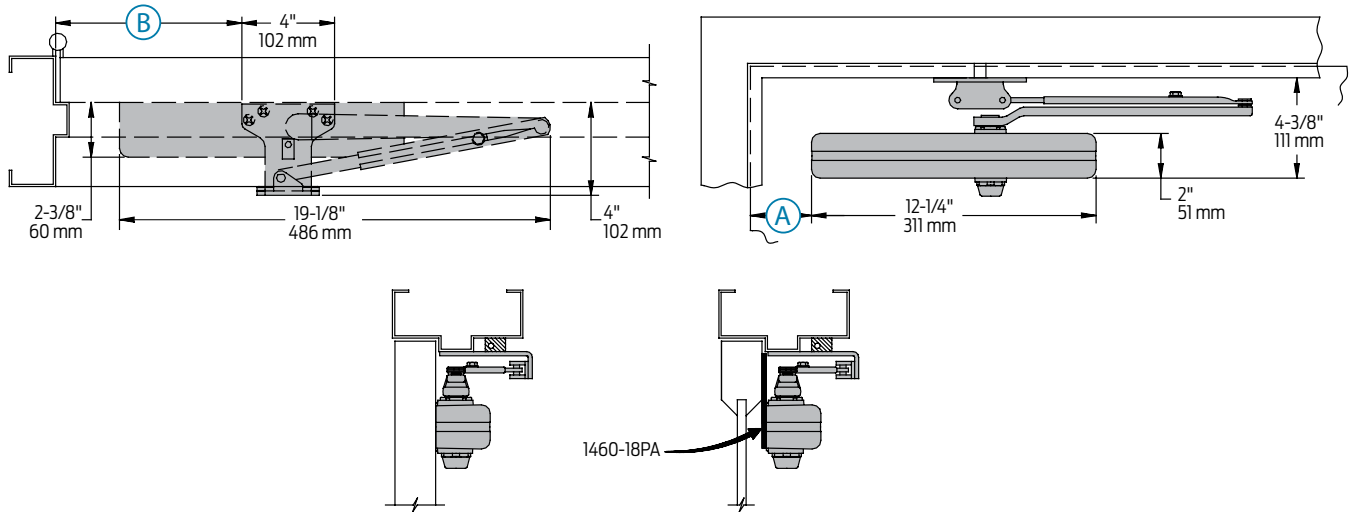


Optional

Non-handed Designer Series Metal Cover



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	Arm Type	Reveal	Max Opening
	Regular Arm	4-7/8"	Up to 140°
	Regular Arm	3-1/2"	Up to 180°
	Long Arm	7"	Up to 140°
	Hold-Open Arm	2-1/2"	Up to 180°
	Long Hold-Open Arm	4-7/8"	Up to 140°
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	<ul style="list-style-type: none"> ■ Add suffix "DEL" to selected cylinder (eg. 1460 DEL). ■ Delays closing: <ul style="list-style-type: none"> 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)	
	101° 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.		

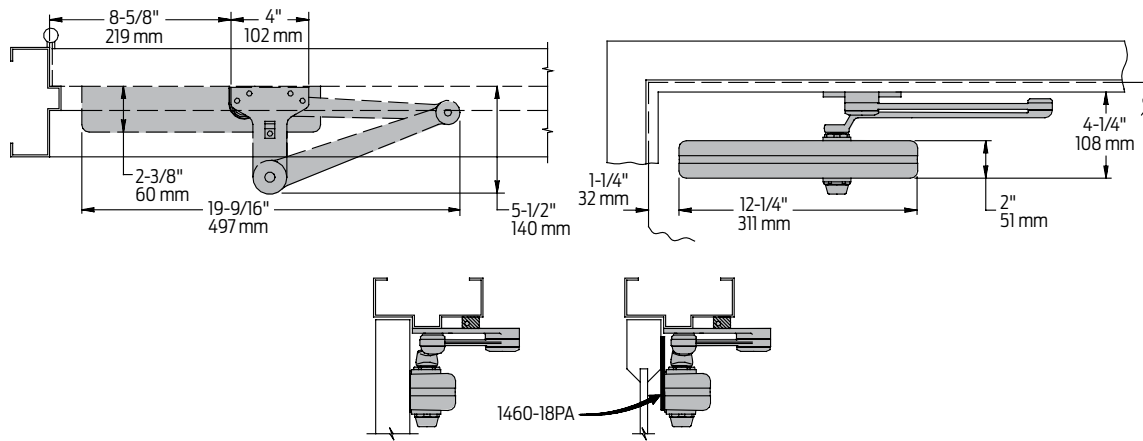


Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	Recommended at hold-open point, where a door cannot swing 180°, or where CUSH-N-STOP arm is not used
Top Rail	<ul style="list-style-type: none"> Less than 4-3/8" (111 mm) measured from the stop requires PLATE, 1460-18PAFC Plate requires 1-3/4" (44 mm) minimum. Plate requires 1-1/4" (32 mm) minimum With Designer Series metal cover, use PLATE, 1460-18PADSI
Clearance	1460-62PA shoe projects 4" (102 mm) from door face
Head Frame	Flush or single rabbeted requires PA SHOE ADAPTER, 1460-419
Stop Width	Minimum 1" (25 mm)
Blade Stop	Clearance, requires 1/2" (13 mm) BLADE STOP SPACER, 1460-61
Auxiliary Shoe	<ul style="list-style-type: none"> 1460-62A allows installation of regular arm with overhead holder/stop Special templating required
Delayed Action	<ul style="list-style-type: none"> Add suffix "DEL" to selected cylinder (eg. P1460 DEL) Delays closing from maximum opening to approximately 75° Delay time adjustable up to approximately 1 minute
Maximum opening	Regular or hold-open arm can be templated to 100°: A = 4-1/4" (108 mm) B = 9-1/4" (235 mm) or 180°: A = 1-3/4" (44 mm) B = 6-3/4" (171 mm) Hold-open points up to maximum opening with hold-open arm.

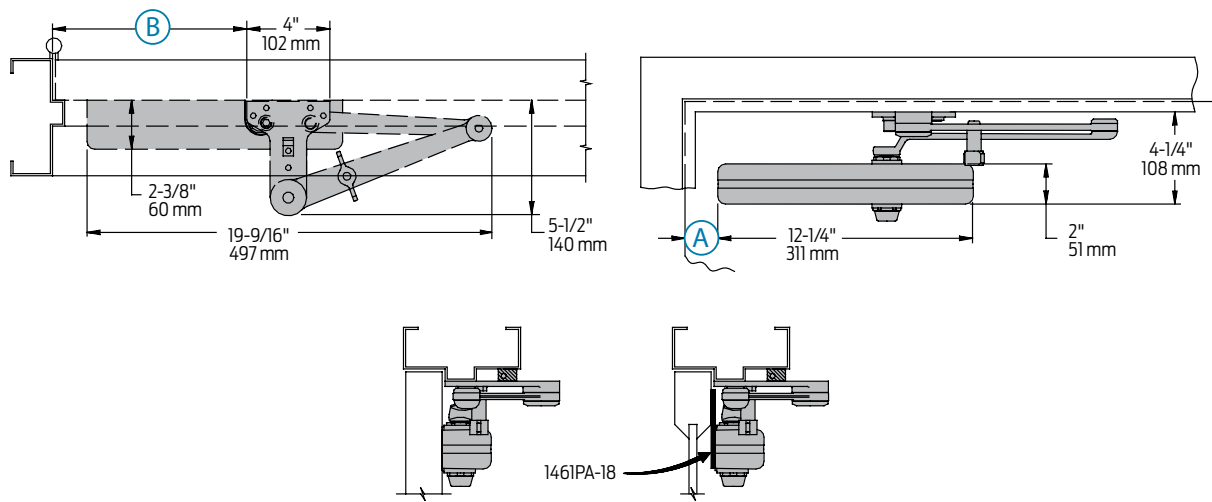
Notes:

- Optional mounting requires PA SHOE, 1460-62PA for REGULAR or HOLD-OPEN arms. Add prefix "P" to closer description (e.g. P1460)
- P1460 closer includes 1460-201 FIFTH HOLE SPACER to support PA SHOE.

EDA mount



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
	85°: A = 2-3/8" (60 mm) B = 9-9/16" (243 mm)
	90°: A = 1-5/8" (41 mm) B = 9-1/16" (230 mm)
	100°: A = 5/8" (16 mm) B = 8-1/16" (205 mm)

Note:

• 1460 closers ordered with EDA, CUSH or SPRING CUSH arms include 1460-201 FIFTH HOLE SPACER to support the shoe

Cylinders



1461-3071
Cast Iron Cylinder Assembly

- Non-Handed
- Standard

Covers



1460-72
Slim Line Plastic Cover

- Non-Handed
- Standard



1460-72FC
Full Cover

- Non-Handed
- Plastic cover
- Optional



1460-72DS
Designer Series Metal Cover

- Non-Handed
- Provides complete enclosure with a stylish look
- Required for plating and custom powder coat option
- Optional

Installation Accessories



1460-18
Plate



1460-18DS1
Plate



1460-18FC
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 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.



1460-30
Cush Shoe Support

- Provide anchorage for fifth screw used with CUSH arm where reveal is less than 3-1/16" (78 mm)



1460-30A
Mounting Bracket

- Bracket to be used when installing cylinder body
- Included with cylinder when ordered



1460-61
Blade Stop Spacer

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



1460-62A
Auxiliary Shoe

- Requires a top rail of 7" (178 mm)
- Optional shoe replaces -62PA for parallel arm mounting of regular arm with overhead holder/stop



1460-18PA
Plate



1460-18PADS1
Plate



1460-18PAFC
Plate

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



1460-419
PA Flush Panel Adapter

- Provides horizontal mounting surface for PA, EDA, or CUSH shoe on single rabbeted or flush frame



1460-62PA
PA Shoe

- Required for parallel arm mounting

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



1460-3049
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



1460-3077EDA
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



1460-3049EDA
Hold-Open Extra Duty Arm

- Handed arm
- Provides hold-open function adjustable at shoe
- Optional



1460-3077CNS
Cush-N-Stop® Arm

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



1460-3049CNS
HCUSH Arm

- Non-handed
- Provides hold-open function with templated stop/hold-open points
- Handle controls hold-open function
- Optional



1460-3077SCNS
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



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

How-to-order 1460 Series closers

Select finish

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

Closer will be shipped with:

- Standard cylinder
- Standard cover
- Regular arm
- Self-reaming and tapping screws
unless options listed below are selected.

Closer options

Cylinder

- Delayed Action (DEL)

Cover

- Full cover (FC)
- Designer series cover (DS)

Finish

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

Arm

- Regular w/62PA (Rw/PA)
- Long (LONG)
- Regular w/62A (Rw/62A)
- Hold-Open (H)
- Hold-Open w/62PA (Hw/PA)
- Long Hold-Open (HLONG)
- Heavy Duty (HD)
- Heavy Duty w/62A (HD/62A)
- Heavy Duty w/62PA (HD/PA)
- Heavy Duty Long (HDL)
- Extra Duty Arm (EDA) (optional -62G)
- Hold-Open Extra Duty (HEDA)
(specify handing), (optional -62G)
- Cush-N-Stop (CUSH)
- HCush (HCUSH)
- Spring Cush (SCUSH)
- Spring HCush (SHCUSH)

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, 1460-18PADS
- Plate, 1460-18PAFC
- CUSH Shoe Support, 1460-30
- Blade Stop Spacer, 1460-61
- Auxiliary Shoe, 1460-62A
- PA Flush Panel Adapter, 1460-419

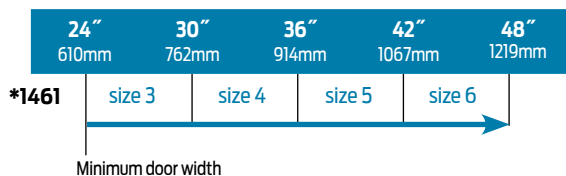
Special template

- ST- _____

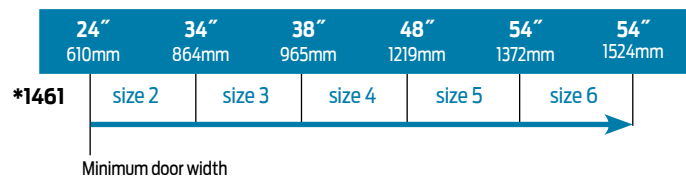
Table of sizes

- 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



Interior door width




→ Indicates recommended range of door width for closer size.
* Adjustable Size 1 thru 5.

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.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	1461	1461	1461
	5.0* lbs.	1461	1461	1461

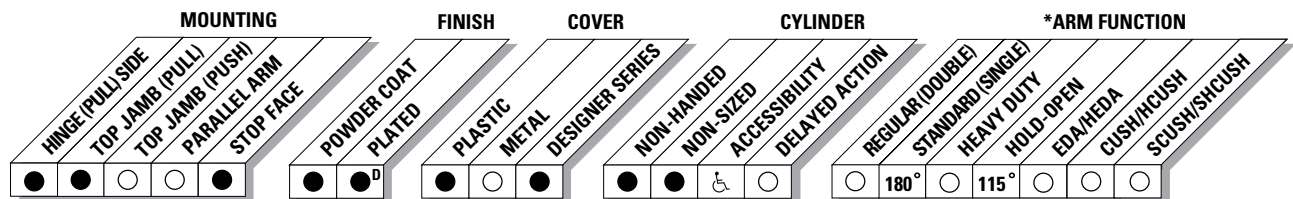


The 1460T is a fully universal slim line, single lever (track) arm closer designed for interior use on narrow head frames and top rails. The modern styling and small projection make it an excellent choice for interior doors.

Certifications	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	<ul style="list-style-type: none"> ■ Slim Line, Standard ■ Full Plastic or Full Metal Designers Series, Optional
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/4" Diameter Piston ■ 5/8" Diameter Single Heat Treated Pinion Journal 	Fasteners	Self Reaming and Tapping Screws (SRT)
Fluid	All Weather Fluid	Mounting	Hinge pull side, top jamb, pull stop face
Handing	Non-Handed	Arms	Single level with track roller
Templating	Peel-n-Stick templates - 1" x 7-1/2" Mounting Hole Pattern	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Size	Adjustable Non-Sized 2-4		<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes
Warranty	30 years		

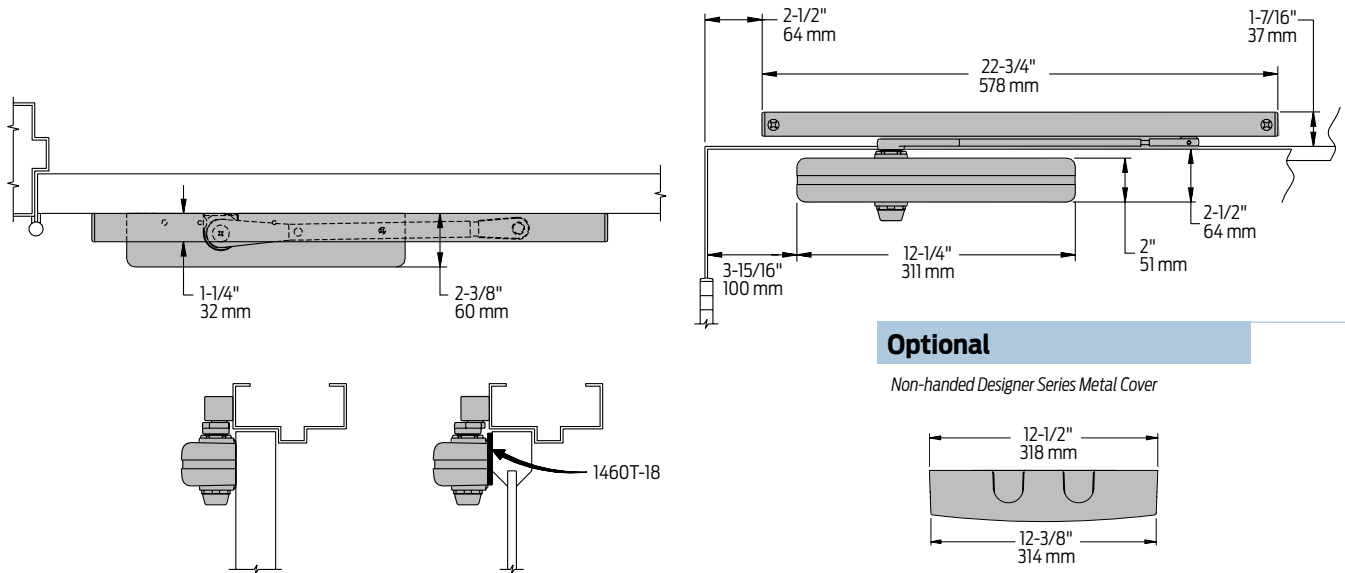
Special Templates

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



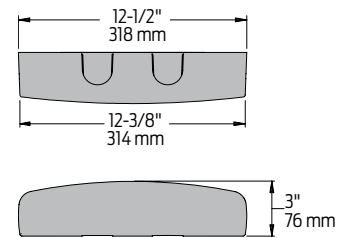
● AVAILABLE
○ NOT AVAILABLE

♿ 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.

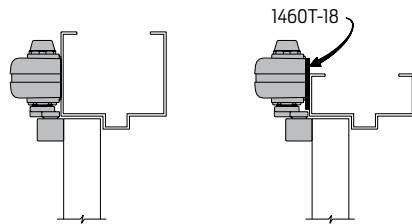
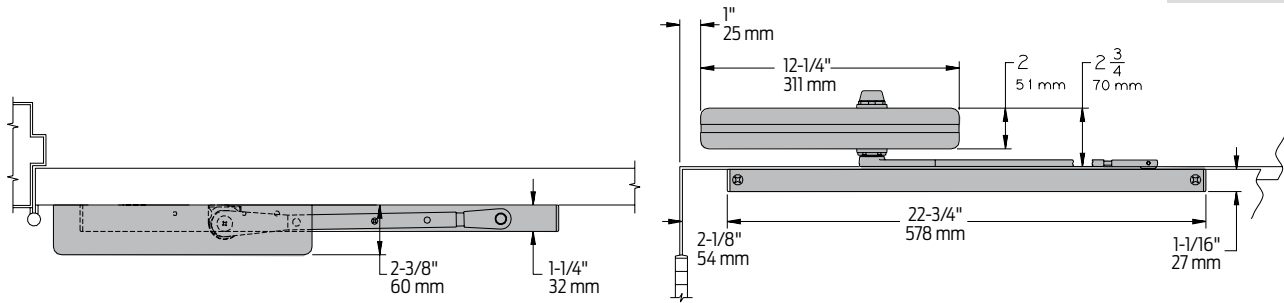


Optional

Non-handed Designer Series Metal Cover

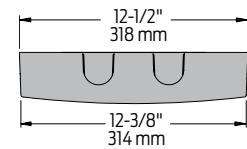


Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	<ul style="list-style-type: none"> Recommended where a door cannot swing 180° Optional track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop
Reveal	Should not exceed 1/8" (3 mm)
Top Rail	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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°

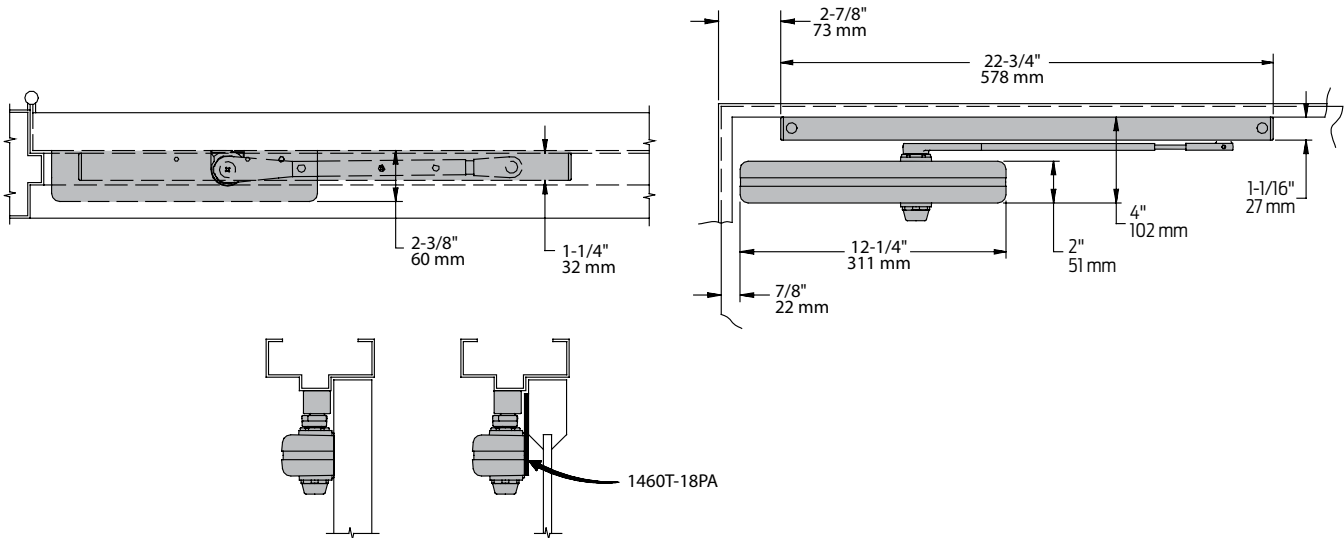


Optional

Non-handed Designer Series Metal Cover



Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	<ul style="list-style-type: none"> 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)
Top Rail	Minimum 1-1/4" (32 mm)
Head Frame	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Templating allows 110°, limited to 100° when optional bumper is installed Variable hold-open angles with infinite options

Cylinders



1460(1)T-3071

Cast Iron Cylinder Assembly

- Non-handed
- 1461 adjustable 1-2
- 1461T adjustable 2-4
- Standard

Arm



1460T-3077T

Single Lever Standard Arm

- Non-handed
- Mounts hinge side, top jamb, or stop face
- Track roller not included with arm

Covers



1460T-72

Slim Line Plastic Cover

- Non-handed
- Standard



1460T-72FC

Full Plastic Cover

- Non-handed
- Optional



1460T-72DS

Designer Series Metal Cover

- Non-handed
- Required for plating option and custom powder coat finishes
- Optional

Tracks



1460T-3038

Track

- Non-handed
- Non hold-open
- Mounts on either side of the door
- Will accept hold-open clip and/or bumper assembly
- Standard



1460T-3038B

Track with Bumper

- Non-handed
- Non hold-open
- Mounts on either side of the door
- Will accept hold-open clip
- Optional



1460T-3038H

Track with Hold-Open

- Non-handed
- Hold-open
- Mounts on either side of the door
- Will accept bumper assembly
- Optional



1460T-3038HB

Hold-Open Track with Bumper

- Non-handed
- Hold-open
- Mounts on either side of the door
- Optional

Installation Accessories



1460T-18
Plate



1460T-18DS
Plate



1460T-18FC
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-18DSI



1460T-18PA
Plate



1460T-18PADS
Plate



1460T-18PAFC
Plate

The following details pertain to the above plates:

- Required for stop face mounting where top rail is less than 4" (102 mm), measured from the stop
- Requires 1-1/2" (38 mm) minimum top rail
- With Full cover, use PLATE, 1460T-18PAFC
- With Designer Series metal cover, use PLATE, 1460T-18PADSI



1460T-30A
Mounting Bracket

- Used when installing cylinder body
- Included with cylinder when ordered



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)



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.

Closer options

Cover

- Full cover (FC)
- Designer Series metal cover (DS)

Finish

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

Track

- 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

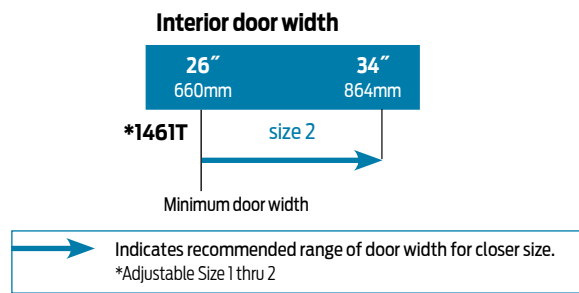
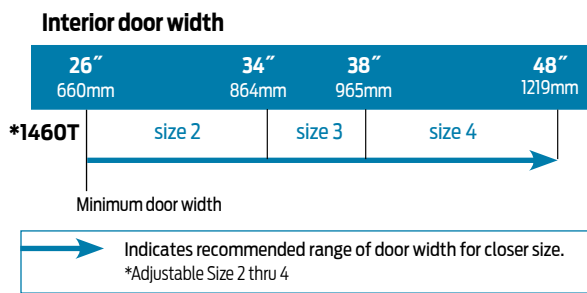
- Plate, 1460T-18
- Plate, 1460T-18DS1
- Plate, 1460T-18FC
- Plate, 1460T-18PA
- Plate, 1460T-18PADS1
- Plate, 1460T-18PAFC

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.

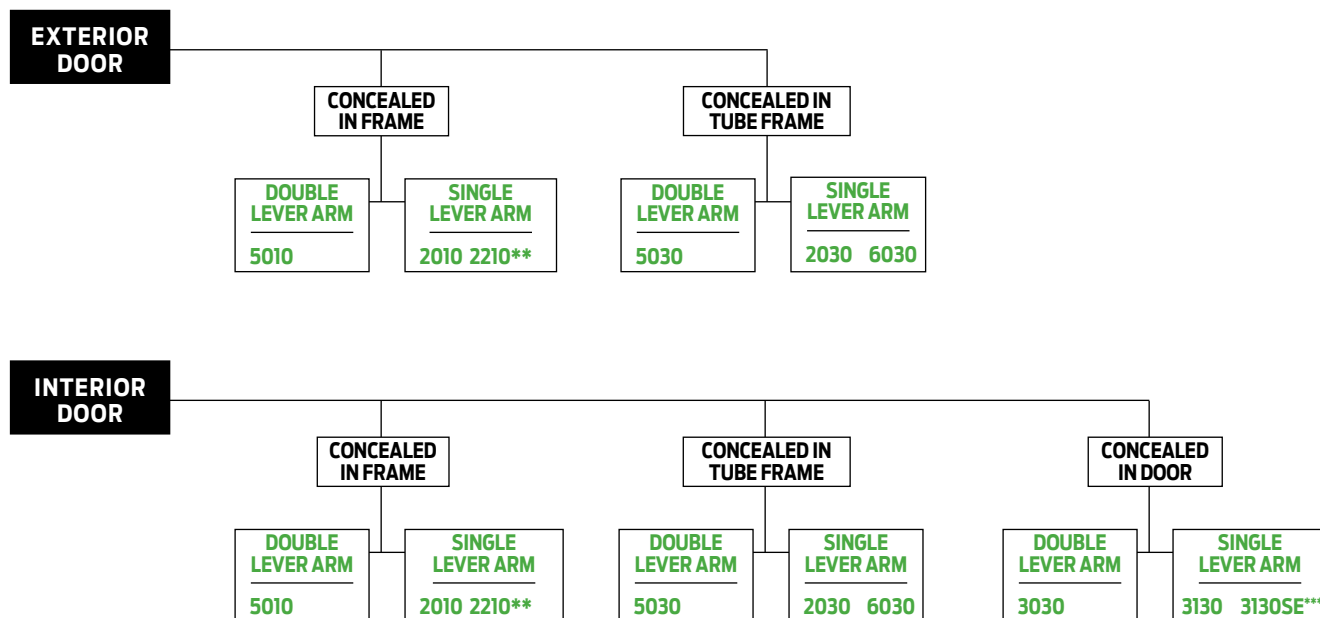
Refer to POWER OPERATORS section for information on systems that meet reduced opening force requirements without affecting closing power.

* Maximum opening force.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	N/A	N/A	N/A
	5.0* lbs.	1461T	1461T	1461T

Product selection guide

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



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

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

Product comparison

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

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

● AVAILABLE
○ NOT AVAILABLE

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

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

APPLICATIONS

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

FEATURES COMMON TO CONCEALED CLOSERS

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

DESIGN ASSISTANCE

LCN has been providing reliable solutions to unique door control problems since 1925. Design and specification assistance are only a phone call away.

Contact LCN for assistance or technical information at **877-671-7011** or **FAX 800-248-1460 (Order Entry)**, Fax **815-879-1495** for Product Support.

WARRANTY

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

SPECIFICATIONS

Refer to "SPECIFICATIONS" section for suggested architectural specifications.

MATERIALS

(Closers concealed in the door or frame)

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

FINISHES

- Available in six standard or a wide selection of optional custom powder coat finishes to blend with door and frame.
- LCN's powder coat finishes surpass 100 hours of salt spray which is over four times the ANSI standard for corrosion resistance.
- For installations where a higher level of corrosive resistance is required, LCN offers an optional special rust inhibiting (SRI) pre-treatment. Closers that combine the exclusive LCN powder coat finish and the SRI pre-treatment exceed the ANSI standard for corrosion resistance even further.
- Plated finishes are available as an option to accent door and frame. (SRI not available with plated finishes)

LISTINGS & APPROVALS

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

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

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

POSITIVE PRESSURE

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

FASTENERS

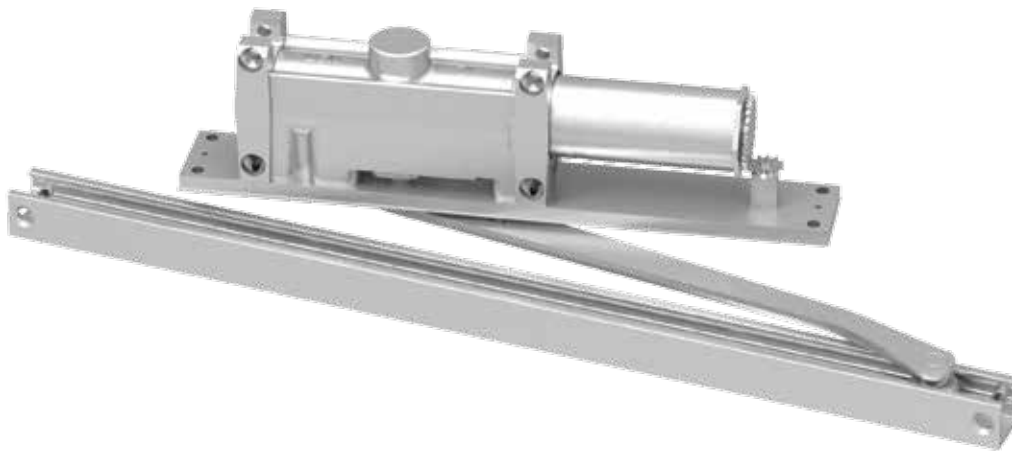
Standard WOOD and MACHINE SCREW (WMS) pack contains phillips head wood and machine screws to install the closer.

TORX machine screws are available for some closers.

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

MAINTENANCE

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

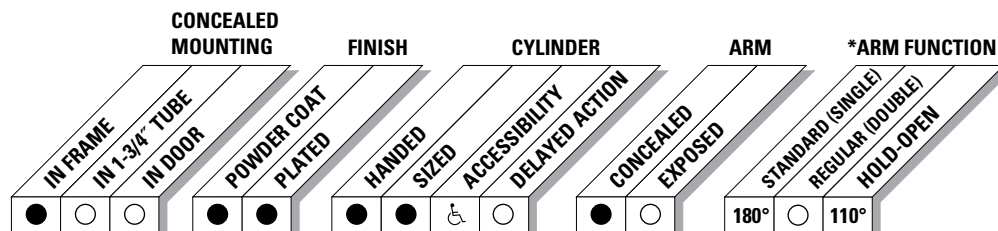


The concealed 2010 Series is a heavy duty closer designed to provide complete concealment. The single lever arm and roller assembly provide smooth, quiet door control and the choice of finishes and track functions meet virtually all architectural requirements.

Certifications	Grade 1 - ANSI A156.4, UL 10 C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Fasteners	Wood and Machine Screw Pack
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/2" Diameter Piston ■ 11/16" Diameter Double Heat Treated Pinion Journal 	Mounting	Concealed (in frame); aluminum frame requires minimum 4" x 4" (102 mm) tube
Fluid	All Weather Fluid	Arms	Standard arm and track
Handing	Handed	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Size	Sized 1-6		<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes
Warranty	15 years		

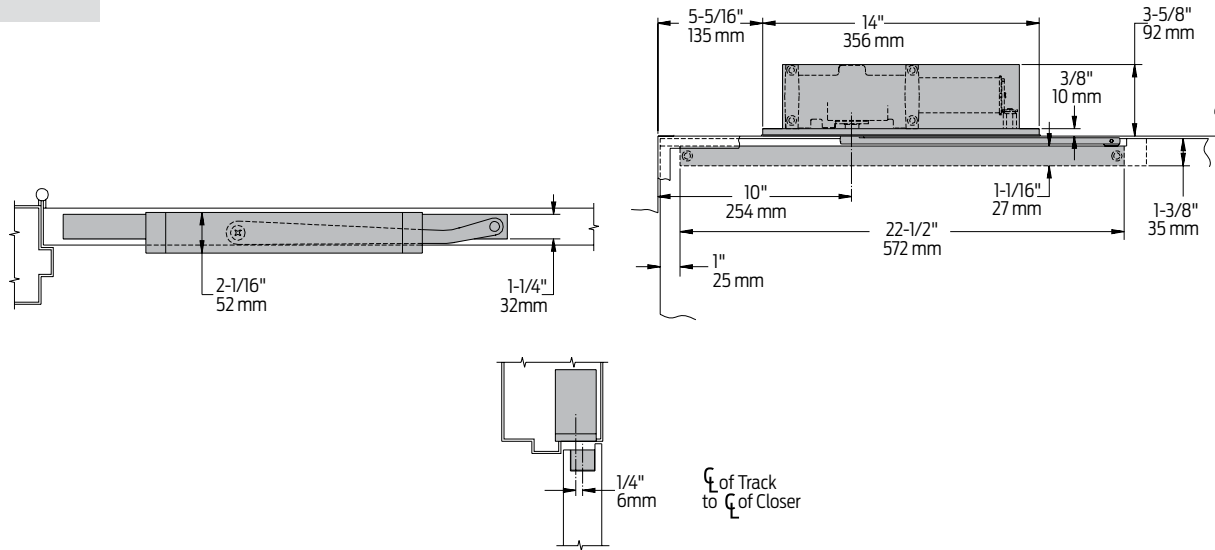
Special Templates

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



● AVAILABLE
○ NOT AVAILABLE

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



Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Butt hinge template allows 180°, trim permitting Limited to 110° when optional bumper is installed Adjustable hold-open points from 85° to 110°, with hold-open track Offset pivot template allows 110°, trim permitting Limited to 95° when optional bumper is installed Adjustable hold-open points from 75° to 95°, with hold-open track Center pivot template allows 120°, trim permitting Limited to 95° when optional bumper is installed Adjustable hold-open points from 75° to 95°, with hold-open track

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

Cylinder



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

- Handed
- With mounting plate
- Standard

Arm



2010-3077T
Standard Arm

- Handed
- Track roller not included with arm

Installation Accessories



2010-420
Fire Shield

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



2010-169
Track Bumper

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

NOTE: Track bumper does not replace auxiliary stop.

Tracks



2010-3038
Standard Track

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



2010-3038B
Standard Track with Bumper

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



2010-3038H
Hold-Open Track

- Non-handed
- Will accept bumper assembly
- Optional



2010-3038HB
Hold-Open Track with Bumper

- Non-handed
- Optional



2010-3054
Hold-Open Clip

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



2010-3034
Track Roller

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



2010-3034H
Hold-Open Track Roller

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

How-to-order 2010 Series closers

Table of sizes

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

Select cylinder size

- 2011
- 2013
- 2014
- 2015
- 2016

Select hand

- RH
- LH

Specify finish

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

Closer will be shipped with:

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

Closer options

Tracks

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

Finishes

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

Installation accessories

- Fire Shield, 2010-420

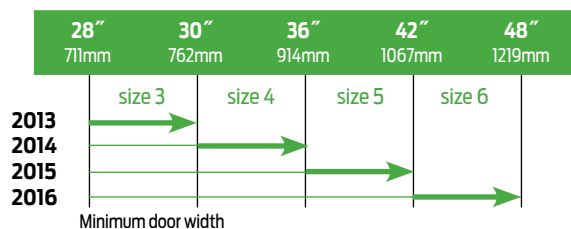
Screw pack

- TORX Machine Screw (TORX)

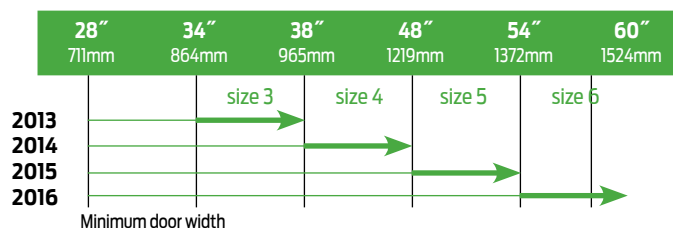
Special template

- ST- _____

Exterior (and Vestibule) door width



Interior door width




→ Indicates recommended range of door width for closer size.

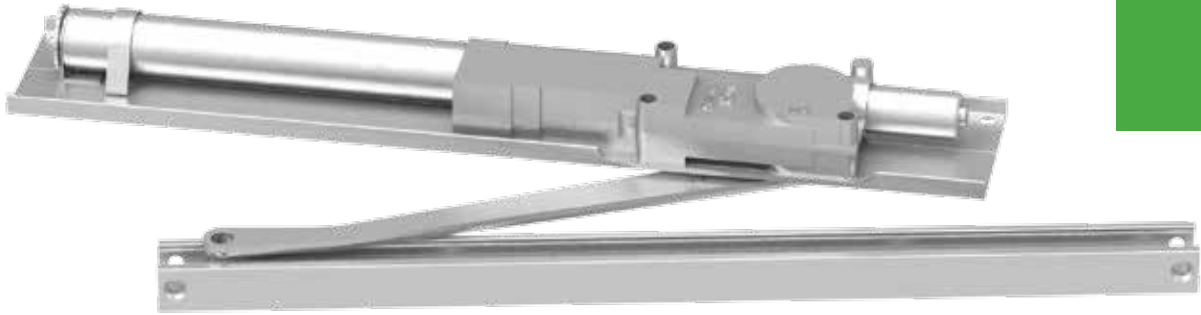
Reduced opening force 2010 Series closers

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

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

* Maximum opening force.

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

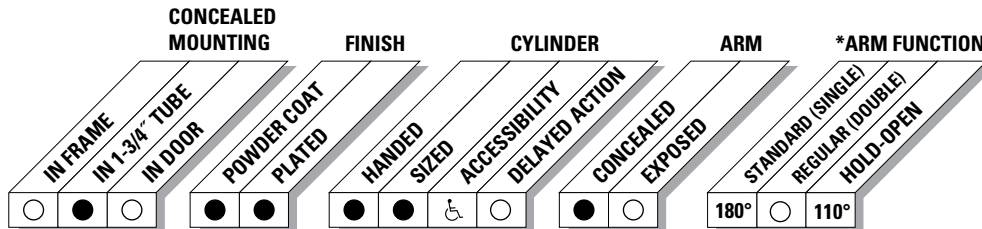


The concealed 2030 Series PACER® is a heavy duty closer designed to fit in a narrow, minimum 1-3/4" aluminum transom. The single lever arm and roller assembly provide smooth, quiet door control and the choice of finishes and track functions meet virtually all architectural requirements.

Certifications	Grade 1 - ANSI A156.4, UL 10 C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Fasteners	Wood and Machine Screw Pack
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1 1/8" Diameter Piston ■ 1 1/16" Diameter Double Heat Treated Pinion Journal 	Mounting	Concealed (in tube); aluminum frame requires minimum 1-3/4" (44 mm) x 4" (102 mm) tube
Fluid	All Weather Fluid	Arms	Standard arm and track
Handing	Handed	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Size	Sized 1-5		<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes
Warranty	15 years		

Special Templates

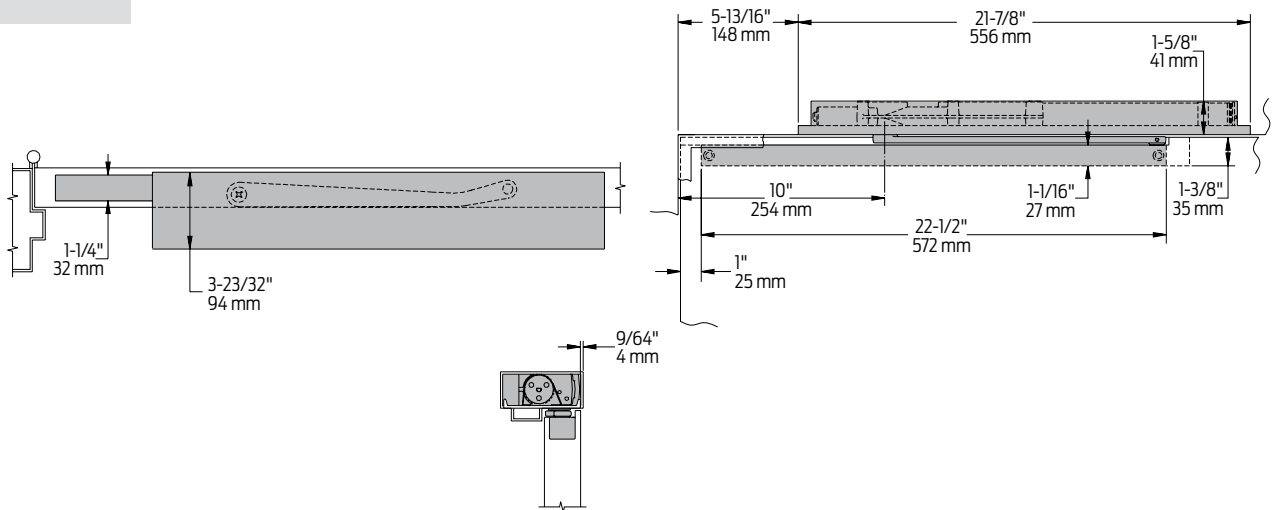
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



● AVAILABLE
○ NOT AVAILABLE

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

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



Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ Butt hinge template allows 180°, trim permitting ■ Limited to 110° when optional bumper is installed ■ Adjustable hold-open points from 85° to 110°, with hold-open track ■ Consult factory if door will be held open at 180° ■ Offset pivot template allows 115°, trim permitting. Limited to 95° when optional bumper is installed ■ Hold-open point from 85°, with hold-open track ■ Center pivot template allows 120°, trim permitting ■ Limited to 100° when optional bumper is installed ■ Adjustable hold-open points from 85° to 100°, with hold-open track

Notes:

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

Cylinder



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

- Handed
- With mounting plate
- Standard

Arm



2030-3077T
Standard Arm

- Handed
- Track roller not included with arm

Tracks



2030-3038
Standard Track

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



2030-3038B
Standard Track with Bumper

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



2030-3038H
Hold-Open Track

- Non-handed
- Will accept bumper assembly
- Optional



2030-3038HB
Hold-Open Track with Bumper

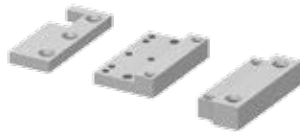
- Non-handed
- Optional

Installation Accessories



2030-420
Fire Shield

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



2030-416
Wood Mounting Clip Set

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



2030-417
Wood Mounting Clip Set

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



2030-169
Track Bumper

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

NOTE: Track bumper does not replace auxiliary stop



2030-3054
Hold-Open Clip

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



2030-3034
Track Roller

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



2030-3034H
Hold-Open Track Roller

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

How-to-order 2030 Series closers

Select cylinder size

- 2031
- 2032
- 2033
- 2034
- 2035

Specify finish

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

Closer will be shipped with:

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

Select hand

- RH
- LH

Closer options

Tracks

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

Finishes

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

Installation accessories

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

Screw pack

- TORX Machine Screw (TORX)

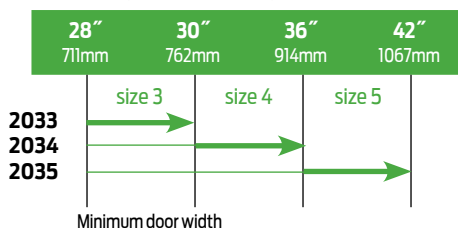
Special template

- ST- _____

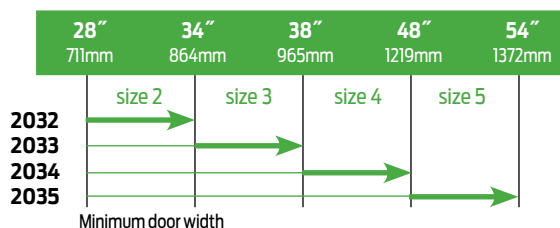
Table of sizes

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

Exterior (and Vestibule) door width



Interior door width




→ Indicates recommended range of door width for closer size.

Reduced opening force 2030 Series closers

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

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

* Maximum opening force.

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

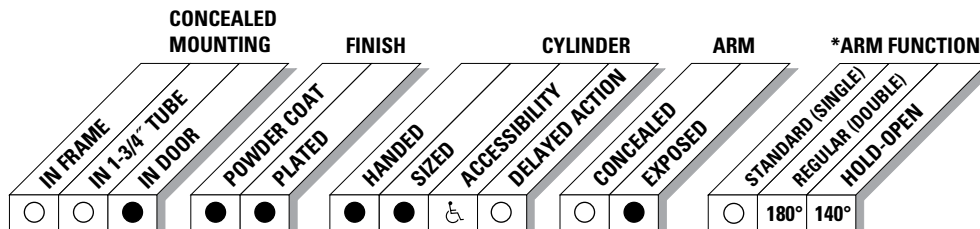


The concealed 3030 Series is designed to mount in a 1-3/4" interior door. The double lever arm provides superior door control and the choice of finishes and arm functions meet virtually all architectural requirements.

Certifications	Grade 1 - ANSI A156.4, UL 10 C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Fasteners	Wood Screws and Torx Security Screws (optional)
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/8" Diameter Piston ■ 1/2" Diameter Double Heat Treated Pinion Journal 	Mounting	Concealed (in door); consult factory for installations with pivots
Fluid	All Weather Fluid	Arms	Regular arm
Handing	Handed	Finishes/Colors/Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Size	Sized 1-4		<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes
Warranty	15 years		

Special Templates

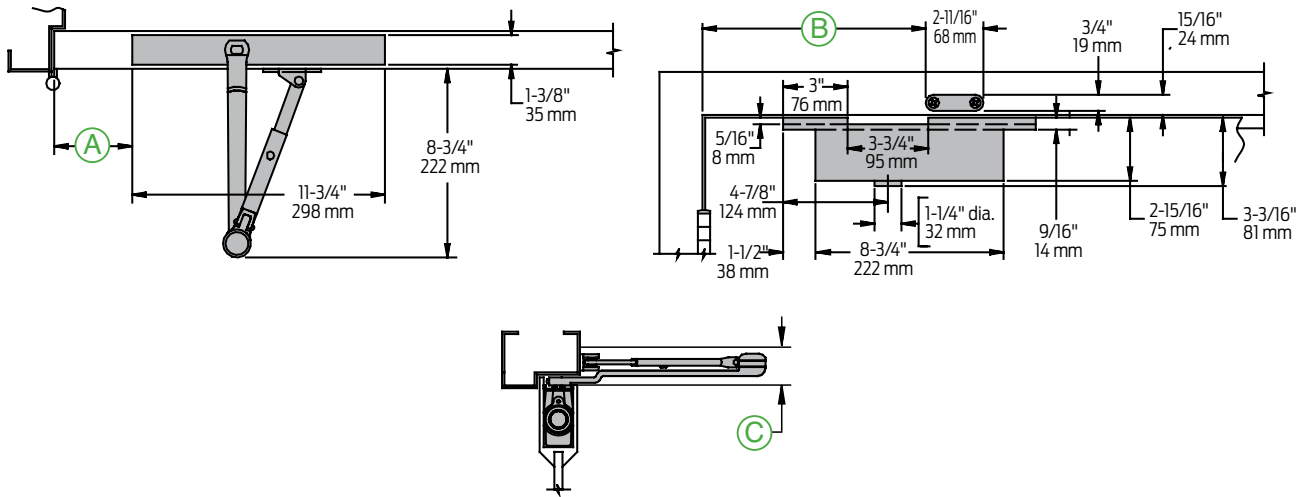
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



● AVAILABLE
○ NOT AVAILABLE

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

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



Butt Hinges	Should not exceed 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	<ul style="list-style-type: none"> ■ 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	<p>Can be templated for</p> <p>100°: A = 3-5/8" (92 mm) B = 10-1/4" (260 mm)</p> <p>130°: A = 2-5/8" (67 mm) B = 9-1/4" (235 mm)</p> <p>180°: A = 1-5/8" (41 mm) B = 8-1/4" (210 mm)</p> <ul style="list-style-type: none"> ■ Hold-open points up to maximum opening or 140°, whichever is less, with hold-open arm. <p>Arm clearance above door C = 1-1/4" (32 mm) minimum</p>

Notes:

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

Cylinder



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

- Handed
- With mounting plate
- Standard

Arms



3030-3077
Regular arm

- Non-handed

3030-3049
Hold-open arm

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

How-to-order 3030 Series closers

Select cylinder size

- 3031
- 3032
- 3033
- 3034

Select hand

- RH
- LH

Specify finish

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

Closer will be shipped with:

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

Closer options

Arm

- Hold-open (H)

Finishes

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

Screw pack

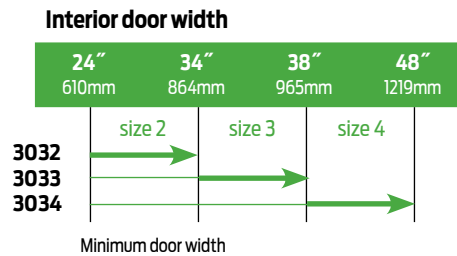
- TORX Machine Screw (TORX)

Special template

- ST- _____

Table of sizes

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




→ Indicates recommended range of door width for closer size.

Reduced opening force 3030 Series closers

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

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

* Maximum opening force.

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

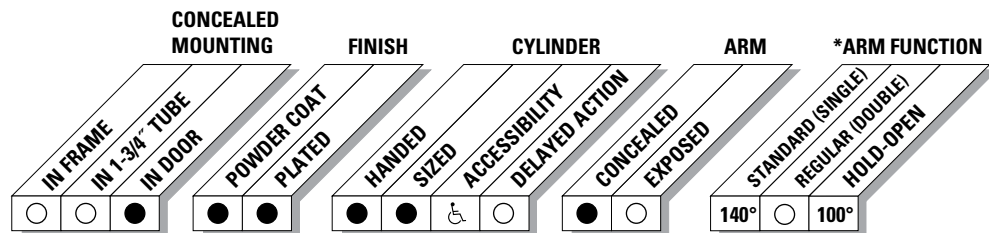


The concealed 3130 Series is designed to mount in a 1-3/4" interior door. The single lever arm and roller assembly provides complete concealment and the choice of finishes and track functions meet virtually all architectural requirements.

Certifications	Grade 1 - ANSI A156.4, UL 10 C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Fasteners	Wood Screws and Torx Security Screws (optional)
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/8" Diameter Piston ■ 1/2" Diameter Double Heat Treated Pinion Journal 	Mounting	Concealed (in door); consult factory for installation with pivots
Fluid	All Weather Fluid	Arms	Standard arm and track
Handing	Handed	Finishes/Colors/Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Size	Sized 1-3		<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes
Warranty	15 years		

Special Templates

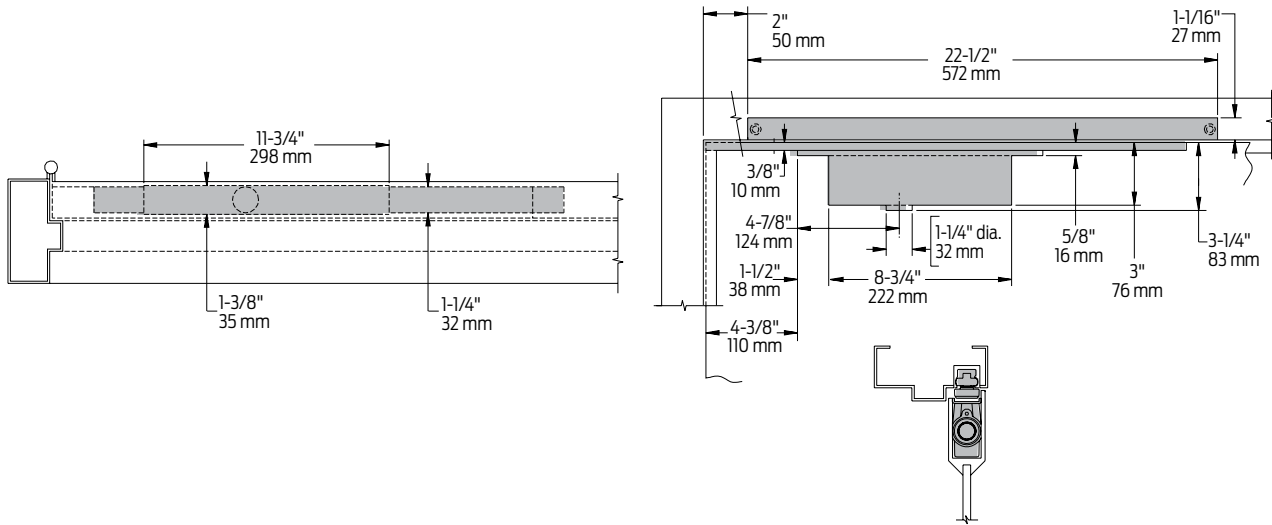
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



● AVAILABLE
○ NOT AVAILABLE

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

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



Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ 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.

Cylinder



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

- Handed
- With mounting plate
- Standard

Arm



3130-3077T
Standard Arm

- Handed
- Track roller not included with arm
- Standard

Tracks



3130-3038
Track

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



3130-3038B
Standard Track with Bumper

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



3130-3038H
Hold-Open track

- Non-handed
- Will accept bumper assembly
- Optional



3130-3038HB
Hold-Open Track with Bumper

- Non-handed
- Optional

Installation Accessories



3130-169
Track Bumper

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



3130-3054
Hold-Open Clip

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



3130-3034
Track Roller

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



3130-3034H
Hold-Open Track Roller

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

How-to-order 3130 Series closers

Select cylinder size

- 3131
- 3132
- 3133

Select hand

- RH
- LH

Specify finish

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

Closer will be shipped with:

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

Closer options

Track

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

Finishes

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

Screw pack

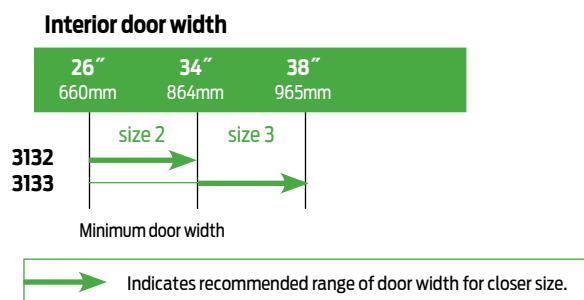
- TORX Machine Screw (TORX)

Special template

- ST- _____

Table of sizes

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



Reduced opening force 3130 Series closers

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

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

* Maximum opening force.

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

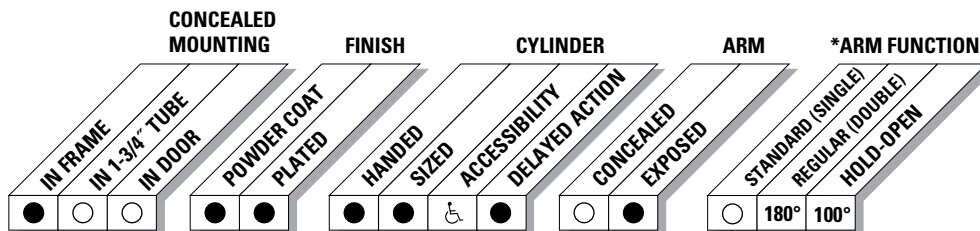


The concealed 5010 Series is a heavy duty closer designed for institutional, high traffic, or other applications exposed to weather or abuse. The double lever arm provides superior door control and a choice of finishes, cylinder functions, and arm functions that meet virtually all architectural requirements.

Certifications	Grade 1 - ANSI A156.4, UL 10 C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Fasteners	Wood Screws and Torx Security Screws (optional)
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/8" Diameter Piston ■ 11/16" Diameter Double Heat Treated Pinion Journal 	Mounting	Concealed (in frame); aluminum frame requires 4" (102 mm) x 4" tube
Fluid	All Weather Fluid	Arms	Regular Arm
Handing	Handed	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Size	Sized 1-6		<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes
Warranty	15 years		

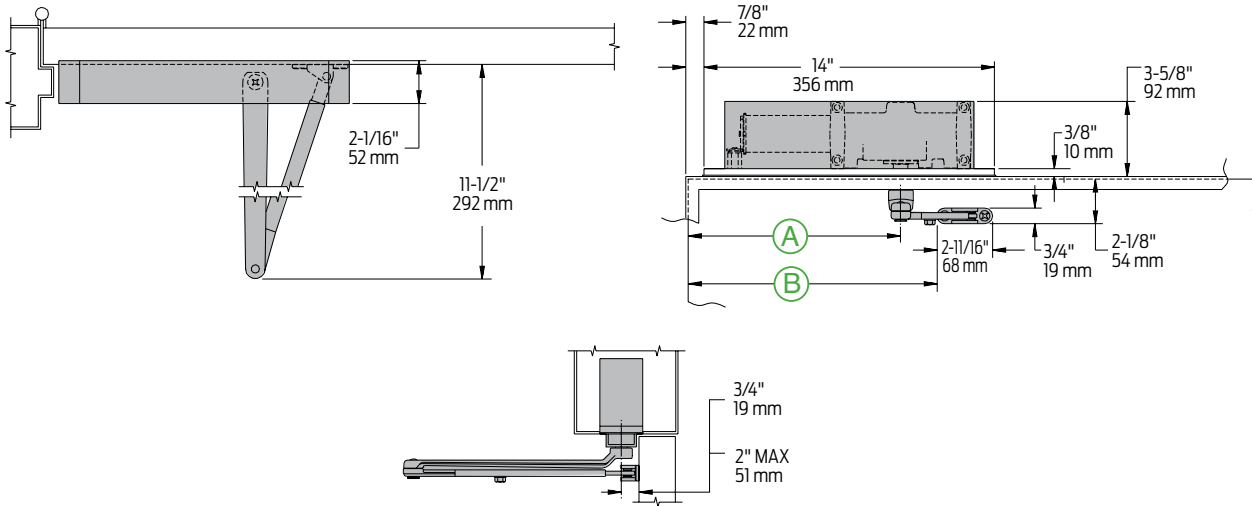
Special Templates

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



● AVAILABLE
○ NOT AVAILABLE

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



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

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

Cylinder



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

- Handed
- With mounting plate
- Standard

Arms



5010-3077
Regular Arm

- Non-handed



5010-3049
Hold-Open Arm

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

How-to-order 5010 Series closers

Select cylinder size

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

Select hand

- RH
- LH

Specify finish

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

Closer will be shipped with:

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

Closer options

Cylinder function

- Delayed Action (DEL)

Arm

- Hold-Open (H)

Finishes

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

Screw pack

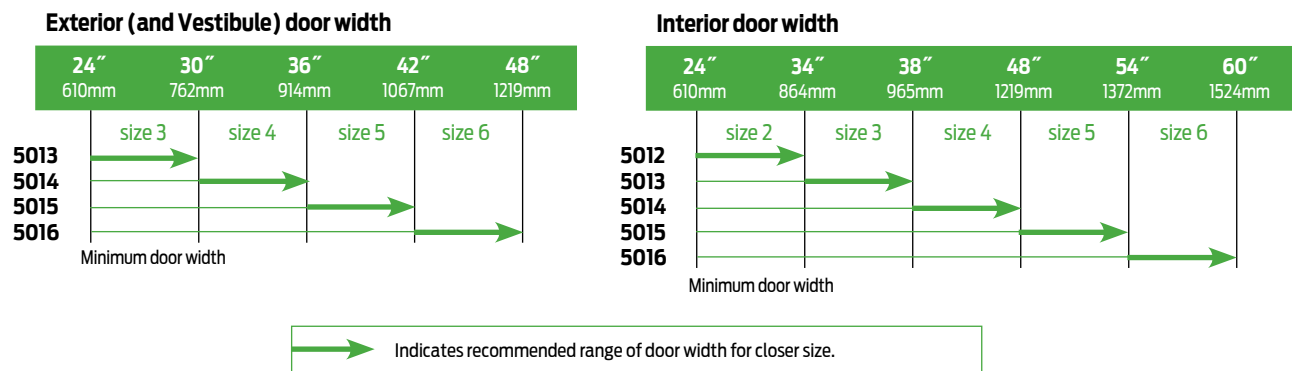
- TORX Machine Screw (TORX)

Special template

- ST- _____

Table of sizes

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



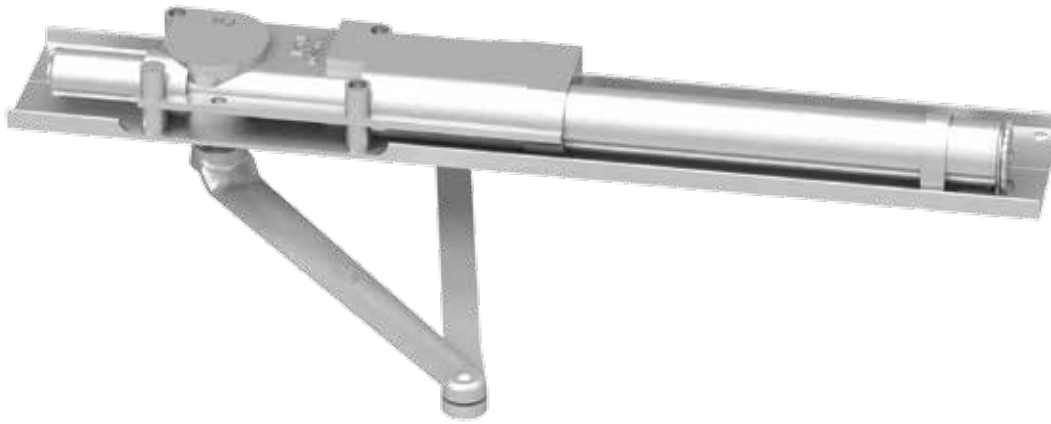
Reduced opening force 5010 Series closers

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

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

* Maximum opening force.

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

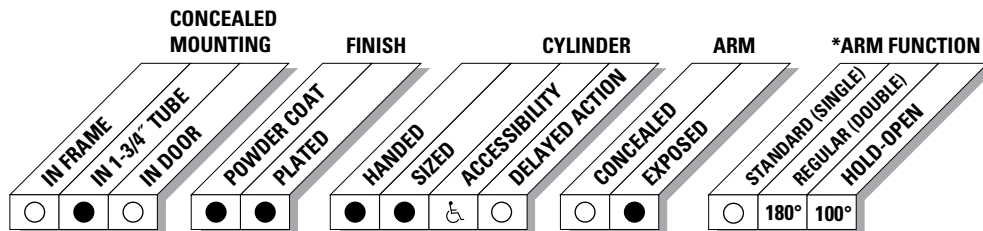


The concealed 5030 Series PACER® is a heavy duty closer designed to fit in a narrow, minimum 1-3/4" aluminum transom. The double lever arm provides superior door control and the choice of finishes and arm functions meet virtually all architectural requirements.

Certifications	Grade 1 - ANSI A156.4, UL 10 C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Fasteners	Wood Screws and Torx Security Screws (optional)
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/8" Diameter Piston ■ 11/16" Diameter Double Heat Treated Pinion Journal 	Mounting	Concealed (in tube); aluminum frame requires minimum 1-3/4" (44 mm) x 4-1/2" (114 mm) tube
Fluid	All Weather Fluid	Arms	Regular Arm
Handing	Handed	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Size	Sized 1; 3-6		<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes
Warranty	15 years		

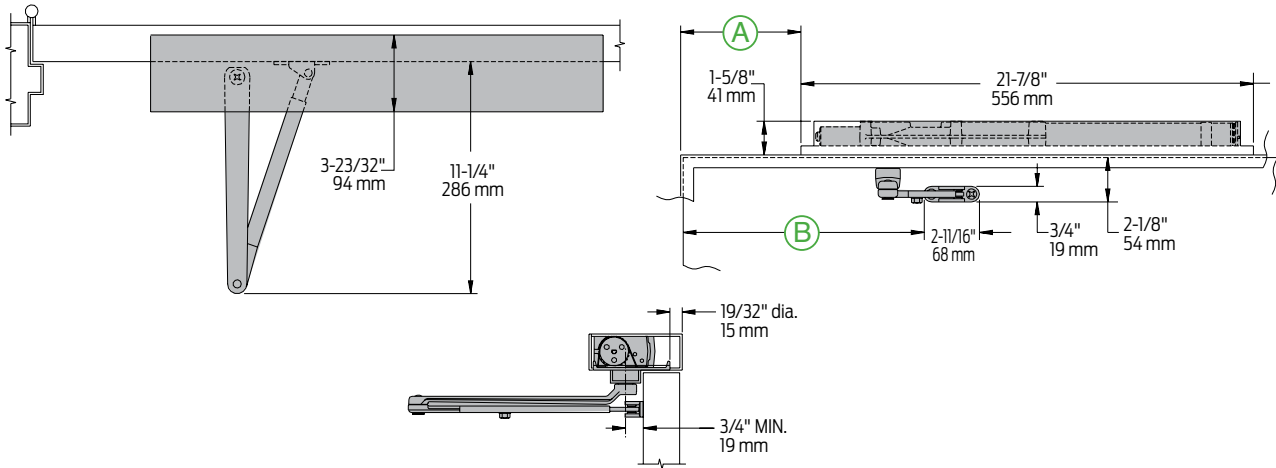
Special Templates

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



● AVAILABLE
○ NOT AVAILABLE

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



Butt Hinges	Should not exceed 6" (152 mm) in width
Auxiliary Stop	Recommended at hold-open point or where the door cannot swing 180°
Wood Frame	<ul style="list-style-type: none"> 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	<p>Butt hung doors can be templated for</p> <p>100°: A = 5-13/16" (148 mm) B = 11-13/16" (300 mm)</p> <p>180°: A = 2-1/16" (52 mm) B = 8-1/16" (205 mm) trim permitting</p> <ul style="list-style-type: none"> 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

Cylinder



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

- Handed
- With mounting plate
- Standard

Arms



5030-3077 Regular Arm

- Non-handed



5030-3049 Hold-Open Arm

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

Installation Accessories



5030-416 Wood Mounting Clip Set

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



5030-417 Wood Mounting Clip Set

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

How-to-order 5030 Series closers

Select cylinder size

- 5031
- 5033
- 5034
- 5035
- 5036

Select hand

- RH
- LH

Specify finish

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

Closer will be shipped with:

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

Closer options

Arm

- Hold-Open (H)

Finishes

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

Installation accessories

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

Screw pack

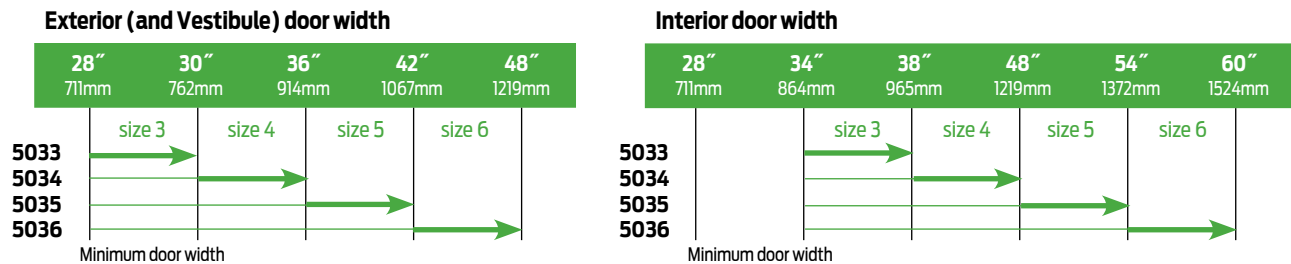
- TORX Machine Screw (TORX)

Special template

- ST- _____

Table of sizes

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




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

Reduced opening force 5030 Series closers

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

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

* Maximum opening force.

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

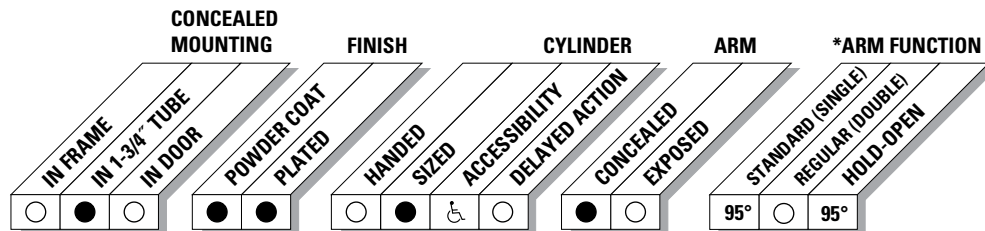


The concealed 6030 Series PACER® is a heavy duty, double acting closer designed to fit in a narrow, minimum 1-3/4" header. The single lever arm and roller assembly provides smooth, quiet door control and the choice of finishes and track functions meet virtually all architectural requirements. Installation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

Certifications	Grade 1 - ANSI A156.4, UL 10 C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Fasteners	Wood Screws and Torx Security Screws (optional)
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/8" Diameter Piston ■ 11/16" Diameter Double Heat Treated Pinion Journal 	Mounting	Concealed (in tube); double acting
Fluid	All Weather Fluid	Arms	Standard arm with track
Handing	Non-Handed	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Size	Sized 1-5		<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes
Warranty	15 years		

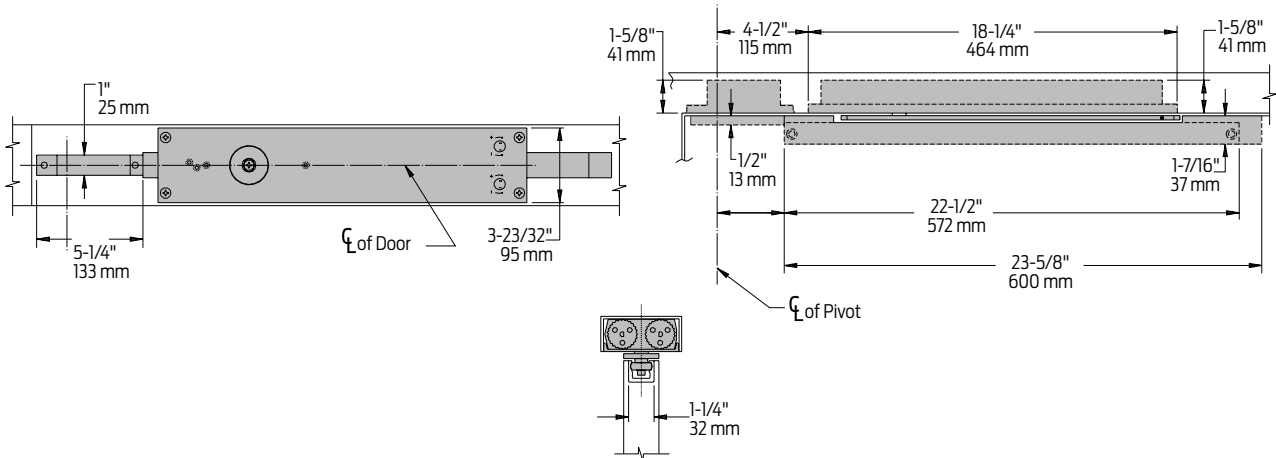
Special Templates

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



● 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	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ Installation simplified by WOOD MOUNTING CLIP SET, 6030-416 ■ Consult product support for special template
Maximum opening	<ul style="list-style-type: none"> ■ 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	Arm	Tracks	
			
<p>6031(2)(3)(4)(5)-3071 Cast Iron Cylinder Assembly</p> <ul style="list-style-type: none"> ■ Non-handed ■ With mounting plate ■ Standard 	<p>6030-3077T Standard Arm</p> <ul style="list-style-type: none"> ■ Non-handed ■ 5/16" (8 mm) thick arm ■ Track roller not included with arm 	<p>6030-3038B Standard Track with Bumper</p> <ul style="list-style-type: none"> ■ Non-handed ■ Non hold-open ■ Will accept hold-open clip ■ Standard 	<p>6030-3038HB Hold-Open Track with Bumper</p> <ul style="list-style-type: none"> ■ Non-handed ■ Optional

Installation Accessories



- 6030-416**
Wood Mounting Clip Set
- Simplifies mounting closer in wood frame
 - Includes latch stile clip, hinge stile clip, and cover
 - For use with Ives Series center pivots
 - Consult factory for special template



- 6030-169**
Track Bumper
- Mounts in track to assist backcheck
 - Limits maximum opening
 - Consists of bumper, bumper post, and mounting screw
- NOTE: Track bumper does not replace auxiliary stop.*



- 6030-3054**
Hold-Open Clip
- Mounts in track to provide hold-open function
 - Hold-open point controlled by clip location
 - Requires 6030-3034H Hold-Open Track Roller



- 6030-3034**
Track Roller
- Quiet, low friction roller assembly includes eccentric with 3/4" (19 mm) adjustment to center 36" (914 mm) door



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

How-to-order 6030 Series closers

Select cylinder size

- 6031
- 6032
- 6033
- 6034
- 6035

Specify finish

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

Closer will be shipped with:

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

Closer options

Track

- Hold-open with Bumper (HBUMPER)

Finishes

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

Installation accessories

- Wood Clip Set, 6030-416

Screw pack

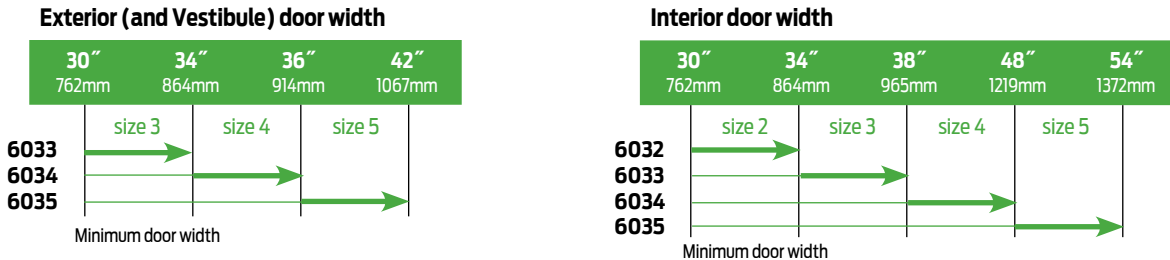
- TORX Machine Screw (TORX)

Special template

- ST- _____

Table of sizes

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




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

Reduced opening force 6030 Series closers

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

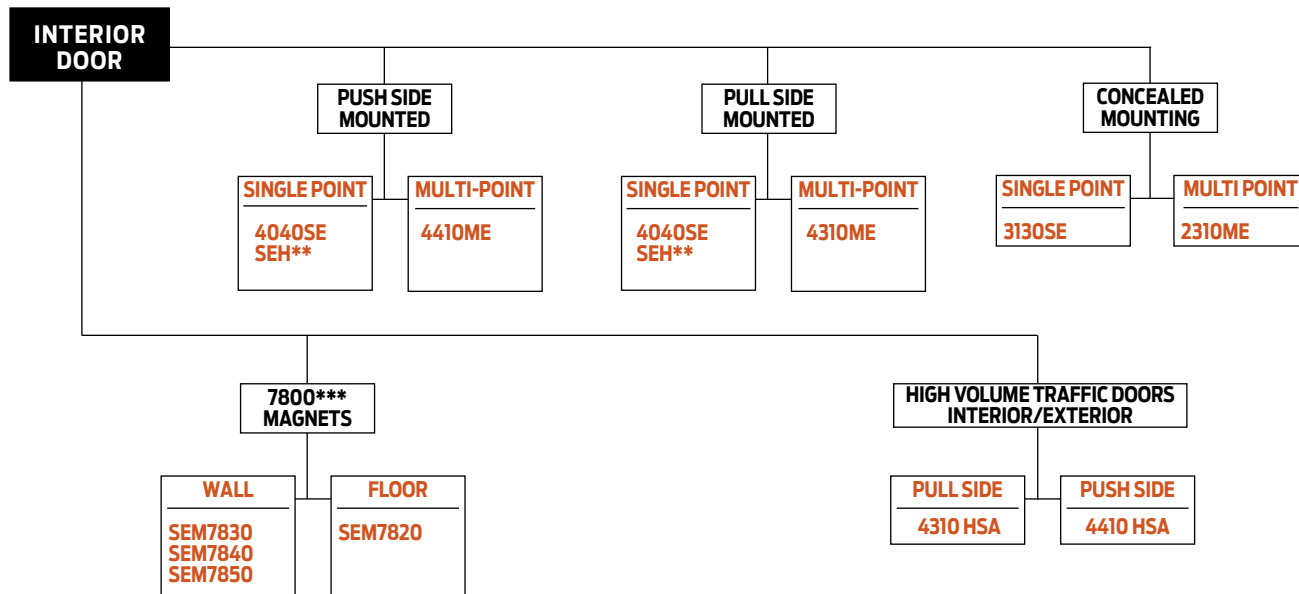
Refer to POWER OPERATORS section for information on systems that meet reduced opening force requirements without affecting closing power.

* Maximum opening force.

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

Product selection guide

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



** See SEH section (cylinder not included).

*** SEM 7800 Series are die cast.

Product comparison

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

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

● AVAILABLE
○ NOT AVAILABLE

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

SENTRONIC® CLOSER/HOLDERS

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

SINGLE POINT HOLD-OPEN (SE)

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

MULTI-POINT HOLD-OPEN (ME)

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

HOLDER SCANNER ACTIVATED (HSA)

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

MAGNETS (SEM) - ELECTROMAGNETIC DOOR HOLDERS

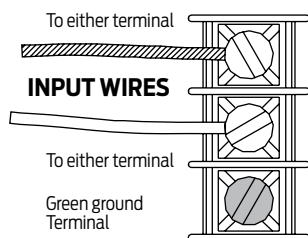
SEM Series magnets work with manual door closers to provide single point hold-open. Now available in new **tri-voltage** with 35 lbs. of holding force.

APPLICATIONS

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

GENERAL NOTES

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



SE WIRING DIAGRAM

LISTINGS AND APPROVALS

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

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

HOLDING SOLENOIDS CURRENT DRAW

SE/ME

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

SEM (TRI-VOLT)

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

HSA

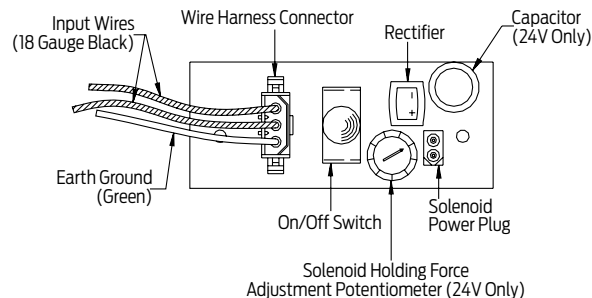
24V AC/DC (+10% -15%) @ 120 mA max.

TRANSFORMER DATA

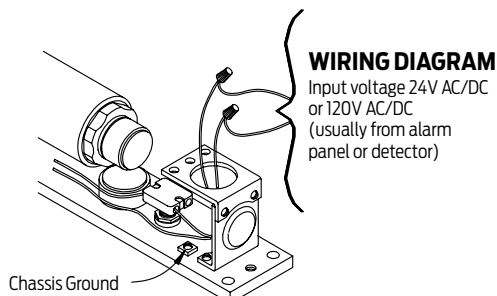
120V AC 50-60 Hz (primary); 24V AC @ 400 mA max. (secondary)
An LCN supplied transformer will power (recommended) 2 SE, 3 SE/ME, and 15 SEM.

ME WIRING

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



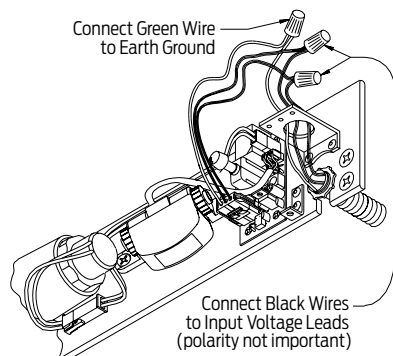
ME (4310, 4410) WIRING DIAGRAM (24V only)



ME (2310) WIRING DIAGRAM

HSA WIRING

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



HSA WIRING DIAGRAM

FEATURES COMMON TO FIRE/LIFE SAFETY CLOSERS

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

WARRANTY

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

SPECIFICATIONS

Refer to "SPECIFICATIONS" section for suggested architectural specifications.

DESIGN ASSISTANCE

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

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

MATERIALS

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

FINISHES

- Available in six standard or a wide selection of optional custom powder coat finishes to blend with door and frame.
- LCN's powder coat finishes surpass 100 hours of salt spray which is over four times the ANSI standard for corrosion resistance.
- Plated finishes are available as an option to accent door and frame.

MAINTENANCE

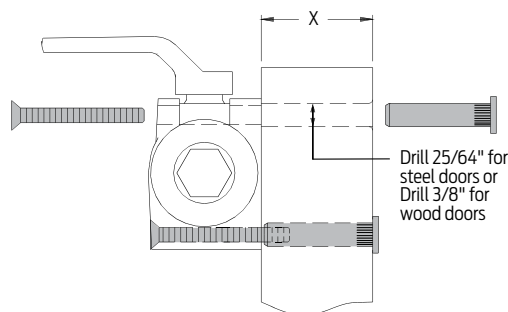
Closers mounted according to LCN installation instructions require no periodic adjustments. Quarterly inspections are recommended. Refer to the installation instructions for complete, product specific details.

POSITIVE PRESSURE

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

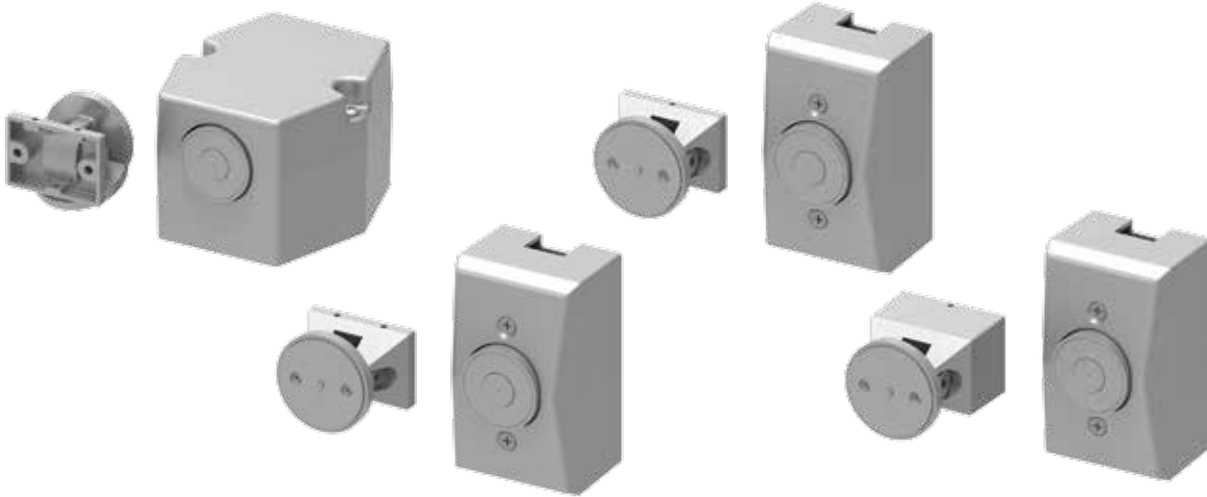
FASTENERS

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



NOTE 1: For Thru Bolts, specify door thickness if other than 1-3/4" (44 mm).

NOTE 2: Phillips head, metric machine screws are available on special order.



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

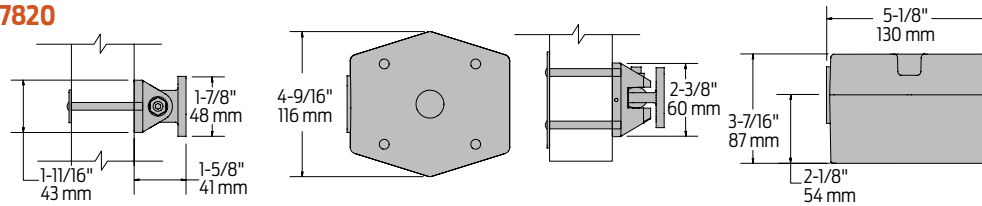
Certifications	Grade 1 - ANSI A156.15, UL 10C for metal smoke barrier or labeled door, ADA, Life Safety Code, NFPA 101, 100 Hour Salt Spray, Meets BAA - Buy American Act
Voltage	Tri-voltage design with 35 lbs. of holding force
Housing	Die cast
Fasteners	Wood and machine screw pack
Finishes/Colors/ Powder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

SEM7800 Series

Magnets

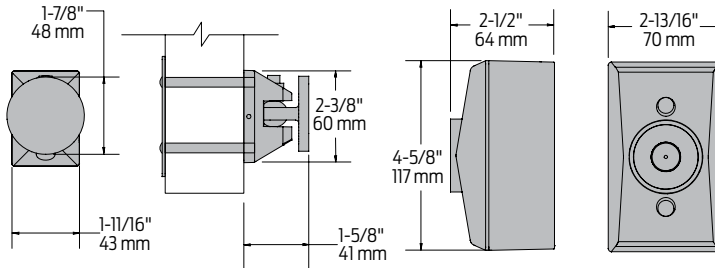
Features and mounting details

7820



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

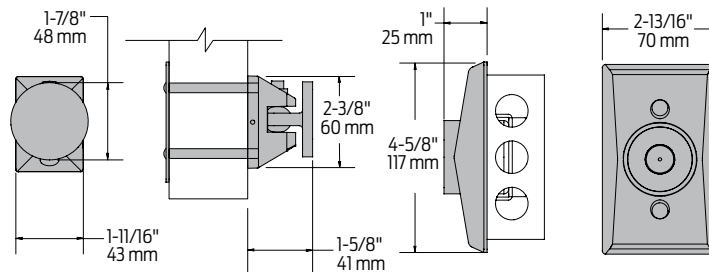
7830



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

- Suitable for use in pocket door installations

7840



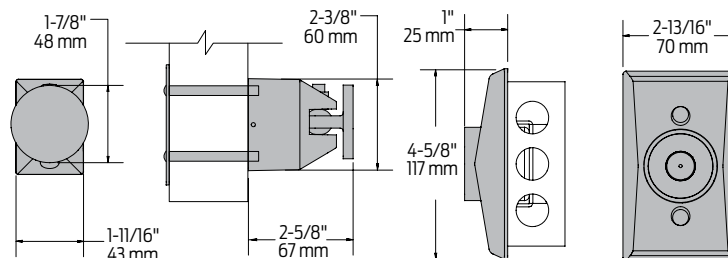
Mounting	<ul style="list-style-type: none"> ■ Low profile recessed wall mount ■ 2" (51 mm) x 4" (102 mm) x 1-1/2" (38 mm)
-----------------	--

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

- Suitable for use in pocket door installations

Note:
Outlet box not included.

7850



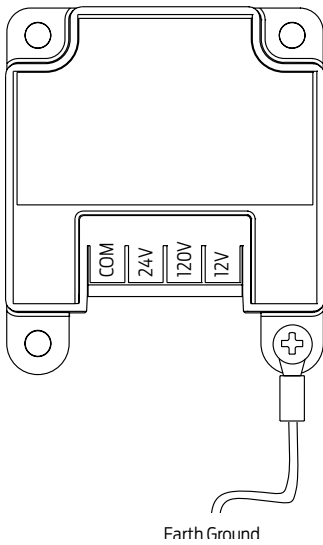
Mounting	<ul style="list-style-type: none"> ■ Standard profile recessed wall mount ■ 2" (51 mm) x 4" (102 mm) x 1-1/2" (38 mm)
-----------------	---

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.

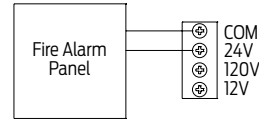


Fig. 1 24V AC/DC Wiring
 Polarity is inimportant

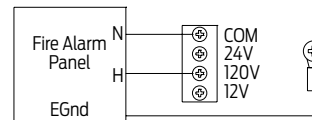


Fig. 2 120V AC Wiring

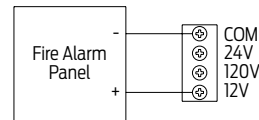


Fig. 3 12V DC Wiring
 Polarity as shown

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

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

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

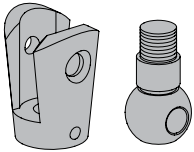
Box



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)



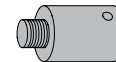
SEM7810-E050
Extension - 1/2"

- Metal
- Standard



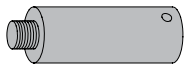
SEM7810-E075
Extension - 3/4"

- Metal
- Standard



Extension, SEM7810-E100
Extension - 1"

- Metal
- Standard



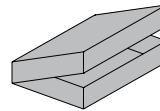
SEM7810-E200
Extension - 2"

- Metal
- Standard



Extension, SEM7810-E400
Extension - 4"

- Metal
- Standard



SEM7810-517
Extension kit

- Extension kit includes:
- 107810SEM-E050
 - 107810SEM-E075
 - 107810SEM-E100
 - 57810SEM-E200
 - 207810SEM-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"*

How-to-order SEM 7800 series magnets

Select magnet series

- SEM7820
- SEM7830
- SEM7840
- SEM7850

Specify finish

- Standard Powder Coat _____
Aluminum, Dark Bronze

Magnets will be shipped with:

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

How-to-order SEM 7810 extensions

Select magnet series

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

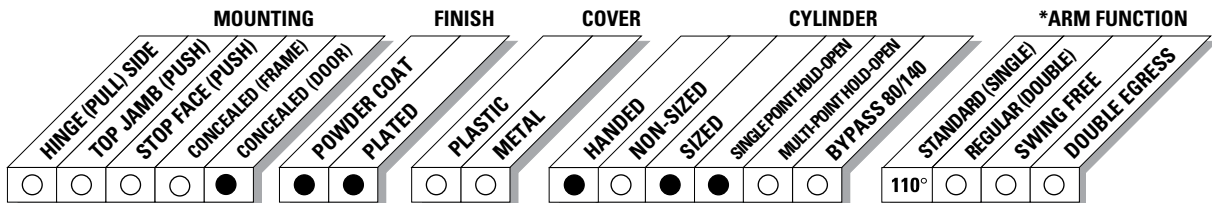


The 3130SE SENTRONIC® is a concealed in the door, closer/ holder designed to provide single point hold-open for fire and smoke barrier doors. Door is held open until current interruption releases the holding mechanism and the door closes. Single lever (track) arm closer is specifically designed for interior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

Certifications	Grade 1 - ANSI A156.15, UL/for metal smoke barrier or labeled door, ADA, Life Safety Code, NFPA 101, 100 Hour Salt Spray, Meets BAA - Buy American Act	Fasteners	Wood and machine screw pack
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/8" Diameter Piston ■ 9/16" Diameter Double Heat Treated Pinion Journal 	Mounting	Concealed (in door) for interior smoke barrier and labeled doors
Fluid	All Weather Fluid	Arms	Standard, handed arm and non-handed track
Handing	Handed	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Size	Size 3 or 4, non-adjustable		<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes
Warranty	2 years		

Special Templates

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



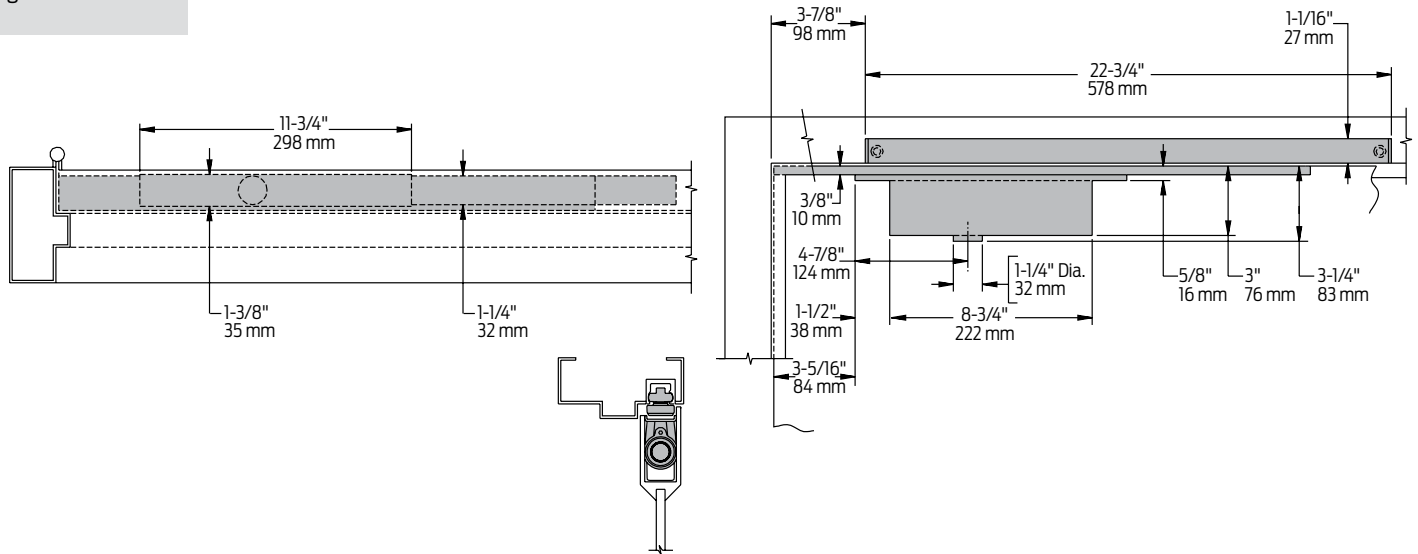
● AVAILABLE
○ NOT AVAILABLE

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

3130SE Series

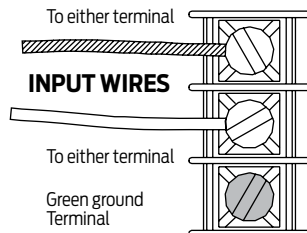
Mounting details

Concealed Mounting



Butt Hinges	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 2' 4" (711 mm) minimum for single door with SE 2' 8" (813 mm) minimum for door with SEL
Maximum Opening	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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

Cylinder



3130SE-3071
SE Cylinder Assembly

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

Arms



3130SE-3077T
Standard Arm

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



3130SEL-3077T
Long Arm

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

Tracks



3130SE-3038
SE Track

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



3130SEL-3038
SEL Long Track

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

Installation Accessories



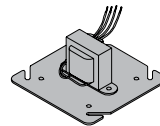
3130SE-81
Conduit Quick-Connector

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



3130SE-3034SE
Track Roller & Track Slider

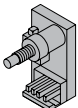
- Quiet, low friction roller assembly
- Shoulder dimension "X" = 1/8" (3 mm)
- Alloy metal slider for use in SE series tracks only



4040SE-3210
Transformer

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

Switch



3130SE-3436
Test Switch

How-to-order 3130SE Series closers

Select cylinder size

- 3133SE
- 3134SE

Select hand

- RH
- LH

Voltage

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

Specify finish

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

Closer will be shipped with:

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

Closer options

Arm

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

Finishes

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

Installation accessories

- Transformer, 4040SE-3210

Screw pack

- TORX Machine Screw (TORX)

Special template

- ST- _____

Table of sizes

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

Interior door width

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

Minimum door width

→ Indicates recommended range of door width for closer size.

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

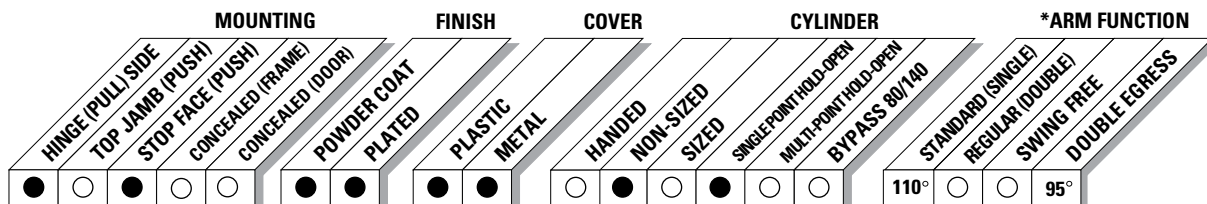


The 4040SE SENTRONIC[®] is a heavy duty, non-handed, nonsized closer/holder designed to provide single point hold-open for fire and smoke barrier doors. The door is held open until current interruption releases the holding mechanism and the door closes. Single lever (track) arm closer is specifically 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, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101	Cover	<ul style="list-style-type: none"> Clip-on plastic, standard Metal, optional
Body Construction	<ul style="list-style-type: none"> Cast Iron Body Full Complement Bearing 1-1/2" Diameter Piston 3/4" Diameter Double Heat Treated Pinion Journal 	Fasteners	Wood and machine screw pack
Fluid	All Weather Fluid	Mounting	Hinge (Pull Side), Stop Face (Push Side)
Handing	Non-Handed	Arms	Standard arm and SE track, standard Double egress arm and SEL track, optional
Size	Adjustable Spring Size, up to 4	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> Aluminum (689) Statuary Bronze (690) Light Bronze (691) Black (693) Dark Bronze (695) Brass (696) Custom colors optional
Warranty	2 years	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.



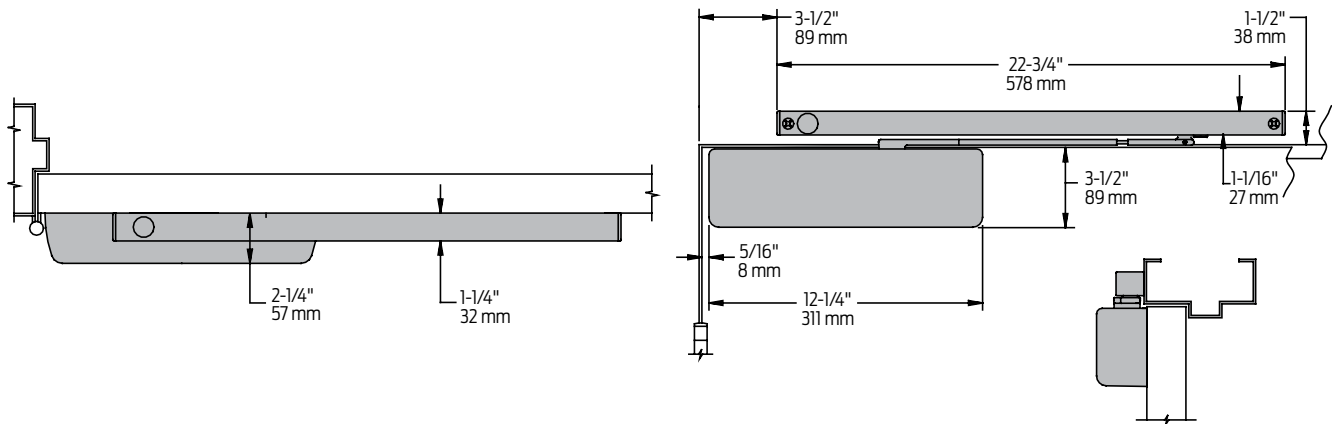
● AVAILABLE
○ NOT AVAILABLE

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

4040SE Series

Mounting details

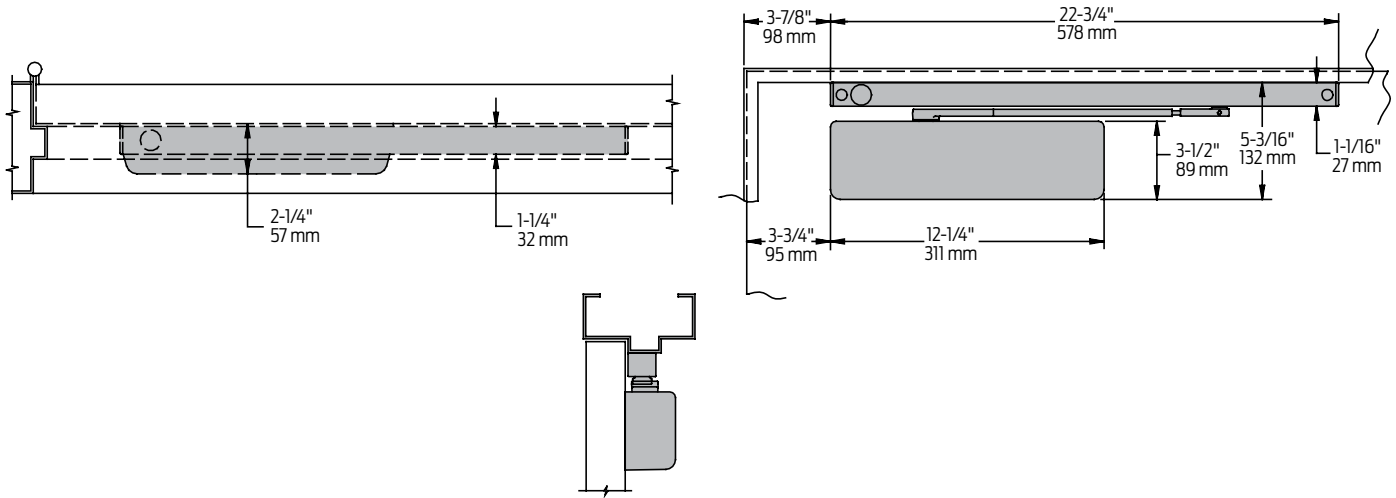
Hinge (Pull)
Side Mounting



Butt Hinges	Should not exceed 5" (127 mm) in width
Swing Clear Hinges	Consult factory
Auxiliary Stop	Recommended at hold-open point
Reveal	<ul style="list-style-type: none"> Should not exceed 1/8" (3 mm) for standard arm Should not exceed 2-11/16" (68 mm) for double egress arm
Top Rail	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 2' 4" (711 mm) minimum for single door with SE 4' 8" (1422 mm) minimum for paired doors with SE
Flush Ceiling	2-3/8" (60 mm) behind door required for 90° installation
Maximum Opening	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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

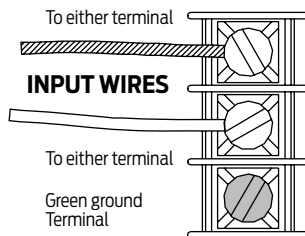
Notes:

- 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



Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	Recommended at hold-open point
Top Rail	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 2' 4" (711 mm) minimum for single door with SE 4' 8" (1422 mm) minimum for paired doors with SE
Maximum Opening	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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

Cylinder



4040SE-3071
Cylinder Assembly

- Non-handed
- Cast iron
- Standard

Covers



4040SE-72
Plastic Cover

- Non-handed
- Clip-on
- Standard



4040SE-72MC
Metal Cover

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

Arms



4040SE-3077T
Standard Arm

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



4040SE-3077DE
Double Egress Arm

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

Tracks



4040SE-3038
SE Track

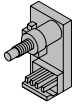
- Non-handed
- For SE closers. Mounts on either head frame or stop
- 24V or 120V AC/DC input for holding solenoid, please specify.
- Includes test switch assembly with fuse
- Standard



4040SEL-3038
SEL Long Track

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

Switch



4040SE-3436
Test Switch

Installation Accessories



4040SE-18
Plate

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



4040SE-18PA
Plate

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



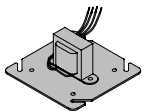
4040SE-81
Conduit Quick-Connector

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



4040SE-3034SE
Track Roller & Track Slider

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



4040SE-3210
Transformer

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

How-to-order 4040SE Series closers

Select cylinder size

- SE
- SEL

Voltage

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

Specify finish

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

Closer will be shipped with:

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

Closer options

Cover

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

Finishes

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

Arm

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

Screw pack

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

Installation accessories

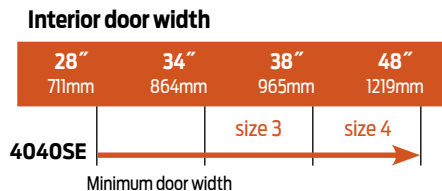
- Plate, 4040SE-18
- Plate, 4040SE-18PA
- Transformer, 4040SE-3210

Special template

- ST- _____

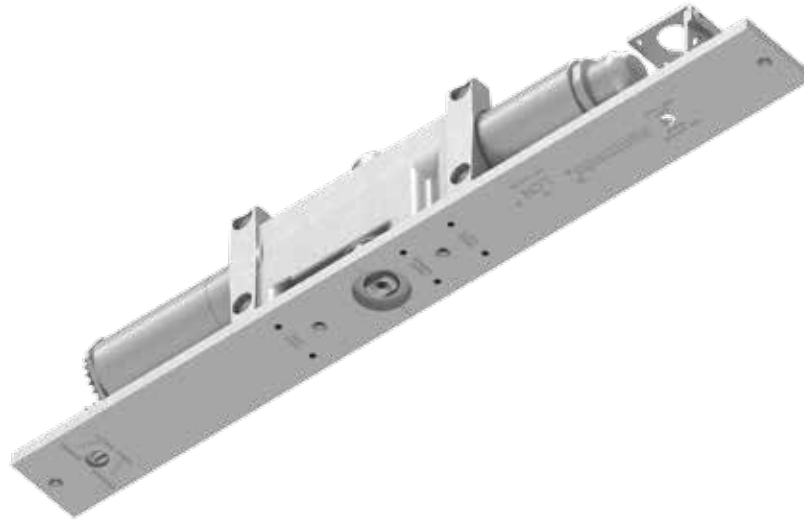
Table of sizes

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



Indicates recommended range of door width for closer size.

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

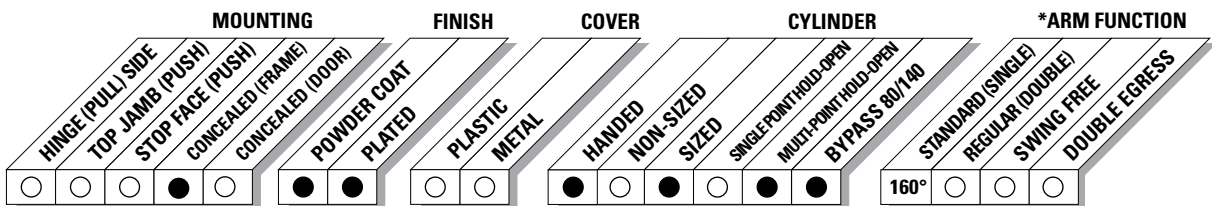


The 2310ME SENTRONIC® is a concealed heavy duty, electrically controlled closer/holder designed to provide infinitely adjustable hold-open for fire and smoke barrier doors. Door is held open until current interruption releases mechanism and the door closes. Single lever (track) arm closer is specifically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

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

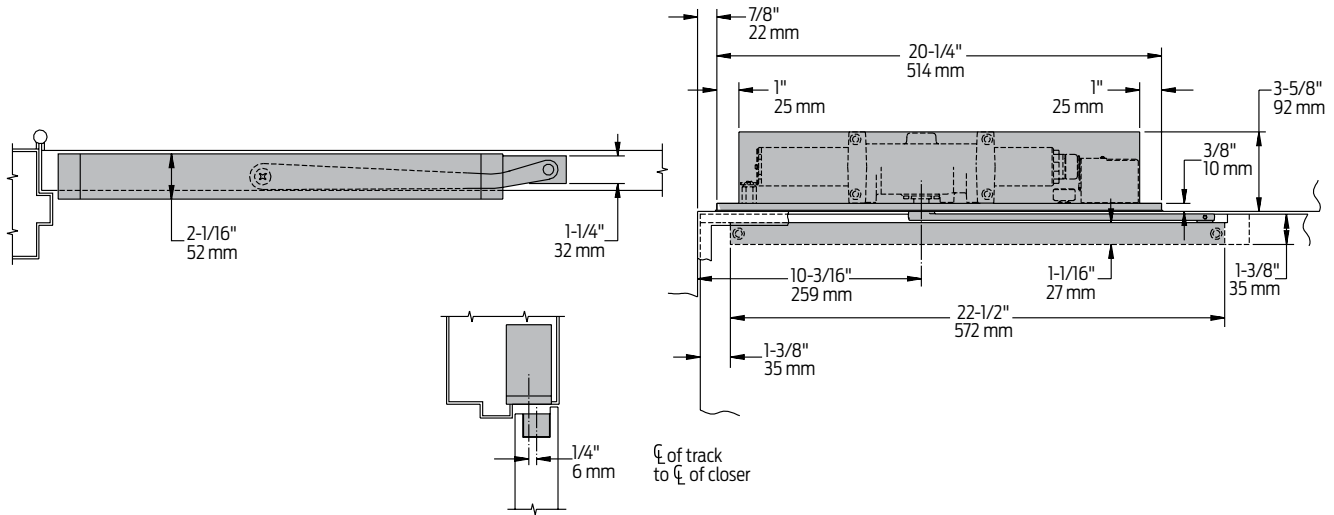
Special Templates

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



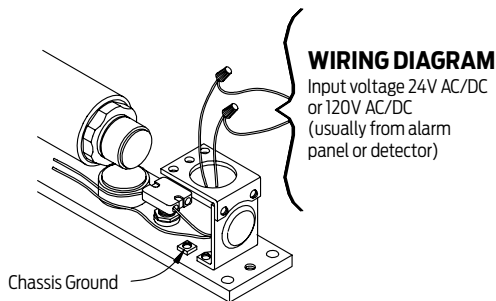
● AVAILABLE
○ NOT AVAILABLE

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



Butt Hinges	Should not exceed 5" (127 mm) in width
Top Rail	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Requires minimum 4" (102 mm) x 4" frame Consult factory or template for preparation details
Bypass	<ul style="list-style-type: none"> (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	<ul style="list-style-type: none"> Hold-open bypass 24V or 120 volt input, please specify

Me (2310) Wiring Diagram



Notes

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

Cylinders



2310ME-3971
ME Cylinder Assembly

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



2310ME-3071
ME Cylinder/Plate Assembly

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

Arm



2310ME-3077T
Standard Arm

- Handed

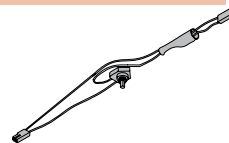
Track



2310ME-3038
Standard Track

- Non-handed
- Standard

Switch



2310ME-3351
Switch

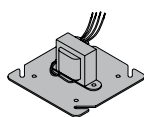
- "On/Off" switch assembly provides continuous hold-open function
- 24V or 120V, please specify

Installation Accessories



2310ME-420
Fire Shield

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



2310ME-3210
Transformer

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



2310ME-3034
Track Roller

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

How-to-order 2310ME Series closers

Select hand

- RH
- LH

Voltage

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

Specify finish

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

Closer will be shipped with:

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

Closer options

Cylinder function

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

Finishes

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

Screw pack

- TORX Machine Screw (TORX)

Installation accessories

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

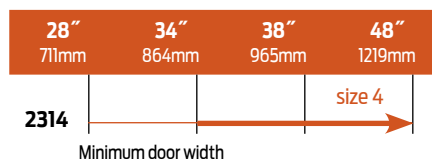
Special template

- ST- _____

Table of sizes

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

Interior door width



→ Indicates recommended range of door width for closer size.

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

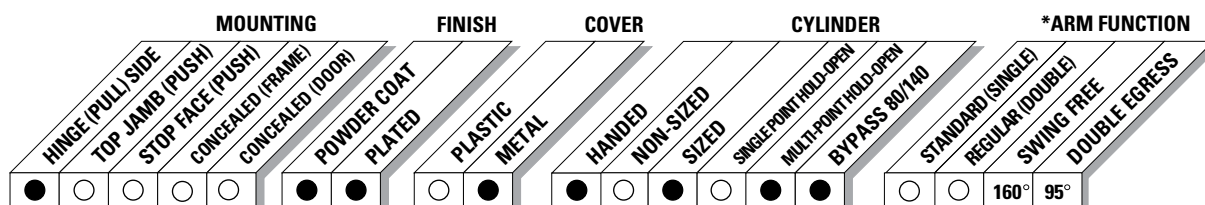


The 4310ME SENTRONIC® is a heavy duty, electrically controlled closer/holder designed to provide infinitely adjustable hold-open for fire and smoke barrier doors. Door is held open until current interruption releases mechanism and the door closes. Single lever (track) arm closer is specifically designed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

Certifications	Grade 1 - ANSI A156.15, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101	Cover	Metal, Standard
Body Construction	<ul style="list-style-type: none"> Cast Iron Body Full Complement Bearing 1-1/2" Diameter Piston 11/16" Diameter Double Heat Treated Pinion Journal 	Fasteners	Wood and machine screw pack
Fluid	All Weather Fluid	Mounting	Hinge (Pull Side)
Handing	Handed	Arms	Swing free arm, standard Double egress, optional
Size	Sized, 4 only	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> Aluminum (689) Statuary Bronze (690) Light Bronze (691) Black (693) Dark Bronze (695) Brass (696) Custom colors optional
Warranty	2 years		<ul style="list-style-type: none"> Optional SRI primer - powder coat only Optional plated finishes
Wiring	<ul style="list-style-type: none"> Concealed or exposed electrical connectors Built in "On/Off" switch controls hold-open function Interfaces with fire alarm systems 		

Special Templates

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



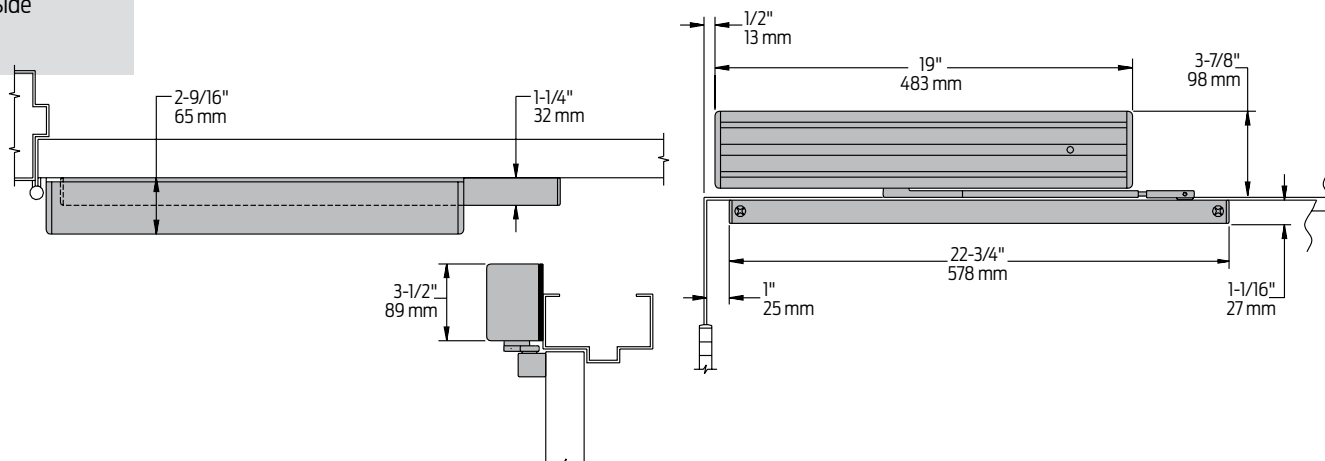
● AVAILABLE
○ NOT AVAILABLE

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

4310ME Series

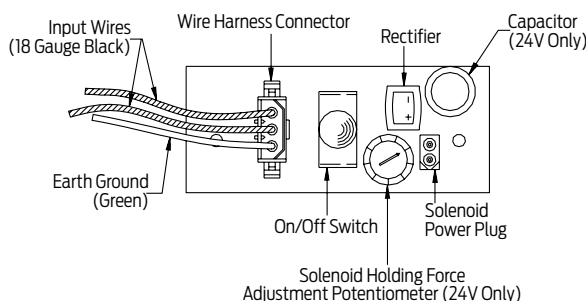
Mounting details

Hinge (Pull) Side Mounting



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

ME (4310, 4410) Wiring Diagram



Notes:

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

Cylinder



4310ME-3971
ME Cylinder Assembly

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



4310ME-3071
ME Cylinder/Plate Assembly

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

Cover



4310ME-72MC
Metal Cover

- Handed
- Standard

Arms



4310ME-3077SF
Swing-Free Arm

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



4310ME-3077DE
Double Egress Arm

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

Track

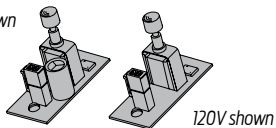


4310ME-3038
Track

- Non-handed
- Standard

Switch

24V shown



4310ME-3351 Switch Assembly

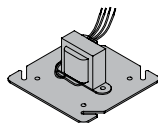
- Provides continuous hold-open function
- 24V or 120V, please specify

Installation Accessories



4310ME-3034 Track Roller

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



4310-3210 Transformer

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



4310ME-3354 ME Wiring Harness

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

How-to-order 4310ME Series closers

Select hand

- RH
- LH

Voltage

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

Specify finish

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

Closer will be shipped with:

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

Closer options

Cylinder function

- Bypass 80° (B80)
- 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

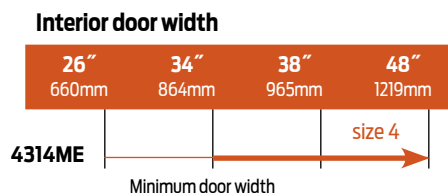
- Transformer, 4310ME-3210

Special template

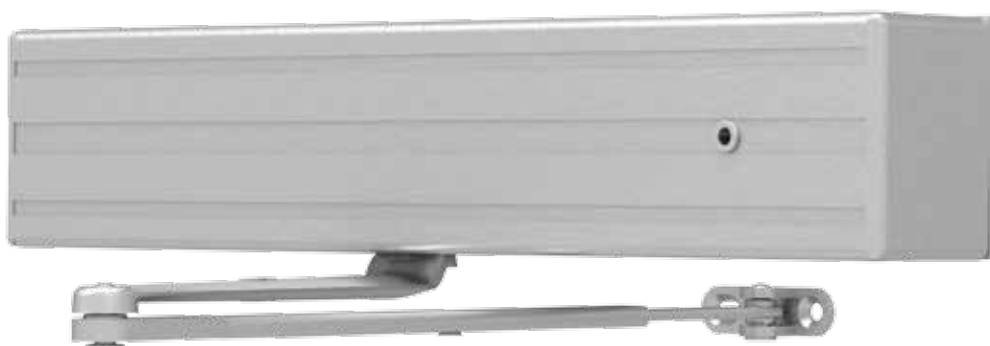
- ST- _____

Table of sizes

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



→ Indicates recommended range of door width for closer size.



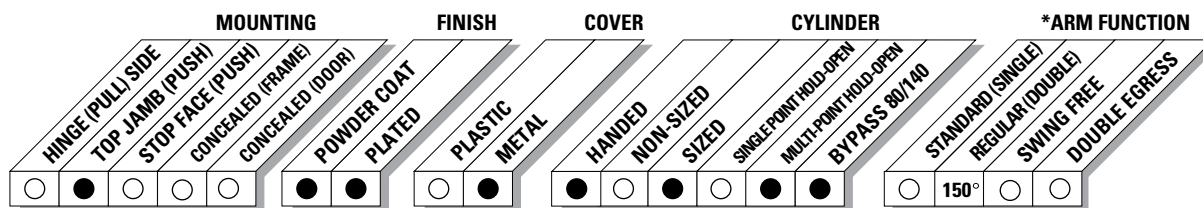
The 4410ME SENTRONIC® is a heavy duty, electrically controlled closer/holder designed to provide infinitely adjustable hold-open for fire and smoke barrier doors. Door is held open until current interruption releases mechanism and the door closes. Double lever arm closer is specifically designed for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

Certifications	Grade 1 - ANSI A156.15, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101
Body Construction	<ul style="list-style-type: none"> ■ Cast iron Body ■ Full Complement Bearing ■ 1-1/2" Diameter Piston ■ 11/16" Diameter Double Heat Treated Pinion Journal
Fluid	All Weather Fluid
Handing	Handed
Size	Sized, 4 only
Warranty	2 years

Cover	Metal, Standard
Fasteners	Wood and machine screw pack
Mounting	Top jamb (Push Side)
Arms	Regular arm
Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Wiring	<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes

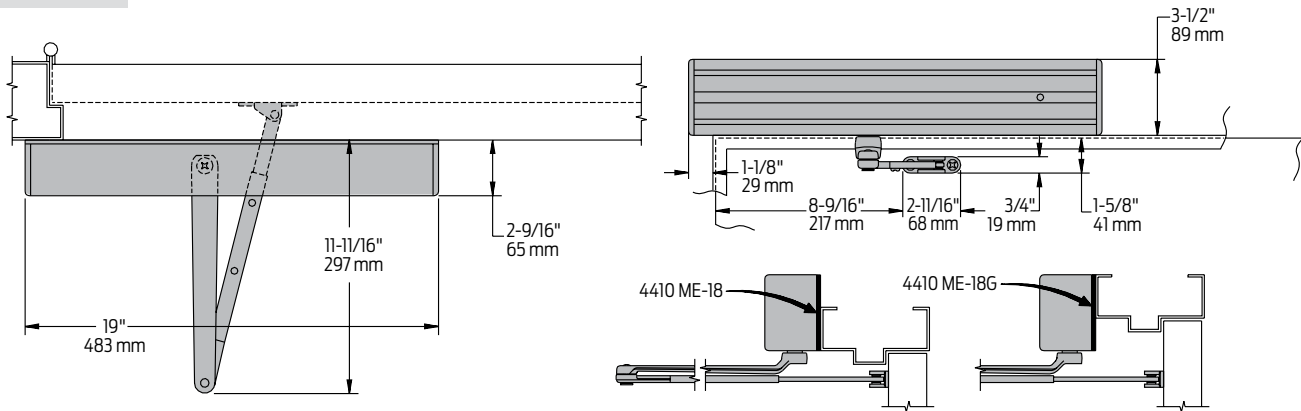
Special Templates

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



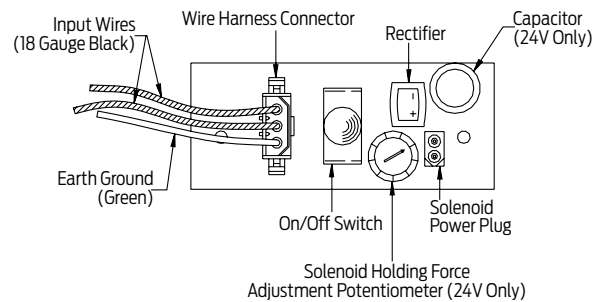
● AVAILABLE
○ NOT AVAILABLE

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



Butt Hinges	Should not exceed 4-1/2" (114 mm) in width
Top Rail	<ul style="list-style-type: none"> 1-3/4" (44 mm) minimum 3-3/4" (95mm) minimum with flush ceiling
Reveal	<ul style="list-style-type: none"> 3-7/8" (98 mm) maximum regular or long arm For reveals greater than 3-7/8" consult factory
Head Frame	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> (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	<ul style="list-style-type: none"> Templating allows 160°, with hold-open points up to 150° Optional long arm allows 180°, hold-open points up to 170°
ME Electrical Options	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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



Cylinders



4414ME-3971
ME Cylinder Assembly

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



4414ME-3071
ME Cylinder/Plate Assembly

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

Cover



4410ME-72MC
Metal Cover

- Handed

Arms



4410ME-3077
Regular Arm

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

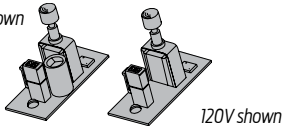


4410ME-3077L
Long Arm

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

Switch

24V shown



4410ME-3351 Switch Assembly

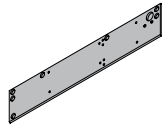
- Provides continuous hold-open function
- Available as 24V or 120V, please specify

Installation Accessories



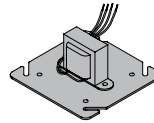
4410ME-18 Mounting Plate

- Standard



4410ME-18G Mounting Plate

- Substituted for standard plate on flush ceiling installations
- Optional



4410ME - 3210 Transformer

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



4410ME-3354 ME Wiring Harness

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

How-to-order 4410ME Series closers

Select hand

- RH
- LH

Voltage

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

Specify finish

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

Closer will be shipped with:

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

Closer options

Cylinder function

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

Arm

- Long (LONG)

Finishes

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

Screw pack

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

Installation accessories

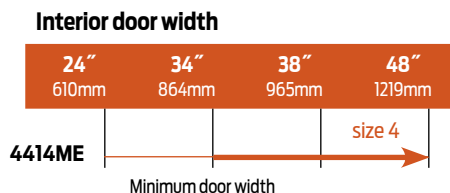
- Plate, 4410ME-18G
(substituted for standard mounting plate)
- Transformer, 4410ME-3210

Special template

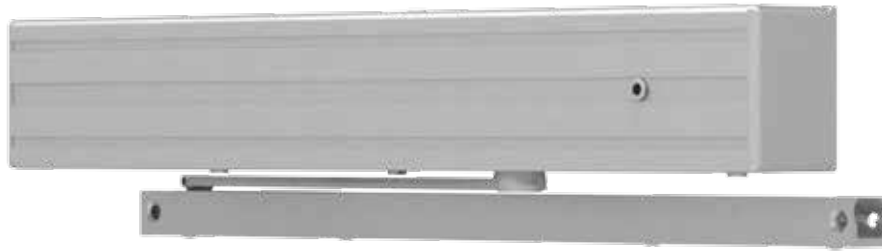
- ST- _____

Table of sizes

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



Indicates recommended range of door width for closer size.

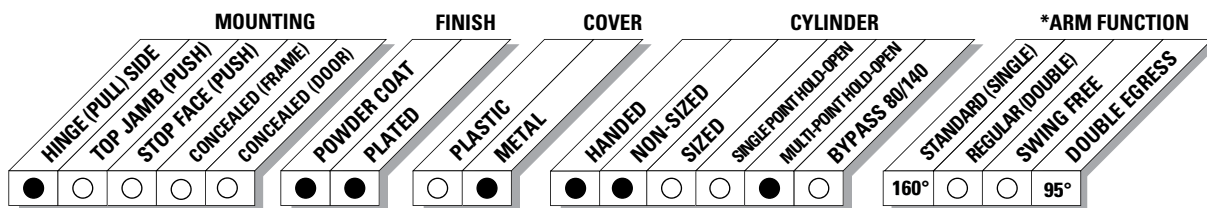


The 4310HSA SENTRONIC® is an electrically controlled closer/holder designed to provide easy passage for groups of pedestrians through high traffic doors. Pedestrians, moving through the doorway, trigger the built-in scanner. When the door is opened to 80° or more, the door is electrically held open to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

Certifications	Grade 1 - ANSI A156.4, ANSI 156.15, NFPA 101, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	Metal, Standard
Body Construction	<ul style="list-style-type: none"> Cast Iron Body Full Complement Bearing 1-1/2" Diameter Piston 11/16" Diameter Double Heat Treated Pinion Journal 	Arms	<ul style="list-style-type: none"> Standard arm (with track) Double egress arm, optional
Fluid	All Weather Fluid	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> Aluminum (689) Statuary Bronze (690) Light Bronze (691) Black (693) Dark Bronze (695) Brass (696) Custom colors optional
Handing	Handed	Wiring	<ul style="list-style-type: none"> Optional SRI primer - powder coat only Optional plated finishes Concealed or surface wiring 24V AC/DC input only 120V requires 4310HSA-3210 transformer HSA features a scanner activated hold-open function, fixed 15 seconds or 30 seconds
Size	Sized, 1-6		
Warranty	2 years		
Fasteners	Wood and machine screw pack		
Mounting	Hinge (Pull Side) interior doors		

Special Templates

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



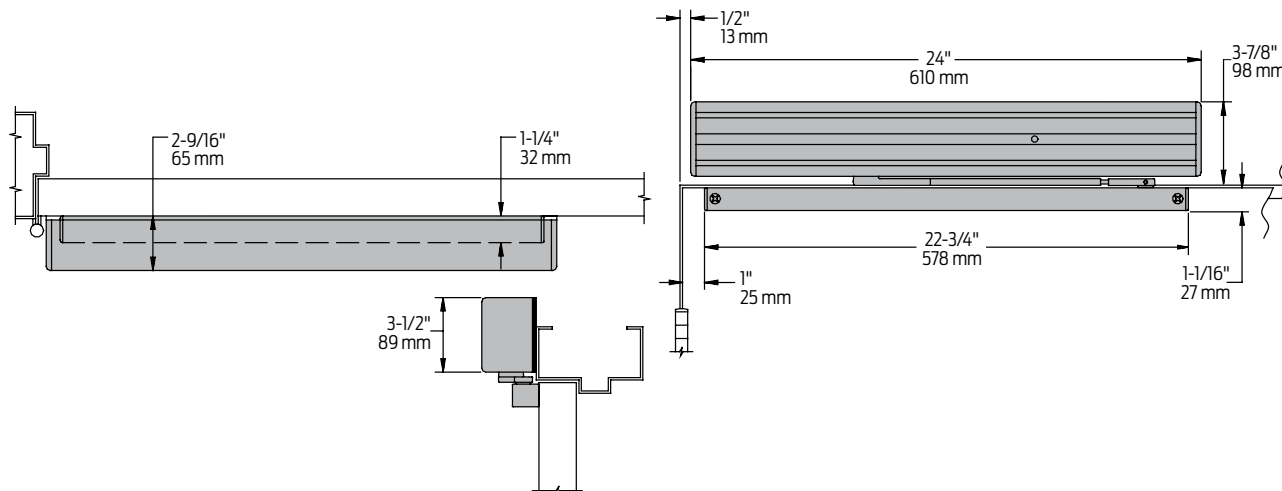
● AVAILABLE
○ NOT AVAILABLE

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

4310 HSA Series

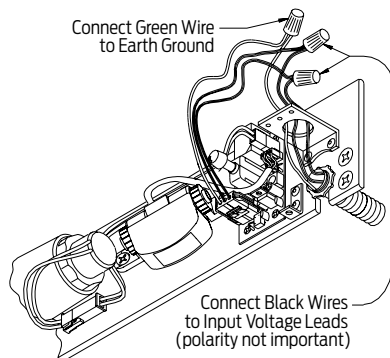
Mounting details

Hinge (Pull) Side Mounting



Butt Hinges	Should not exceed 4-1/2" (114 mm) in width
Top Rail	1-1/16" (27 mm) minimum
Reveal	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Templating allows 180° Optional double egress arm limited to 95° Infinite hold-open points from 80° up to 160°
Options	<ul style="list-style-type: none"> 120 volt input requires 4310HSA-3210 transformer to change 120V AC to 24V AC

HSA (4310) Wiring Diagram



Notes:

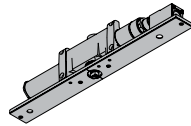
- Functions as full rack and pinion door closer when current is interrupted or continuous hold-open is not engaged
- Built-in "On/Off" switch provides continuous hold-open function

Cylinders



4311HSA-3971
HSA Cylinder Assembly

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



4311HSA-3071
HSA Cylinder/Plate Assembly

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

Cover



4310HSA-72MC
Metal Cover

- Handed
- Standard

Track



4310HSA-3038
Track

- Non-handed
- Standard

Arms



4310HSA-3077T
Standard Arm

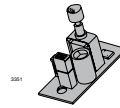
- Handed



4310HSA-3077DE
Double Egress Arm

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

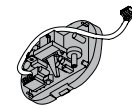
Switch



4310HSA-3448
Switch Assembly

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

Scanner



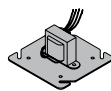
4310HSA-3428
Scanner Module

Installation Accessories



4310HSA-3034
Track Roller

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



4310HSA-3210
Transformer

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

How-to-order 4310 HSA Series closers

Select hand

- RH
- LH

Voltage

- 24V AC/DC

Specify finish

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

Closer will be shipped with:

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

Closer options

Arm

- Double Egress (DE)

Finishes

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

Screw pack

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

Installation accessories

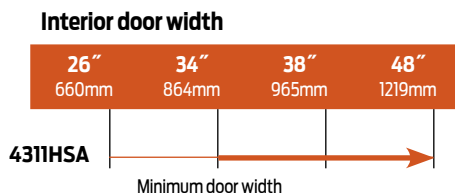
- Transformer, 4310HSA-3210

Special template

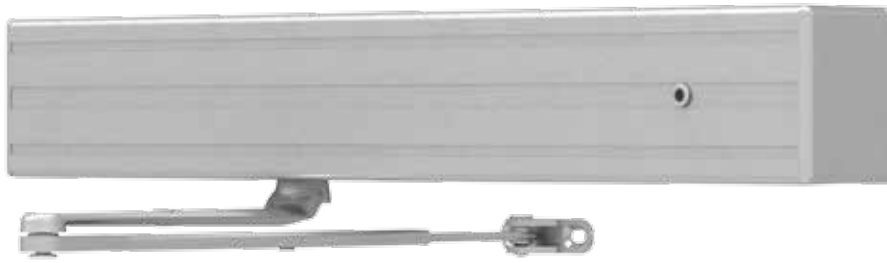
- ST- _____ (if required)

Table of sizes

- Closing power of 4310 HSA Series closers may be increased 15%



→ Indicates recommended range of door width for closer size.



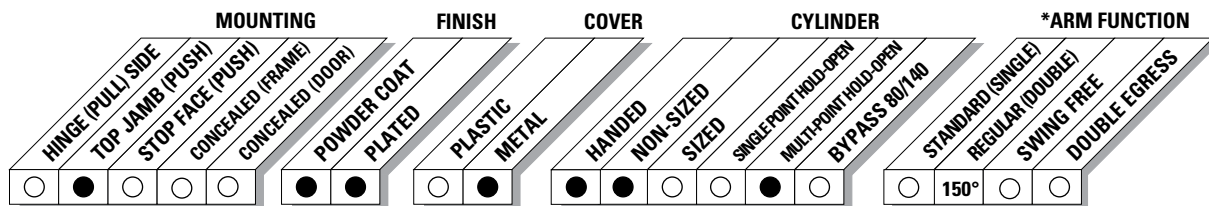
The 4410HSA SENTRONIC® is an electrically controlled closer/holder designed to provide easy passage for groups of pedestrians through high traffic doors. Pedestrians, moving through the doorway, trigger the built-in scanner. When the door is opened to 80° or more, the door is electrically held open to 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, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/2" Diameter Piston ■ 11/16" Diameter Double Heat Treated Pinion Journal
Fluid	All Weather Fluid
Handing	Handed
Size	Sized, 1-6
Warranty	2 years
Fasteners	Wood and machine screw pack
Mounting	Hinge (Pull Side) for interior
Cover	Metal, Standard

Arms	<ul style="list-style-type: none"> ■ Standard arm and track ■ Double egress, optional
Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Wiring	<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes ■ Concealed or surface ■ 24V AC/DC input only ■ 120V AC input requires 4310HSA-3210 transformer ■ HSA features a scanner activated hold-open function, adjustable 15 seconds or 30 seconds ■ Built-in "On/Off" switch provides continuous hold-open feature

Special Templates

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



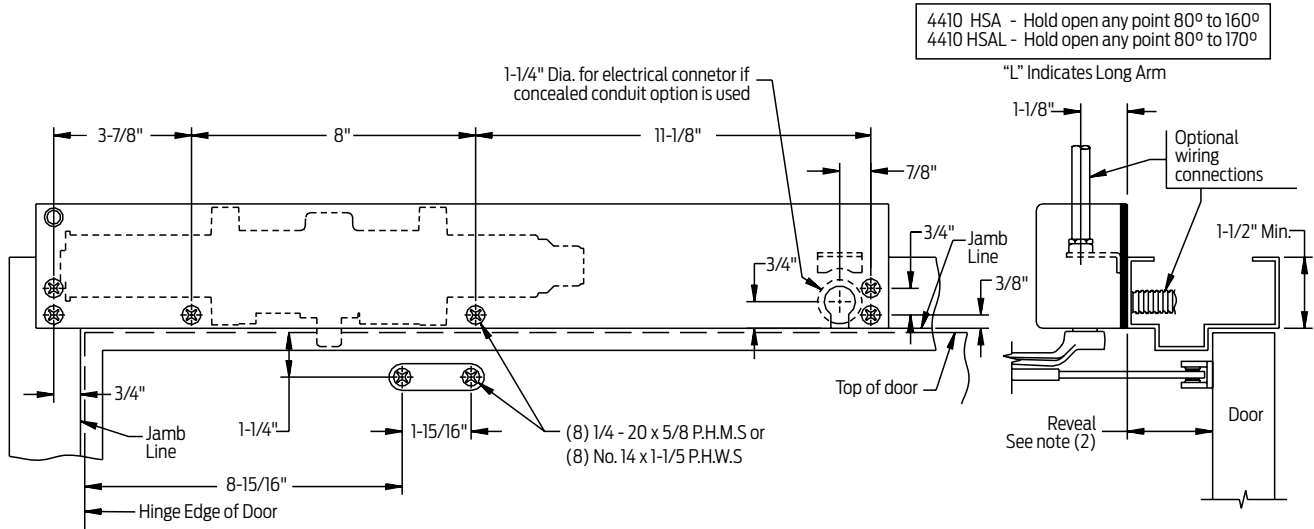
● AVAILABLE
○ NOT AVAILABLE

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

4410 HSA Series

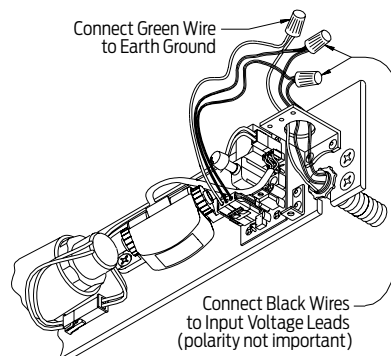
Mounting details

Top Jamb (Push) Side Mounting



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

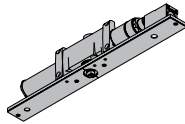


Cylinders



4412HSA-3971

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



4412HSA-3071 HSA Cylinder / Plate Assembly

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

Cover



4410HSA-72MC Metal Cover

- Handed
- Standard

Arms



4410HSA-3077 Regular Arm

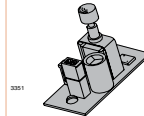
- Non-Handed
- 3-7/8" (98 mm) maximum reveal



4410HSA-3077L Long Arm

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

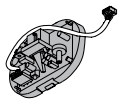
Switch



4410HSA-3448 Switch Assembly

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

Scanner



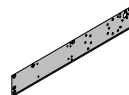
4410HSA-3428 Scanner Module

Installation Accessories



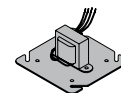
4410HSA-18 Mounting Plate

- Standard



4410HSA-18G Transformer Mounting Plate

- Substituted on flush ceiling installations
- Optional



4410HSA-3210 Transformer

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

How-to-order 4410 HSA Series closers

Select hand

- RH
- LH

Voltage

- 24V AC/DC

Specify finish

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

Closer will be shipped with:

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

Closer options

Arm

- Long Arm (LONG)

Finishes

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

Screw pack

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

Installation accessories

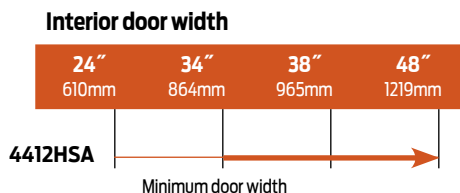
- Plate, 4410HSA-18
- Plate, 4410HSA-18G
(substituted for standard mounting plate)
- Transformer, 4410HSA-3210


Special template

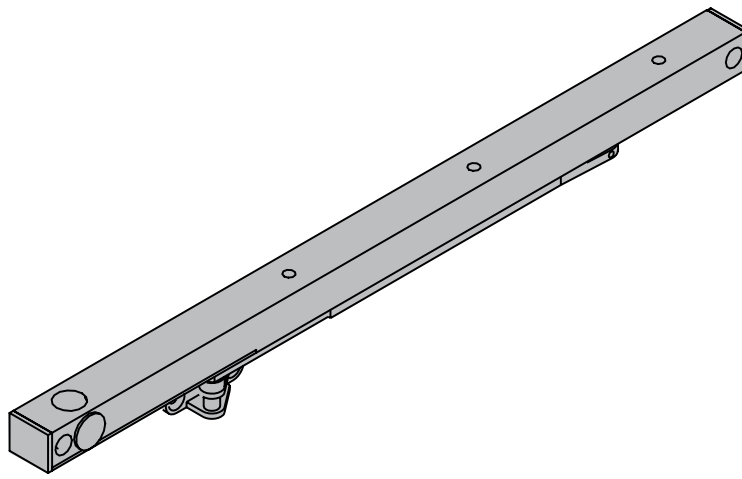
- ST- _____ (if required)

Table of sizes

- Closing power of 4410 HSA Series closers may be increased 15%



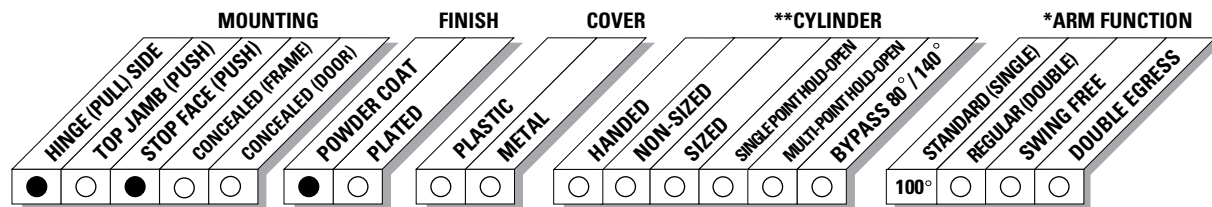
 Indicates recommended range of door width for closer size.



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, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> Aluminum (689) Statuary Bronze (690) Light Bronze (691) Black (693) Dark Bronze (695) Brass (696) Custom colors optional
Handing	Non-Handed	Wiring	<ul style="list-style-type: none"> Concealed or surface 24V or 120V, please specify Interfaces with alarm system, please consult with factory for full details
Templating	22 3/4" x 1 1/4"		
Warranty	2 years		
Fasteners	Wood and machine screw pack		
Mounting	Hinge (Pull Side)		
Arms	<ul style="list-style-type: none"> 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 		

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



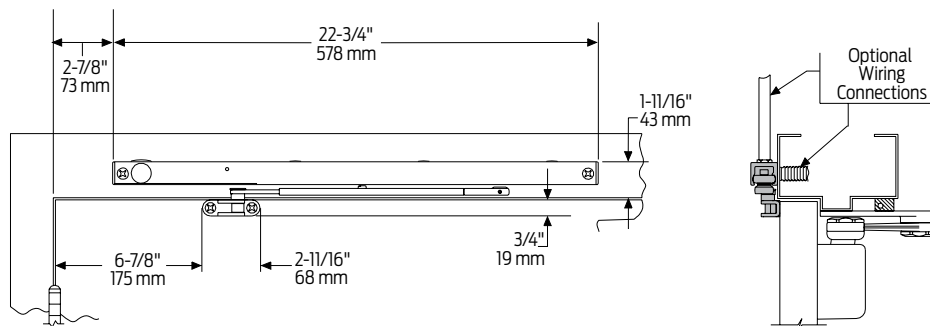
● AVAILABLE
○ NOT AVAILABLE

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

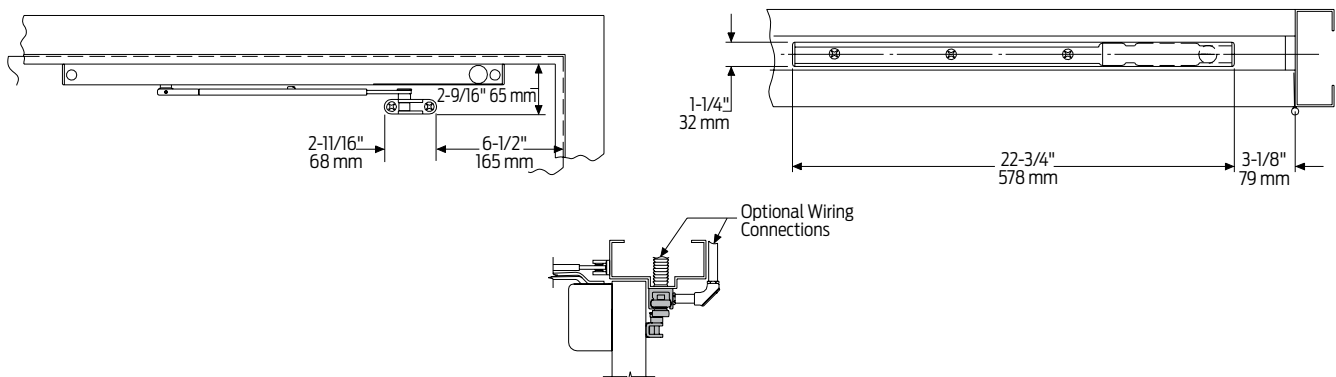
Mounting details

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

Hinge (pull) side mount



Stop face (push side) mount

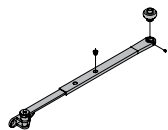


Butt Hinges	Should not exceed 5" (127 mm) in width
Swing Clear Hinges	Consult factory
Auxiliary Stop	Recommended at hold-open point
Reveal	Should not exceed 1/8" (3 mm) for standard arm
Head Frame	Requires 2" (51 mm) minimum
Stop Width	1-1/4" (32 mm) minimum
Flush Ceiling	2" (51 mm) head frame does not require special templating
Door Width	<ul style="list-style-type: none"> 2' 4" (711 mm) minimum for single door with SEH 4' 8" (1422 mm) minimum for paired doors with SEH
Maximum Opening	<ul style="list-style-type: none"> Templating allows 100° Hold-open points between 80° and 100° in approximately 3° increments
SEH Electrical Options	<ul style="list-style-type: none"> 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 4040SE-3210 TRANSFORMER or 8310-824 reduces 120V AC line voltage to 24V AC. Circuitry accepts either AC or DC input
Options	<ul style="list-style-type: none"> 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

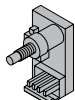
Track



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



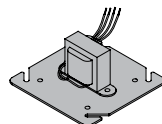
SEH-81
Conduit Quick-Connector

- 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.

Closer will be shipped with:

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

Options

Finishes

- Custom Powder Coat (RAL)

Screw pack

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

Installation accessories

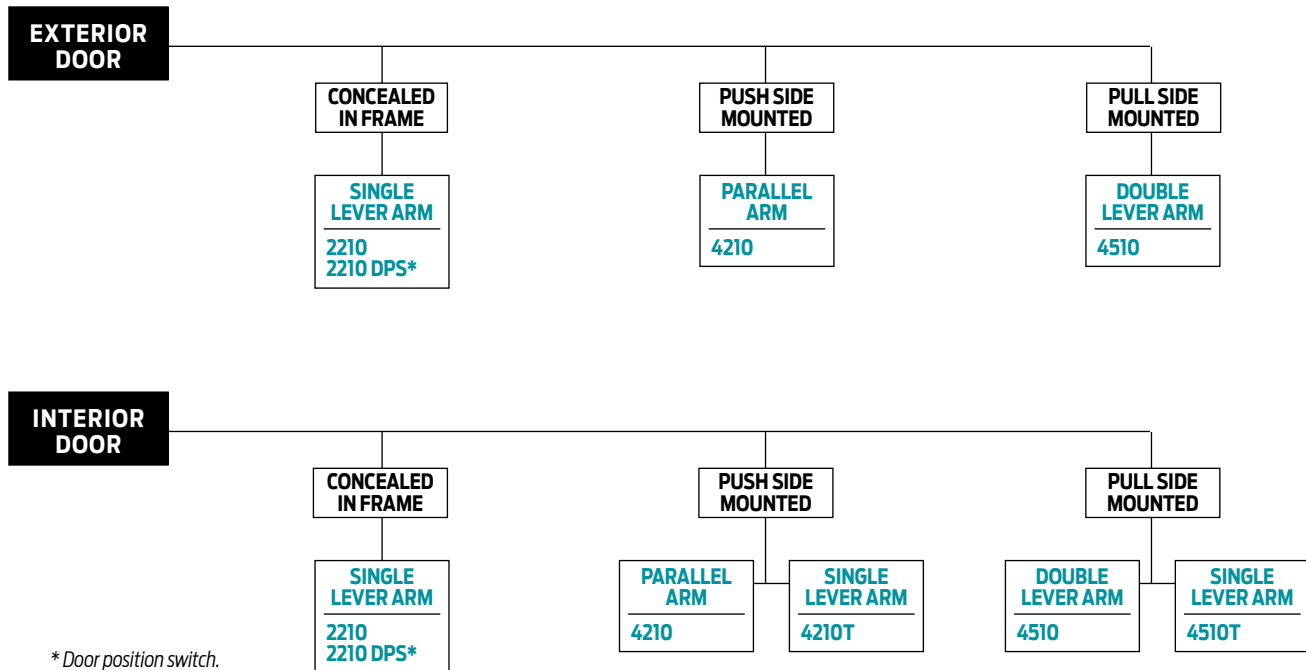
- Transformer, 4040SE-3210

Special template

- ST- _____ (if required)

Product selection guide

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.

CLOSER SERIES	MOUNTING				FINISH		COVER		CYLINDER				** ARM FUNCTION					
	HINGE (PULL SIDE)	PARALLEL ARM (PUSH)	STOP FACE	CONCEALED (FRAME)	POWDER COAT	PLATED	PLASTIC	METAL	HANDED	NON-SIZED	SIZED	ACCESSIBILITY	DELAYED ACTION	AVB***	DPS SWITCH	STANDARD (SINGLE)	EDA	CUSH/HCUSH
2210	○	○	○	●	●	●	○	○	●	○	●	○	○	●	○	180°	○	○
2210DPS	○	○	○	●	●	●	○	○	●	○	●	○	○	●	●	180°	○	○
4210	○	●	○	○	●	●	○	●	●	●	●	♿	●	●	○	○	180°	110°
4210T	○	○	●	○	●	●	○	●	●	○	●	♿	○	●	○	110°	○	○
4510	●	○	○	○	●	●	○	●	●	●	●	♿	●	●	○	○	140°	○
4510T	●	○	○	○	●	●	○	●	●	○	●	♿	○	●	○	180°	○	○

● 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.

High Security Closers Series

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 forearms.
- 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 A 156.4. Consult factory for details.

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

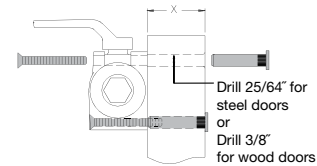
POSITIVE PRESSURE

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

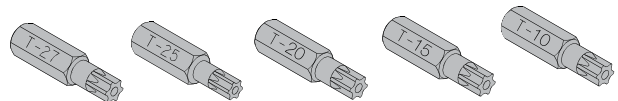
TORX MACHINE SCREW (TORX) pack contains tamper resistant machine screws to install the closer. Thru Bolts for TORX machine screws are available for all high security closers, except 2210 series.

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 T20, for #8 (and undercut #10) machine screws use T15, and for #6 machine screws use T10. The specific bits required for installation are listed on the "HOW TO ORDER" page for each closer. Sold separately.

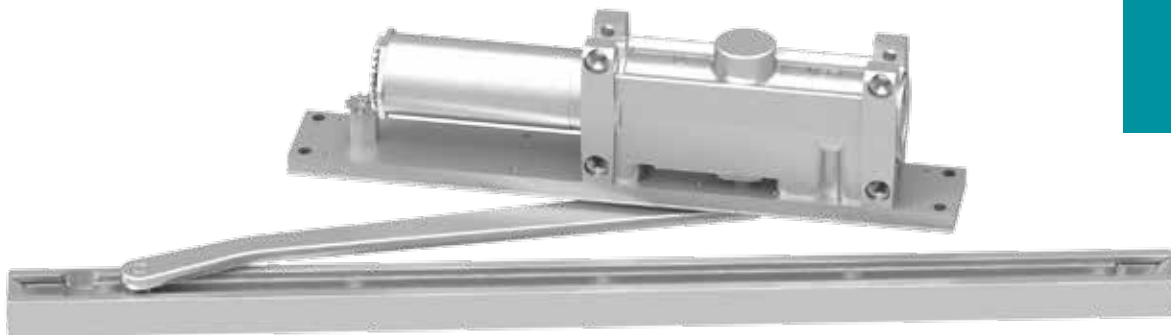


FASTENERS

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.

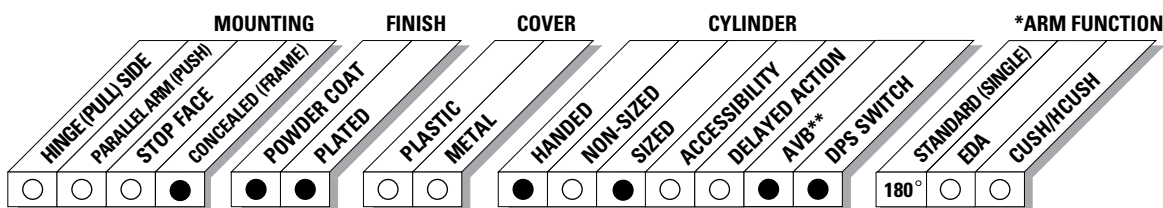


The concealed 2210 Series, heavy duty, high security track closer features complete concealment with special components to minimize tampering and vandalism. Forged steel, single lever arm and heavy steel mounting plate are designed for correctional, vandal prone, institutional, and other high traffic 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	Cover	Metal, standard
Body Construction	<ul style="list-style-type: none"> Cast Iron Body Full Complement Bearing 1-1/2" Diameter Piston 11/16" Diameter Double Heat Treated Pinion Journal 	Fasteners	TORX machine screw pack
Fluid	All Weather Liquid X Fluid	Mounting	<ul style="list-style-type: none"> Concealed, single acting cylinder in head frame Concealed, arm and track in top rail of door
Handing	Handed	Arms	Standard security arm and security track
Size	Sized, interior, exterior and vestibule 3-5 (refer to chart)	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> 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 (2210); 2 years (2210DPS)		

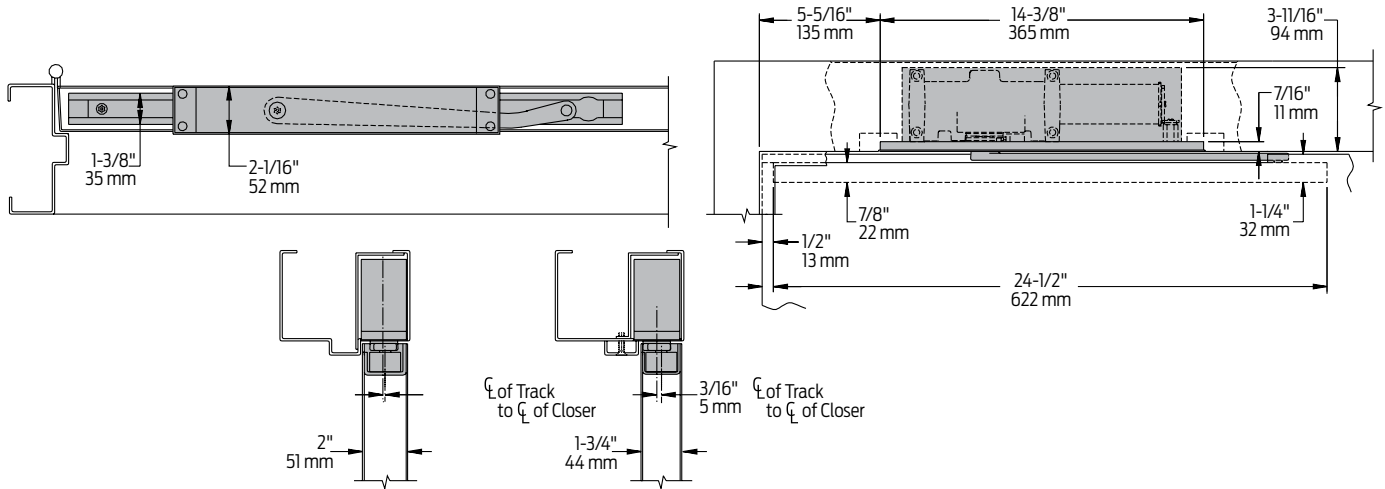
Special Templates

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



● AVAILABLE
○ NOT AVAILABLE

* Maximum opening with standard template.
** Advanced Variable Backcheck.



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	<ul style="list-style-type: none"> 5-3/4" (146 mm) wide and 4" (102 mm) high with 2-3/16" (56 mm) rabbet required Consult factory if any dimension is less
Steel Mounting Plate	Thickness 3/8" (10 mm)
Door Position Switch	<ul style="list-style-type: none"> Optional, newly redesigned, field adjustable switch can interface with security and monitoring systems Add suffix "DPS" to selected cylinder Provides normally open (N.O.) and normally closed (N.C.) circuit A three wire connector harness with 84" (2134 mm), 16 AWG leads is furnished to simplify connection to field wiring Single pole double throw (SPDT) contacts rated at 125/250 VAC at 10.1 amps maximum resistive load are standard
Advanced Variable Backcheck	<ul style="list-style-type: none"> Cylinder starts backcheck at approximately 45° instead of the normal 75° Add suffix "AVB" to selected cylinder (eg. 2213 DPS AVB)
Maximum Opening	<ul style="list-style-type: none"> Templating allows 180° Consult factory if door will be held open at 180° Pivot mounting door limits opening to 110° and increases minimum door width to 32" (813 mm). Consult factory Please note that many track style door closers are capable of allowing 180° of door swing <p><i>Note: Track style closers are at their weakest closing force at 180°. Consult factory for applications where door must swing 180°.</i></p>
Options	<ul style="list-style-type: none"> Advanced Variable Backcheck Cylinder Door Position Switch

Cylinder



2213(4)(5)-3071
Cylinder Assembly

- Handed
- Cast iron
- Standard



2210DPS-3071
Cylinder Assembly

- Handed
- Cast iron

Arms



2210-3077T
2210DPS-3077T
Standard Security Arm

- 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

- 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

Tracks



2210-3038
Security Track

- 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



2210DPS-3038

Finish Plates



2210-11
Long Plate

- Heavy gauge metal plate
- Required for complete enclosure
- Six point TORX® mounting screws for extra security
- Closer adjustments not accessible with finish plates installed



2210-12
Short Plate

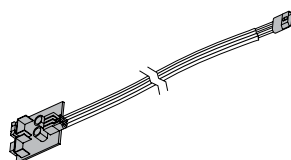
- Heavy gauge metal plate
- Required for complete enclosure
- Four point TORX® mounting screws for extra security
- Closer adjustments not accessible with finish plates installed

Installation Accessories



2210-3034
Security Track Roller

- Low friction track roller threads into 2210-3077T arm for extra strength and security
- Can not be removed without disconnecting arm from closer



2210-493
Test Kit

- Battery operated designed to verify switch signal response point
- Can be used directly at door location (used for 2210 DPS only)

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 _____
Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass

Closer will be shipped with:

- Standard cylinder
- Finish plate
- Standard security arm
- Security track roller
- Security track
- TORX machine screw pack, unless options listed below are selected.

Closer options

Cylinder

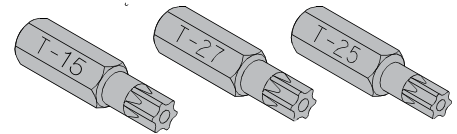
- Advanced Variable Backcheck (AVB)

Finishes

- Custom Powder Coat (RAL) _____
- Plated Finish, US _____ (cover plate and arm only)
- SRI primer (excludes DPS) (use with powder _ coat finishes only)

Special template

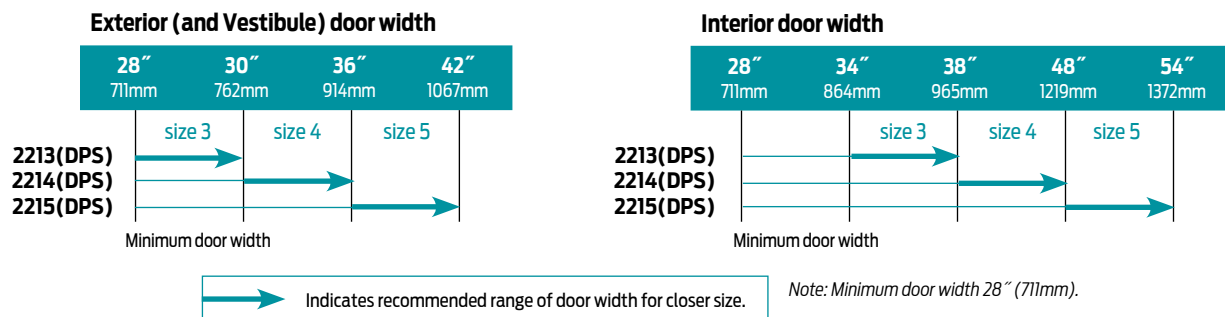
- ST- _____

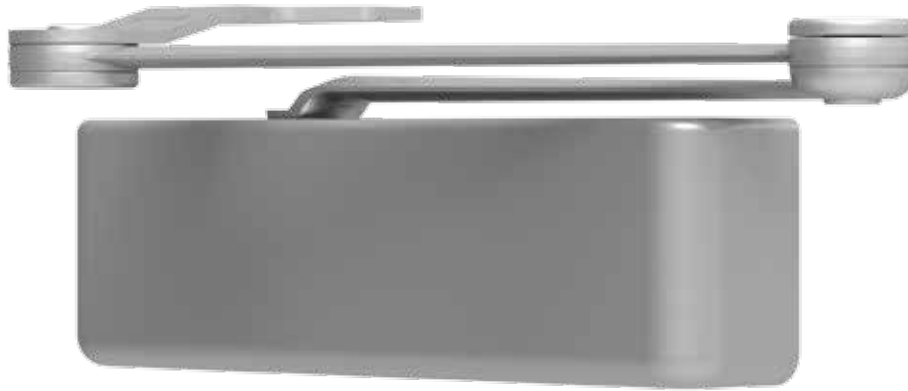


NOTE: Installation of this closer requires T-27, T-25 and T-15 driver bits for TORX machine screws with a security pin. Sold separately.

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%)



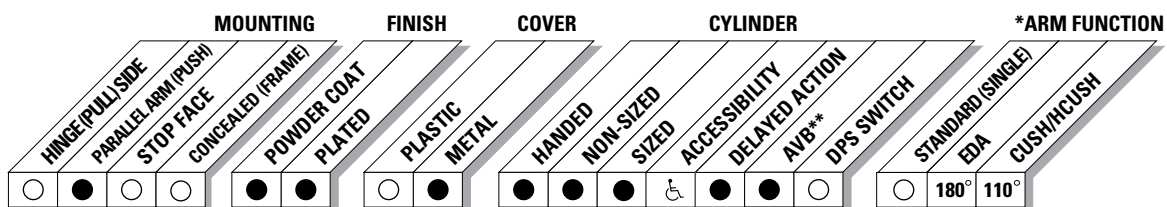


The 4210 SMOOTHIE® Series is a heavy duty, high security closer with special components to minimize tampering and vandalism. Forged steel parallel arms and heavy gauge metal security covers are designed for correctional, vandal prone, institutional and other high traffic applications. The closer has 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 <i>*4211 cylinder meets ADA</i>	Cover	Metal Security
Body Construction	<ul style="list-style-type: none"> Cast Iron Body Full Complement Bearing 1-1/2" Diameter Piston 11/16" Diameter Double Heat Treated Pinion Journal 	Fasteners	TORX machine screw pack
Fluid	All Weather Fluid	Mounting	Parallel (Push Side)
Handing	Handed	Arms	Extra duty, non hold-open
Size	<ul style="list-style-type: none"> Adjustable Exterior and, Vestibule, Size 3-5 or size 6 Adjustable, Interior, Size 2-5; or size 6 	Finishes/Colors/Powder Coat	<ul style="list-style-type: none"> Aluminum (689) Statuary Bronze (690) Light Bronze (691) Black (693) Dark Bronze (695) Brass (696) Custom colors optional
Warranty	15 years		<ul style="list-style-type: none"> 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.



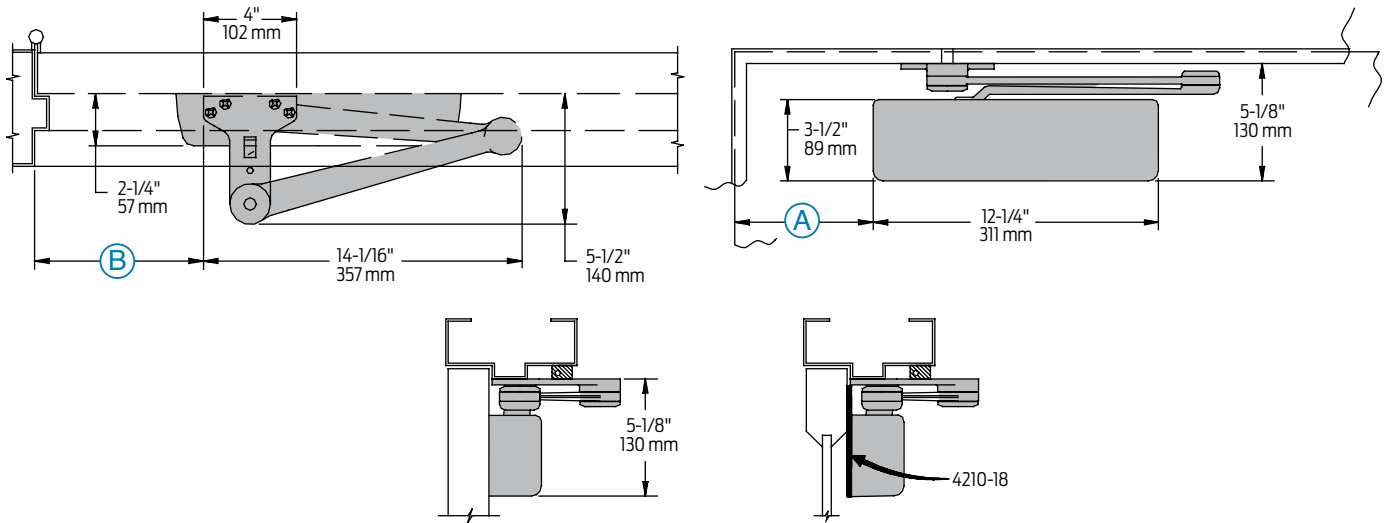
● AVAILABLE
○ NOT AVAILABLE

♿ 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.

4210 Series

Mounting details

Parallel Arm (Push Side) Mounting



Butt Hinges	Should not exceed 5" (127 mm) in width	
Auxiliary Stop	Recommended where the door cannot swing 180° or where CUSH arms not used	
Clearance	For EDA or CUSH is 5-1/2" (140 mm) from push side of door	
Top Rail	Less than 5-1/8" (130 mm) measured from stop, requires PLATE 4210-18. Plate requires 2" (51 mm) minimum top rail	
Stop Width	2-3/4" (70 mm) recommended. Less than 1" (25mm), consult factory	
Delay Action	<ul style="list-style-type: none"> ■ Add suffix "DEL" to selected cylinder (eg. 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	<ul style="list-style-type: none"> ■ Cylinder starts backcheck at approximately 45° instead of the normal 75° ■ Add suffix "AVB" to selected cylinder (eg. 4211 AVB) 	
Maximum opening	EDA arm can be templated for	CUSH 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 = 2-15/16" (75 mm) B = 4-1/4" (108 mm)	100°: A = 6-7/16" (164 mm) B = 7-3/4" (197 mm)
		110°: 5-9/16" (141 mm) B = 6-7/8" (175 mm)

Hold-open point at maximum opening with H-CUSH arm.

Options	<ul style="list-style-type: none"> ■ Delayed Action or Advanced Variable Backcheck cylinder.
----------------	---

Cylinder



4211(6)-3071
Cylinder Assembly

- Handed
- Cast iron
- Standard

Cover



4210-72MC
Metal Security Cover

- Handed
- Four point mounting for extra security
- Closer adjustments not accessible with cover installed
- Standard

Arms



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



4210-3077CNS
Cush-N-Stop® (CUSH) Arm

- Non-handed
- Parallel arm features solid forged steel main arm and forearm with built-in stop in soffit shoe
- Double slab arm/pinion attachment for maximum strength



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

Installation Accessories



4210-18, 4210-18CUSH
Plate

- Required for push side mount where top rail 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



4210-30
CUSH Shoe Support

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



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 rabbetted or flush frame

How-to-order 4210 Series

Select cylinder size

- 4211 (adjustable from size 1 to 5)
- 4216 (DEL or HCUSH arm not available)

Select hand

- RH
- LH

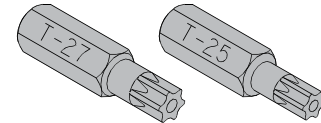
Specify finish

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

Closer will be shipped with:

- Standard cylinder
- Security cover
- Standard security arm
- 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.



Closer options

Cylinder

- Delayed Action (DEL)
- Advanced Variable Backcheck (AVB)

Finishes

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

Arms

- Cush-N-Stop arm (CUSH)
- HCush-N-Stop arm (HCUSH)

Screw pack

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

Installation accessories

- PLATE, 4210-18
- PLATE, 4210-18CUSH

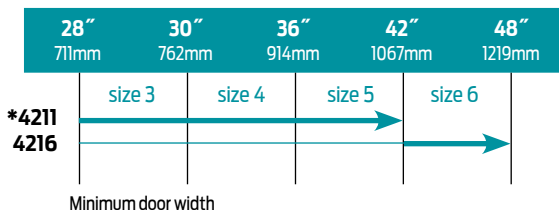
Special template

- ST- _____

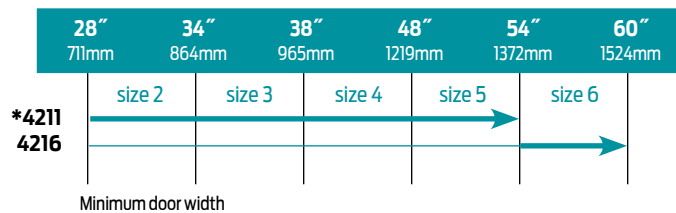
Table of sizes

- Select closer based on width of door
- The spring power of non-sized 4211 cylinder is adjustable from size 1 through size 5 and is shipped set to size 3
- Sized 4210 Series cylinder available in size 6
- Delayed action not available with 4216 cylinder

Exterior (and Vestibule) door width



Interior door width



→ Indicates recommended range of door width for closer size. * Adjustable Size 1 thru 5

Reduced opening force 4210 Series closers

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

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

* Maximum opening force.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	4211	4211	4211
	5.0* lbs.	4211	4211	4211

* Maximum opening force.

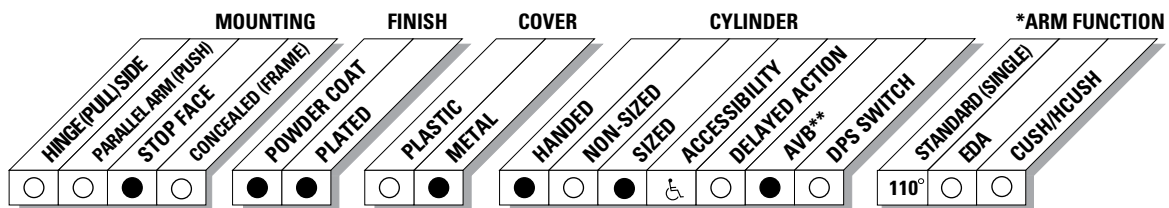


The 4210T SMOOTHIE® Series is a heavy duty, high security track closer with special components to minimize tampering and vandalism. Forged steel arms and heavy gauge metal security covers are designed for correctional, vandal prone, institutional and other high traffic interior applications. The closer has passed 10 million cycles in independent testing. A choice of finishes and cylinder functions meet correctional and vandal resistant requirements.

Certifications	Grade 1 - ANSI A156.4, UL 10C, ADA*, 100 Hour Salt Spray, Meets BAA - Buy American Act <i>*4211 meeting ADA requirements</i>	Cover	Metal Security
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/2" Diameter Piston ■ 11/16" Diameter Double Heat Treated Pinion Journal 	Fasteners	TORX machine screw pack
Fluid	All Weather Fluid	Mounting	Stop Face (Push Side)
Handing	Handed	Arms	Security arm, security track with roller
Size	Interior, Sized 1, 3 or 4	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Warranty	15 years		<ul style="list-style-type: none"> ■ 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.



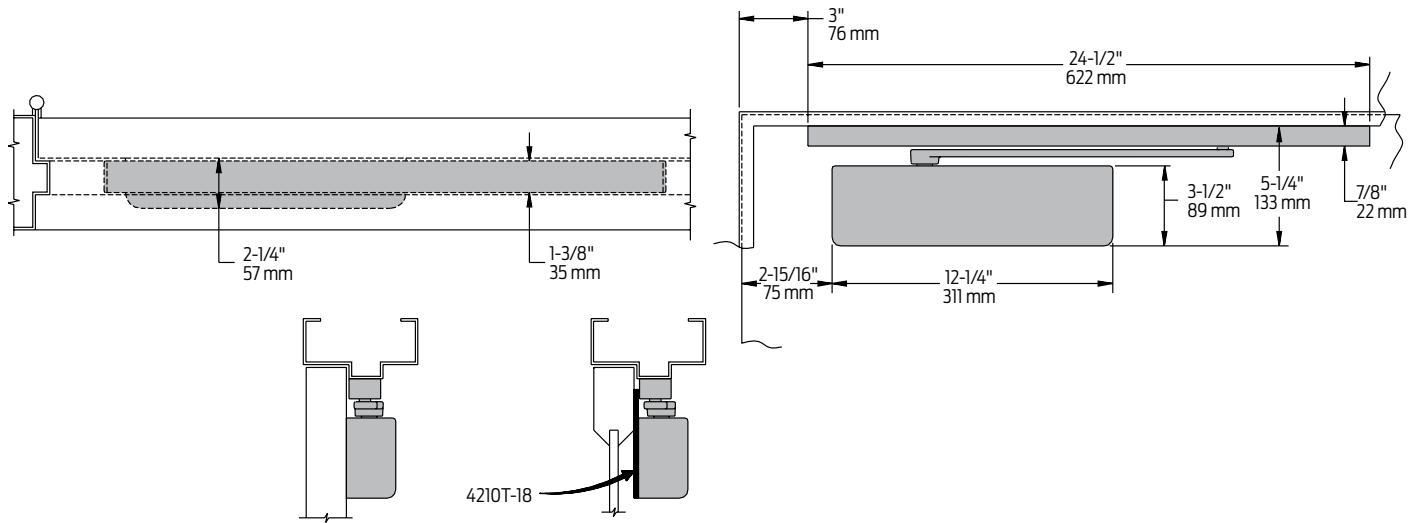
● AVAILABLE
○ NOT AVAILABLE

♿ Closer available with less than 5.0 lbs. opening force on 36" door.
* Maximum opening with standard template.
** Advanced Variable Backcheck.

4210T Series

Mounting details

Stop Face (Push Side) Mounting



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	<ul style="list-style-type: none"> Less than 5-1/4" (133 mm) measured from stop, requires PLATE 4210T-18 Plate requires 2-1/4" (57mm) minimum measured from the stop
Stop Width	Minimum 1-3/8" (35 mm)
Advanced Variable Backcheck	<ul style="list-style-type: none"> Cylinder starts backcheck at approximately 45° instead of the normal 75° Add suffix "AVB" to selected cylinder (eg. 4213T AVB)
Maximum opening	Templating allows 110°
Options	Advanced Variable Backcheck cylinder

Cylinder



4211(3)(4)T-3071 Cylinder Assembly

- Handed
- Cast iron
- For various applications see "Table of Sizes" on 4210T Series page 14
- Standard

Cover



4210T-72MC Metal Security Cover

- Handed
- Four point TORX mounting for extra security
- Closer adjustments not accessible with cover installed

Arms



4210T-3077T Standard Security Arm

- Handed
- Solid forged steel, large cross section arm
- Special threaded attachment of track roller for extra security
- Double slab arm/pinion attachment for maximum strength
- Can only be used with high security track roller, 4210T-3034

Track



4210T-3038 Security Track

- Non-handed
- Designed to eject foreign objects placed in track during either opening or closing motion
- Requires track roller, 4210T-3034



4210T-3034 Security Track Roller

- Low friction track roller threads into 4210T-3077 arm for extra strength and security
- Can not be removed without disconnecting arm from closer

Installation Accessories



4210T-18 Plate

- Required where top rail, when measured from the stop, is less than 5-1/4" (133 mm)
- Requires 2-1/4" (57 mm) minimum top rail measured from the stop

How-to-order 4210T Series

Select cylinder size

- 4211T (ADA)
- 4213T
- 4214T

Select hand

- RH
- LH

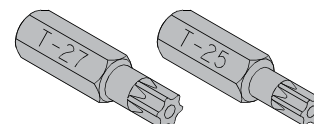
Specify finish

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

Closer 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.



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

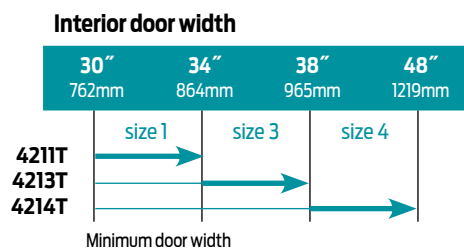
- PLATE, 4210T-18

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

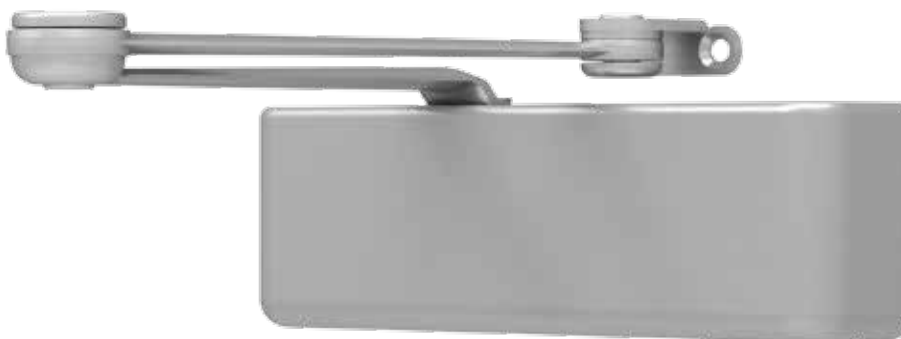
CAUTION! Any manual door closer, including those certified by BHMA to conform to ANSI Standard A156.4, that is selected, installed and adjusted based on ADA or other reduced opening force requirements may not provide sufficient power to reliably close and latch a door.

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

* Maximum opening force.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	4213T	4213T	4213T
	5.0* lbs.	4211T	4211T	4211T

* Maximum opening force.

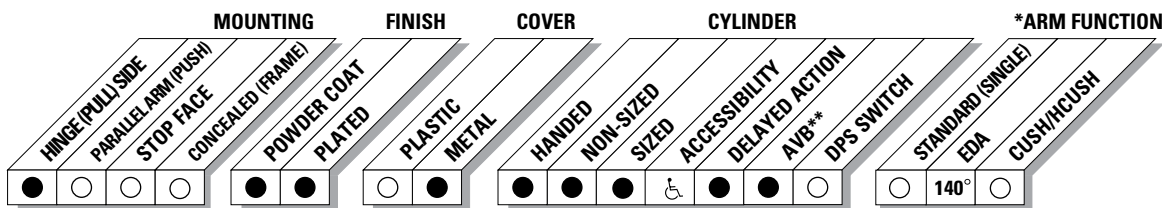


The 4510 SMOOTHIE® Series is a heavy duty, high security closer with special components to minimize tampering and vandalism. Forged steel double lever arms and heavy gauge metal security covers are designed for correctional, vandal prone, institutional and other high traffic applications. The closer has passed 10 million cycles in independent testing. A choice of finishes and cylinder functions meet correctional and vandal resistant requirements.

Certifications	Grade 1 - ANSI A156.4, UL 10C, ADA*, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	Metal Security
	<i>*4511 cylinder meets ADA requirements</i>	Fasteners	TORX machine screw pack
Body Construction	<ul style="list-style-type: none"> Cast Iron Body Full Complement Bearing 1-1/2" Diameter Piston 11/16" Diameter Double Heat Treated Pinion Journal 	Mounting	Hinge (Pull Side)
Fluid	All Weather Fluid	Arms	Extra heavy duty, non-hold open
Handing	Handed	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> Aluminum (689) Statuary Bronze (690) Light Bronze (691) Black (693) Dark Bronze (695) Brass (696) Custom colors optional
Size	Exterior and Vestibule, Adjustable Size 1-5 Interior, Adjustable Size 1-5		<ul style="list-style-type: none"> Optional SRI primer - powder coat only Optional plated finishes
Warranty	15 years		

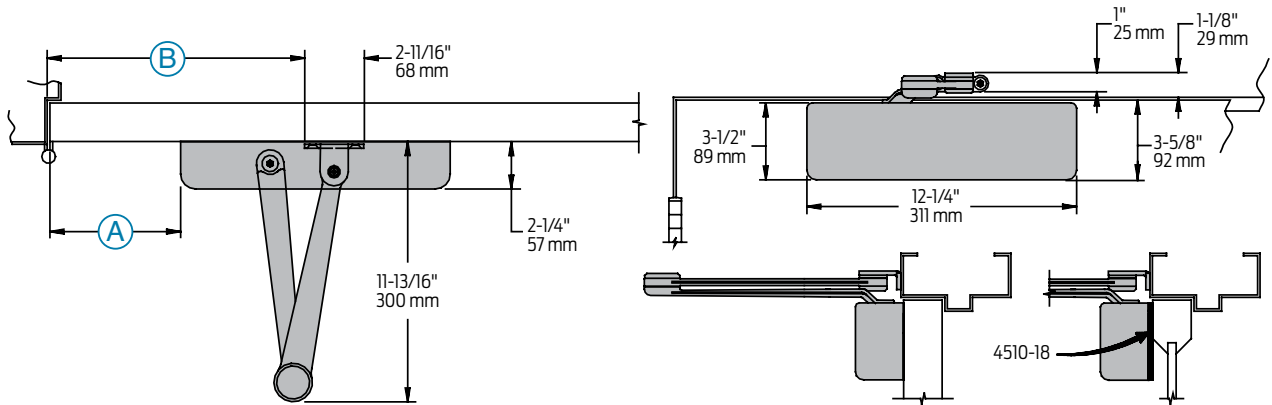
Special Templates

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



● AVAILABLE
○ NOT AVAILABLE

♿ Closer available with less than 5.0 lbs. opening force on 36" door.
* Maximum opening with standard template.
** Advanced Variable Backcheck.



Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	Recommended where a door cannot swing 140°
Reveal	Should not exceed 1/8" (3 mm)
Top Rail	<ul style="list-style-type: none"> Less than 3-1/2" (89 mm), requires PLATE 4510-18 Plate requires 2" (51mm) 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Delayed action or Advanced Variable Backcheck cylinder

Cylinder



4511(6)-3071
Cylinder Assembly

- Handed
- Cast iron
- Standard

Cover



4510-72MC
Metal Security Cover

- Handed
- Four point mounting for extra security
- Closer adjustments not accessible with cover installed
- Standard

Arms



4510-3077EDA
Extra Duty Arm

- Non-handed
- Solid forged steel main arm and forearm for potentially abusive installations
- Double slab arm/pinion attachment for maximum strength
- Standard

Installation Accessories



4510-18
Plate

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

How-to-order 4510 Series

Select cylinder size

- 4511 (adjustable from size 1 to 5)
- 4516 (DEL not available)

Select hand

- RH
- LH

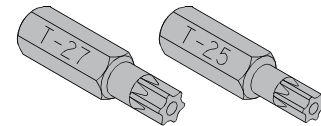
Specify finish

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

Closer will be shipped with:

- Standard cylinder
- Security cover
- Extra duty arm
- 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.



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

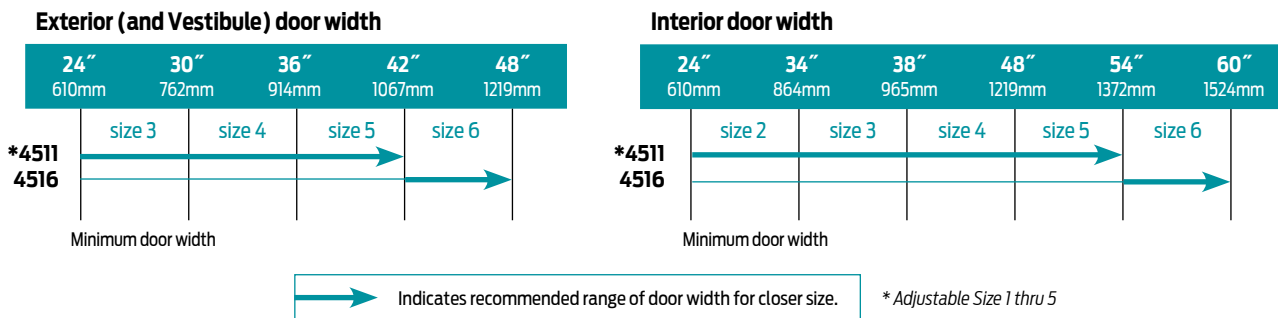
- PLATE, 4510-18

Special template

- ST- _____

Table of sizes

- Select closer based on width of door
- The spring power of non-sized 4511 cylinder is adjustable from size 1 through size 5 and is shipped set to size 3
- Sized 4510 Series cylinder available in size 6
- Delayed action not available with 4516 cylinder



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	36"	42"	48"
	8.5* lbs.	4511	4511	4511
5.0* lbs.	4511	4511	4511	

* Maximum opening force.

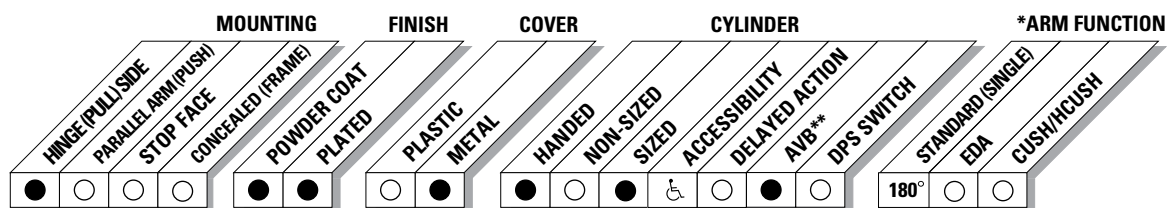


The 4510T SMOOTHIE® Series is a heavy duty, high security track closer with special components to minimize tampering and vandalism. Forged steel single lever arm and heavy gauge metal security cover are designed for correctional, vandal prone, institutional and other high traffic interior applications. The closer has passed 10 million cycles in independent testing. A choice of finishes and cylinder functions meet correctional and vandal resistant requirements.

Certifications	Grade 1 - ANSI A156.4, UL 10C, ADA*, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	Metal Security
	<i>*4510T cylinder meets ADA requirements</i>	Fasteners	TORX machine screw pack
Body Construction	<ul style="list-style-type: none"> Cast Iron Body Full Complement Bearing 1-1/2" Diameter Piston 11/16" Diameter Double Heat Treated Pinion Journal 	Mounting	Hinge (Pull Side)
Fluid	All Weather Fluid	Arms	Standard security arm, security track (non hold-open) and track roller
Handing	Handed	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> Aluminum (689) Statuary Bronze (690) Light Bronze (691) Black (693) Dark Bronze (695) Brass (696) Custom colors optional
Size	Sized, 1, 3 or 4		<ul style="list-style-type: none"> 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.



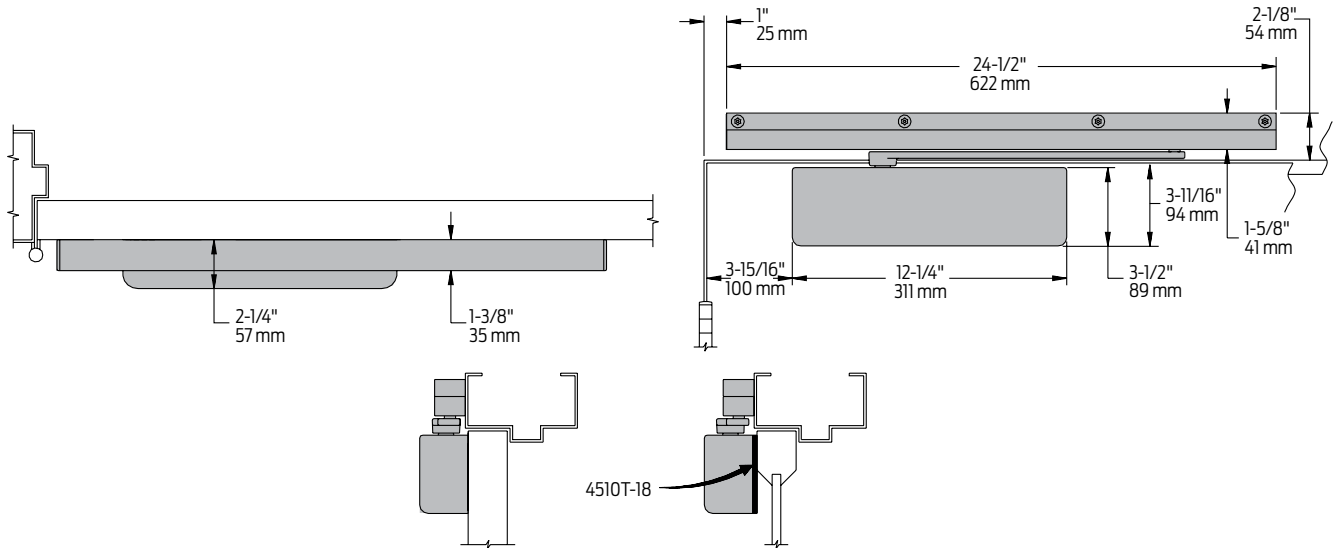
● AVAILABLE
○ NOT AVAILABLE

♿ Closer available with less than 5.0 lbs. opening force on 36" door.
* Maximum opening with standard template.
** Advanced Variable Backcheck.

4510T 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°
Reveal	Should not exceed 1/8" (3 mm)
Top Rail	<ul style="list-style-type: none"> Less than 3-3/4" (95 mm), requires PLATE 4510T-18 Plate requires 2" (51 mm) minimum top rail
Head Frame	Minimum 2-1/8" (54 mm)
Clearance	2-1/4" (57 mm) behind door required for installation
Advanced Variable Backcheck	<ul style="list-style-type: none"> Cylinder starts backcheck at approximately 45° instead of the normal 75° Add suffix "AVB" to selected cylinder (eg. 4513T AVB)
Maximum opening	<ul style="list-style-type: none"> Templating allows 180° Consult factory if door will be held open at 180°.
Options	Advanced Variable Backcheck cylinder

Cylinder



4511T(3)(4)
Cylinder Assembly

- Handed
- Cast iron
- Standard

Cover



4510T-72MC
Metal Security Cover

- Handed
- Four point TORX mounting for extra security
- Closer adjustments not accessible with cover installed

Arms



4510T-3077T
Standard Security Arm

- Handed
- Solid forged steel, large cross section arm
- Special threaded attachment of track roller for potentially abusive installations
- Double slab arm/pinion attachment for maximum strength
- Can only be used with high security track roller, 4510T-3034

Track



4510T-3038
Security Track

- Non-handed
- Designed to eject foreign objects placed in track during either opening or closing motion
- Requires track roller, 4510T-3034



4510T-3034
Security Track Roller

- Low friction track roller threads into 4510T-3077T arm for extra strength and security
- Can not be removed without disconnecting arm from closer

Installation Accessories



4510T-18
Plate

- Required where top rail is less than 3 3/4" (95 mm)
- Requires minimum 2" (51 mm) top rail

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

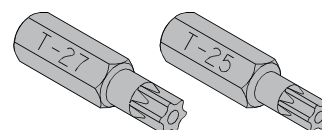
Specify finish

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

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.



Closer options

Cylinder

- Advanced Variable Backcheck (AVB)

Finishes

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

Screw pack

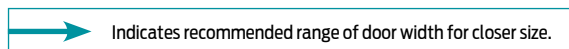
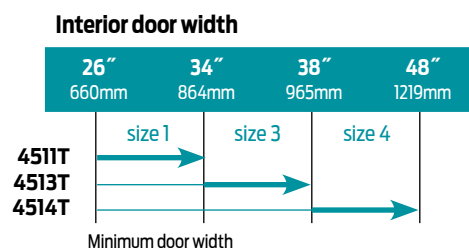
- TB* and TORX Machine Screw (TBTRX)
*Specify door thickness if other than 1-3/4".

Installation accessories

- PLATE, 4510T-18

Special template

- ST- _____



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.

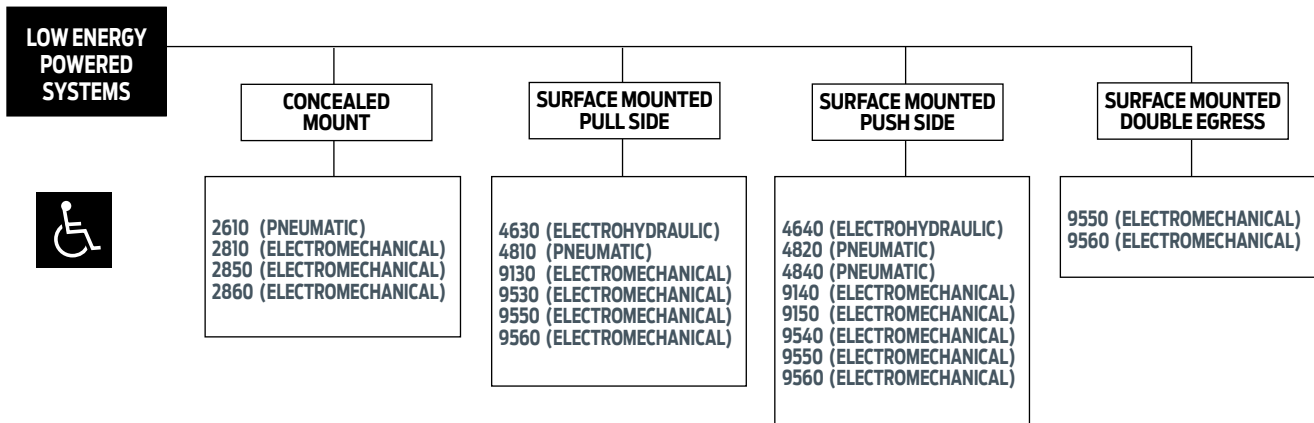
* Maximum opening force.

	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	4513T	4513T	4513T
5.0* lbs.	4511T	4511T	4511T	

* 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.



Product comparison

Electrohydraulic/Pneumatic Product Comparison

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

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

● AVAILABLE
○ NOT AVAILABLE

♿ Meets ADA requirements (power mode).

* See individual series for maximum manual opening.

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

Product comparison

Electromechanical Product Comparison

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

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

● AVAILABLE
○ NOT AVAILABLE

*** All electromechanical operators open to 90°.

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

WHAT IS THE ADA?

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

WHAT IS THE INTENT OF ADA, TITLE III?

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

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

HOW DOES ADA AFFECT DOORS?

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

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

WHAT ARE THE OPENING FORCE LIMITS?

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

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

HOW IS THE DOOR MEASURED?

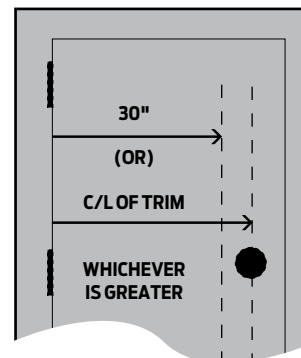
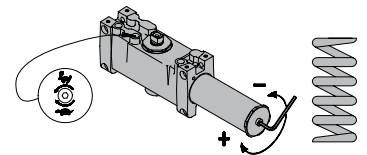
Two ADA criteria affect the door closer selection, adjustments, opening force, and time to close. Since the law does not clearly define the method of measurement, this is LCN's recommendation.

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

FINISHES

- Available in six standard or a wide selection of optional custom powder coat finishes to blend with door and frame.
- LCN's powder coat finishes surpass 100 hours of salt spray which is over four times the ANSI standard for corrosion resistance.
- For installations where a higher level of corrosive resistance is required, LCN offers an optional special rust inhibiting (SRI) pre-treatment. Closers that combine the exclusive LCN powder coat finish and the SRI pre-treatment exceed the ANSI standard for corrosion resistance even further.
- Plated finishes are available as an option to accent door and frame.

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



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

WHAT ARE THE CHOICES FOR ADA COMPLIANT DOOR CONTROLS?

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

POWERED SYSTEMS

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

POWERED SYSTEMS

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

1. DOOR WIDTH:

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

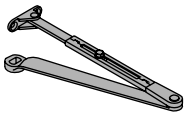
2. SPRING POWER:

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

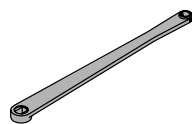
3. ARM SELECTION:

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

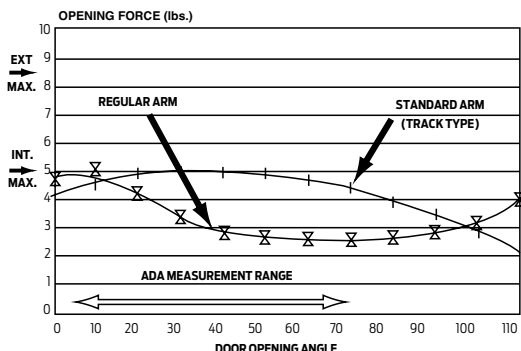
REGULAR ARM



STANDARD ARM



TYPICAL ARM POWER CURVE



4. ADDITIONAL FORCES

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

INFORMATION SOURCES

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

U.S. DEPARTMENT OF JUSTICE

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

THE U.S. ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD

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

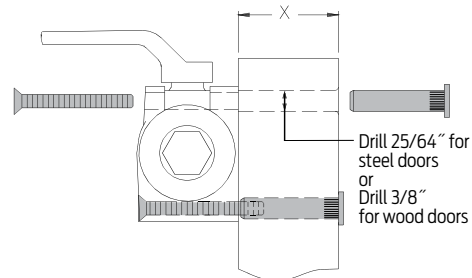
AMERICAN NATIONAL STANDARDS INSTITUTE

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

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

ELECTROHYDRAULIC & PNEUMATIC FASTENERS

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



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

ELECTROMECHANICAL FASTENERS

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

Low Energy Operators

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

APPLICATIONS

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

A156.19 SYSTEM DESIGN PARAMETERS

- Cycle test standard of 300,000 full load operating cycles.
- Power opening plus full door control.
- Open to backcheck no faster than 3 seconds.
- Opening time to fully open is no faster than 4 seconds.
- Remain fully open for at least 5 seconds.
- Closing time from 90° to 10° is no faster than 3 seconds.
- Less than 15 lb to stop doors motion.
- Kinetic energy must not exceed 1.25 lb-ft.
- In event of failure, less than 15 lb to release latch, less than 30 lb to put door in motion, less than 15 lb to fully open door system.

COMMON SYSTEM FEATURES

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

WARRANTY

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

MAINTENANCE

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

PNEUMATIC (AIR) POWERED SYSTEMS

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

UNIQUE FEATURES

■ Multi-Door & Single-Door Solutions

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

■ Quiet Operation

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

■ Pneumatically (Air) Powered

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

■ Easy Adjustment/Installation

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

■ Multiple Mounting Configurations

Available in three different mounting configurations:

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

■ Hazardous Location Use

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

■ Blow-Open (Smoke Evacuations Systems)

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

STANDARDS, LISTINGS & APPROVALS

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

WARRANTY

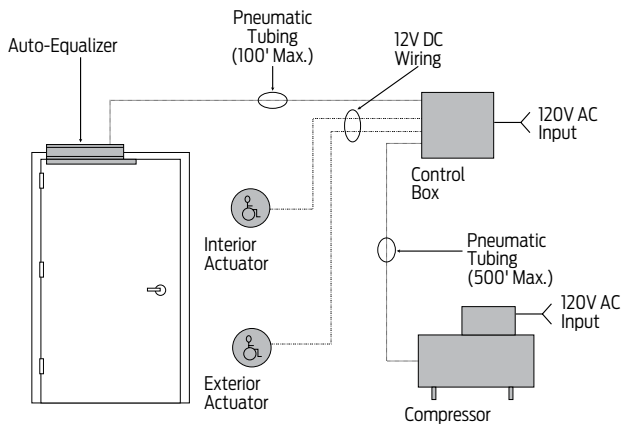
- 2 year limited warranty. See General Information Section for complete details.

STANDARDS, LISTINGS & APPROVALS

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

Typical Pneumatic Powered Systems

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



SINGLE INTERIOR DOOR SYSTEM (WIRED)

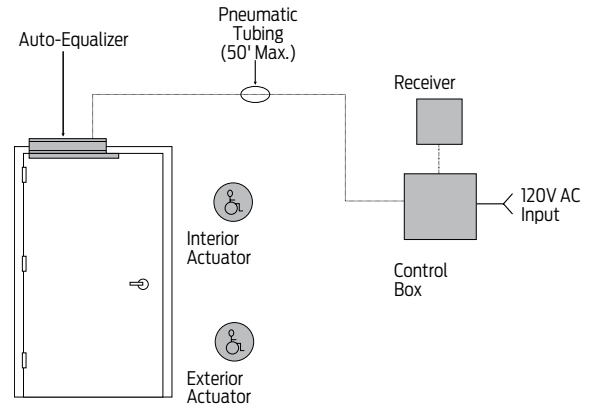
- Slow opening interior door leaf
- System may be expanded to include an additional simultaneous door
- No guide rails or safety devices

How It Works:

- A person requiring assistance triggers the system using either actuator.
- The control box supplies pressurized air to the Auto Equalizer which opens the door slowly to 90°, holds it for up to 30 seconds, then applies full spring power to reliably close and latch the door
- If not actuated, the Auto Equalizer functions as a full featured door closer

Bill Of Materials:	Qty.	Part No.	Description
	1	4811	Auto Equalizer
	1	8310-856	Actuator (exterior)
	1	8310-856	Actuator (interior)
	1	7901	Control Box
	1		Compressor*
	(as needed)	925	Tubing

*Contact Technical Support to verify compressor requirements.



SINGLE INTERIOR DOOR SYSTEM (WIRELESS)

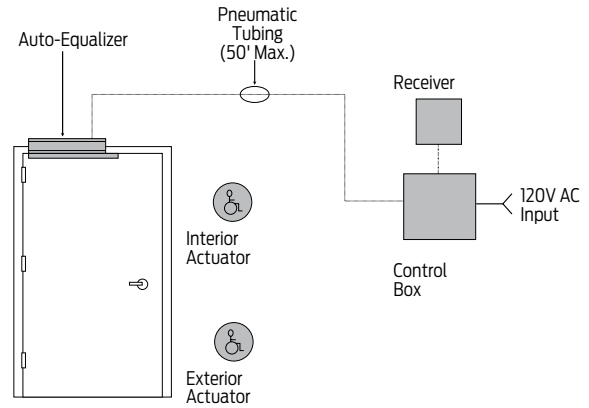
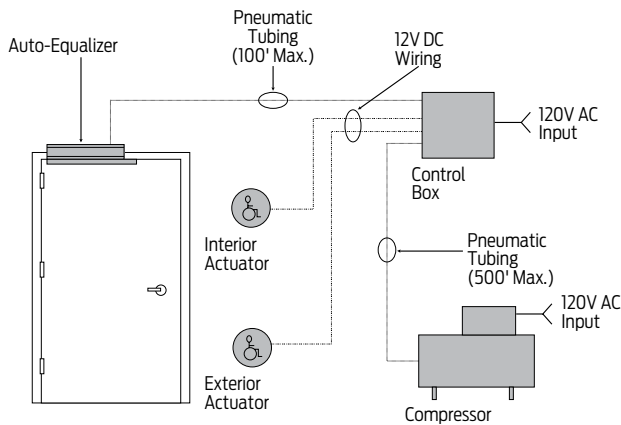
- Slow opening automatic door on door leaf
- Wireless actuators
- Stand alone system, no planned expansion
- No guide rails or safety devices

How It Works:

- A person requiring assistance triggers the system using either actuator
- The wireless transmitter in the actuator sends a signal to the wireless receiver which triggers the control box
- The control box supplies pressurized air to the Auto Equalizer which slowly swings door to 90°, holds it for up to 30 seconds, then applies full spring power to reliably close and latch the door.
- If not actuated, the Auto Equalizer functions as a full featured door closer

Bill Of Materials:	Qty.	Part No.	Description
	1	4811	Auto Equalizer
	2	8310-3856WS	Wireless Actuator
	1	8310-865	Wireless Receiver
	1	7981	Control Box
	(as needed)	925	Tubing

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



ALTERNATE VESTIBULE DOOR SYSTEM (WIRED)

- Slow opening automatic doors with sequential operation for exterior and vestibule pairs of doors
- No guide rails or safety devices

How It Works:

- People requiring assistance press exterior actuator for entry
- The exterior pair opens and after a short sequential delay the interior pair opens
- As the system times out, first the exterior, then the interior doors close
- Pressing the interior actuator reverses the process to exit the building
- This allows passage through the vestibule without all doors open for the entire cycle
- If a person stops in the vestibule and the system times out before they exit, pressing either vestibule actuator opens the appropriate doors
- Compressor is sized for multiple systems. Sequential operation is not recommended with scanners or motion sensors
- If not actuated, the Auto Equalizer functions as a full feature door closer

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

VESTIBULE DOOR SYSTEM (WIRELESS)

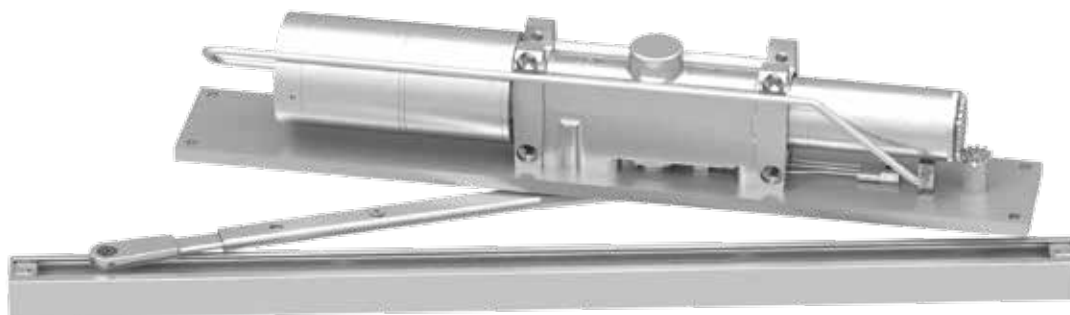
- Slow opening automatic doors with sequential operation for single exterior and vestibule doors
- No guide rails or safety devices

How It Works:

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

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

* Contact Technical Support to verify compressor requirements.

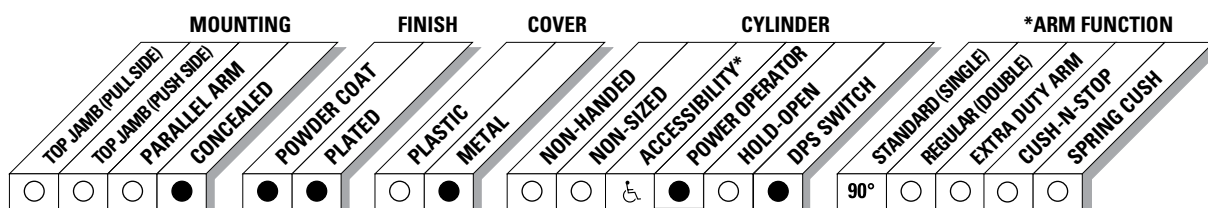


The 2610 AUTO EQUALIZER™ is LCN's pneumatically powered MULTI-DOOR solution. This low-energy power operator provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

Certifications	Grade 1 - ANSI A117.1, A156.19 UL228, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Fasteners	Wood and machine screws
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/2" Diameter Piston ■ 11/16" Diameter Double Heat Treated Pinion Journal 	Mounting	Concealed, in frame
Fluid	All Weather Fluid	Arms	Single lever arm, mounting/finish plate, standard track
Handing	Handed	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Size	Sized 3 and 4		<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes
Warranty	2 years		

**Special
Templates**

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



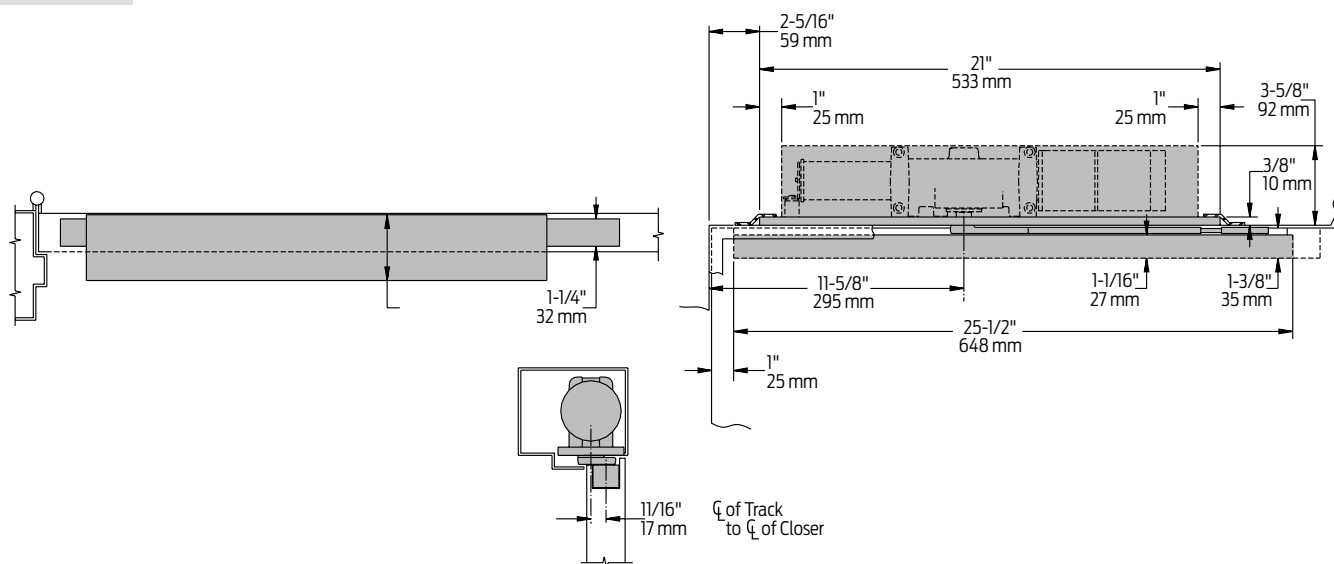
● AVAILABLE
○ NOT AVAILABLE

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

2610 Series Auto Equalizer

Mounting details

Concealed Mounting



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	<ul style="list-style-type: none"> ■ 1-3/8" (35 mm) mortise required ■ 5/16" (8 mm) cutout required at top of the door, push side only
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	<ul style="list-style-type: none"> ■ Butt hinge template allows 90° power opening and 160° manual opening ■ Please note that many track style door closers are capable of allowing 180° of door swing ■ Track style closers are at their weakest closing force at 180° ■ Consult factory for applications where exterior or large/heavy door must swing 180° ■ Consult factory for all pivot mounted installations

Notes:

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

Cylinders



2610-3971
Cast Iron Cylinder Assembly

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



2610-3971 DPS
Cast Iron Cylinder Assembly

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



2610-3071
Cast Iron Cylinder Assembly

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



2610-3071 DPS
Cast Iron Cylinder Assembly

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

Arm



2610-3077T
Standard Arm

- Handed
- Track roller not included with arm

Track



2610-3038
Standard Track

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

Installation Accessories



2610-3034
Track Roller

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

How-to-order 2610 Series

Select cylinder size

- 2613
- 2613 DPS
- 2614
- 2614 DPS

Select hand

- RH
- LH

Specify finish

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

Closer will be shipped with:

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

Closer options

Finishes

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

Screw pack

- Wood & Machine Screw (WMS)

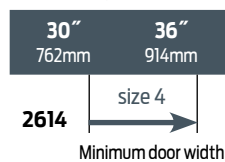
Special template

- ST- _____

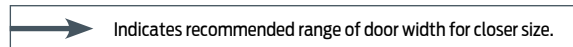
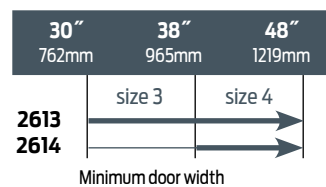
Table of sizes

- Select closer based on width of door
- Sized 2610 Series cylinders available in size 3 or 4
- Closing power of all 2610 Series closers may be increased 15%

Exterior (and Vestibule) door width



Interior door width



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

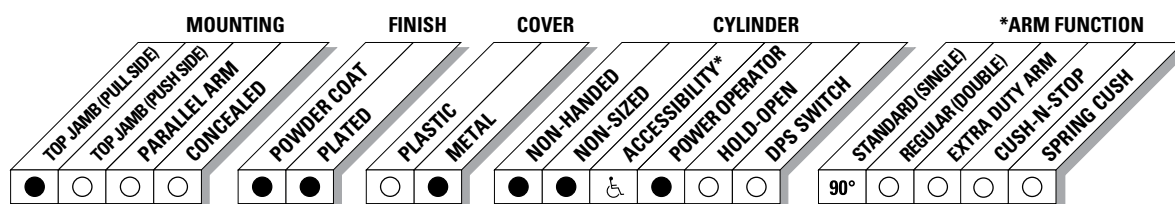


The 4810 AUTO EQUALIZER™ is LCN's pneumatically powered MULTIDOOR solution. This low-energy automatic operator provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

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



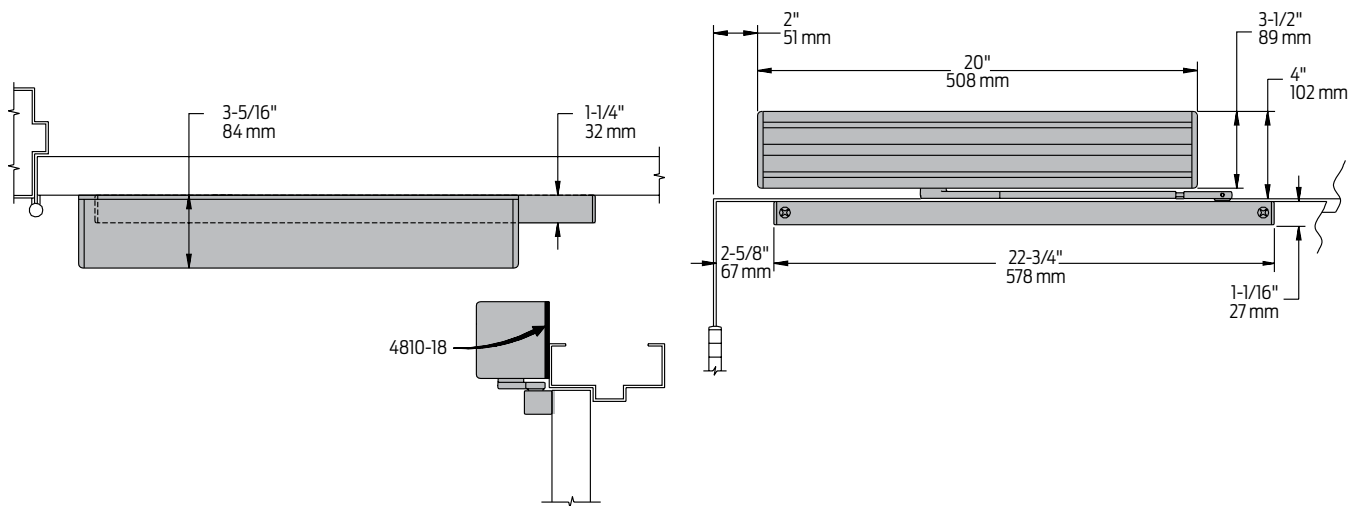
● AVAILABLE
○ NOT AVAILABLE

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

4810 Series Auto Equalizer

Mounting details

Top Jamb (Pull Side) Mounting



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	<ul style="list-style-type: none"> ■ Templating allows 90° power opening and 170° manual opening ■ Please note that many track style door closers are capable of allowing 180° of door swing ■ Track style closers are at their weakest closing force at 180° ■ Consult factory for applications where exterior or large/heavy door must swing 180°

Notes:

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

Cylinders



4811-3971
Cast Iron Cylinder Assembly

- Non-handed
- Standard



4811-3071
Cast Iron Cylinder Assembly

- Non-handed
- Mounting plate
- Standard

Cover



4810-72MC
Metal Cover

- Non-handed
- With black end caps
- Standard

Track



4810-3038
Standard Track

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

Arm



4810-3077T
Standard Arm

- Non-handed
- Track roller not included with arm

Installation Accessories



4810-3034
Track Roller

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

How-to-order 4810 Series

Specify finish

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

Closer options

Finishes

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

Screw pack

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

Special template

- ST- _____

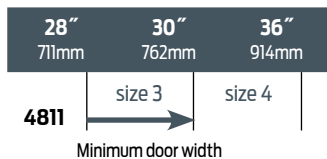
Closer will be shipped with:

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

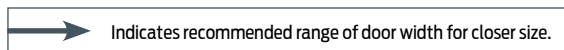
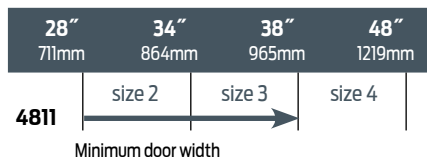
Table of sizes

- Non-sized 4810 Series cylinder is adjustable from size 1 through size 4 and is shipped set to size 3
- Closing power of 4810 Series closers may be increased 50%

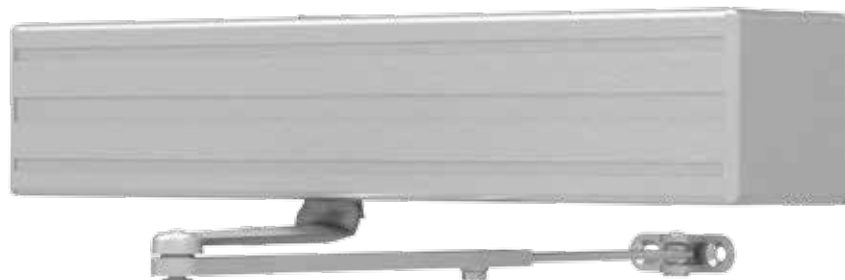
Exterior (and Vestibule) door width



Interior door width



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

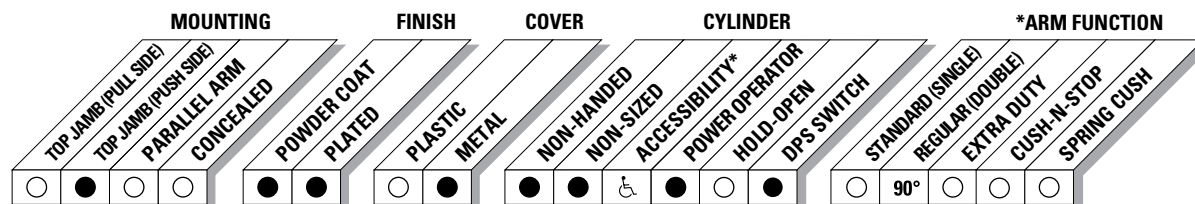


The 4820 AUTO EQUALIZER™ is LCN's pneumatically powered MULTI-DOOR solution. This low-energy automatic operator provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

Certifications	Grade 1 - ANSI A117.1, A156.19, UL 10C 228, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	Metal, standard
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/2" Diameter Piston ■ 3/4" Diameter Double Heat Treated Pinion Journal 	Fasteners	Wood and machine screw
Fluid	All Weather Fluid	Mounting	Top Jamb (Push Side)
Handing	Non-Handed	Arms	<ul style="list-style-type: none"> ■ Regular arm, standard ■ Long arm, optional
Size	Adjustable Spring Size 2-5	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Warranty	2 years		<ul style="list-style-type: none"> ■ 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

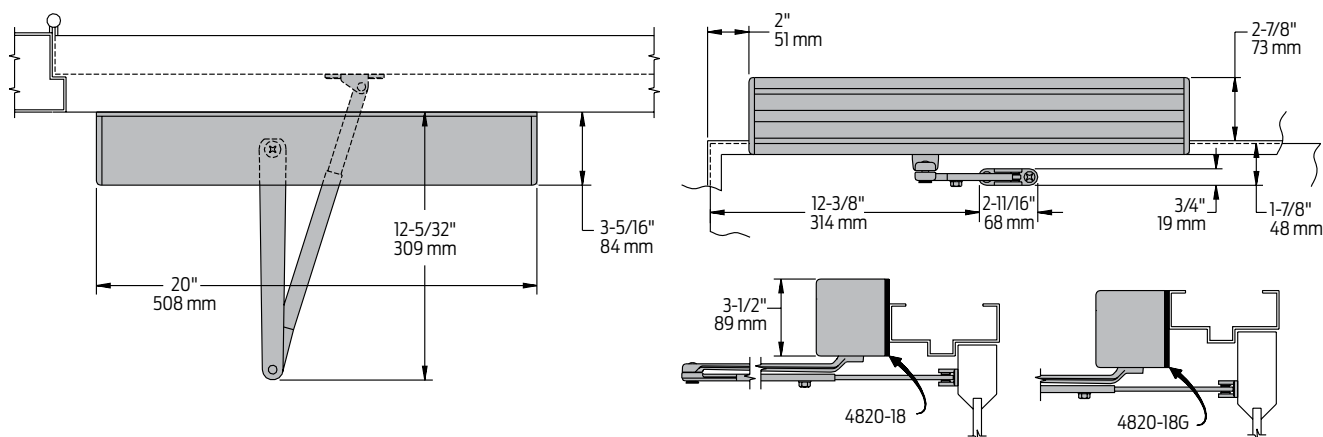
♿ Meets ADA requirements (power mode).

* See individual series for maximum manual opening.

4820 Series Auto Equalizer

Mounting details

Top Jamb (Push Side) Mounting



Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	Recommended
Reveal	<ul style="list-style-type: none"> ■ 4-1/2" (114 mm) allows up to 90° power opening and 100° manual opening ■ 8" (203 mm) allows up to 90° power opening and 100° manual opening with LONG ARM where standard rod and shoe is replaced with optional LONG ROD AND SHOE, 4820-79LR
Head Frame	<ul style="list-style-type: none"> ■ Minimum 1-3/4" (44 mm) ■ With flush ceiling use PLATE, 4820-18G substituted for standard plate
Top Rail	<ul style="list-style-type: none"> ■ 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
- Specifically RH or LH when ordering

4820 Series Auto Equalizer

Ordering Information

How-to-order 4820 Series

Specify finish

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

Closer options

Finishes

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

Arm

- Long (LONG)

Screw pack

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

Closer will be shipped with:

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

Installation Accessories

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

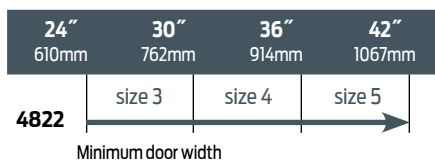
Special template

- ST- _____

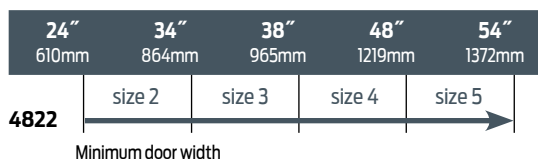
Table of sizes

- 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%

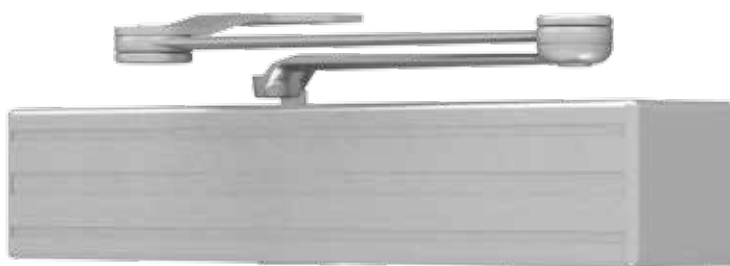
Exterior (and Vestibule) door width



Interior door width



→ Indicates recommended range of door width for closer size.

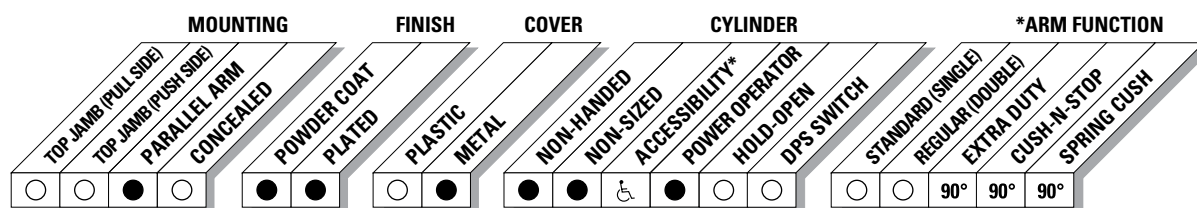


The 4840 AUTO EQUALIZER™ is LCN's pneumatically powered MULTIDOOR solution. This low-energy automatic operator provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

Certifications	Grade 1 - ANSI A117.1, A156.19, UL 10C 228, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	Metal, standard
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/2" Diameter Piston ■ 3/4" Diameter Double Heat Treated Pinion Journal 	Fasteners	Wood and machine screws Specify door thickness if over 1-3/4"
Fluid	All Weather Fluid	Mounting	Parallel arm (Push Side)
Handing	Non-Handed	Arms	Extra heavy duty, standard Cush-n-stop and spring cush, optional
Size	Adjustable Spring Size 1-5	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Warranty	2 years		<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes* <p><i>*End caps are black</i></p>

**Special
Templates**

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



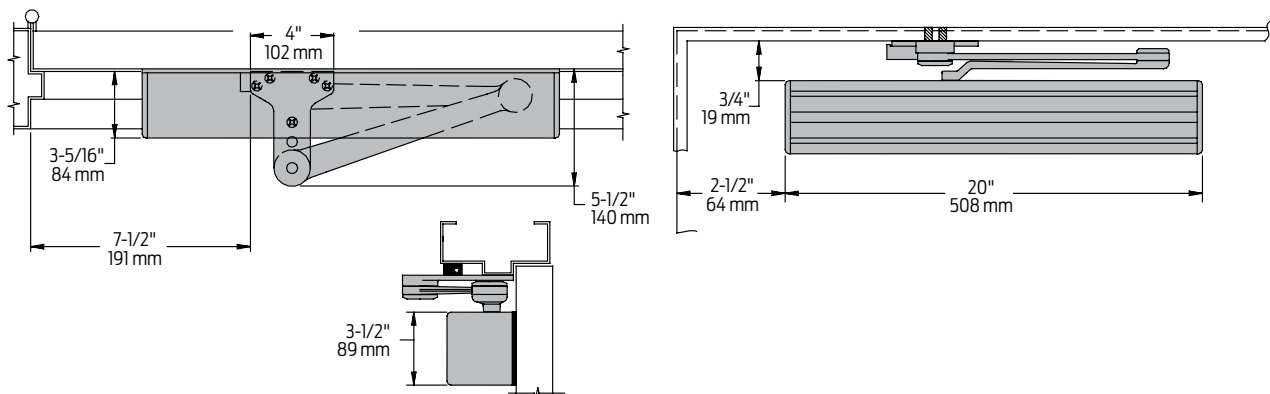
● AVAILABLE
○ NOT AVAILABLE

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

4840 Series Auto Equalizer

Mounting details

Parallel Arm (Push Side) Mounting



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	<ul style="list-style-type: none"> ■ 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 <p><i>NOTE: For CUSH-N-STOP or SPRING CUSH arm installations with maximum opening less than listed above, consult factory for Special Template</i></p>

Notes:

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

Cylinders



4841-3971
Cast Iron Cylinder Assembly

- Non-handed
- Standard



4841-3071
Cast Iron Cylinder Assembly

- Non-handed
- Mounting plate
- Standard

Cover



4840-72MC
Metal Cover

- Non-handed
- With black end caps
- Standard

Arms



4840-3077EDA
Extra Duty Arm

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



4840-3077CNS
Cush-n-Stop Arm

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



4840-3077SCNS
Spring CUSH Arm

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

Installation accessories



**4840-30
CUSH Shoe Support**

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



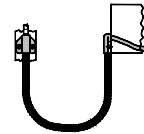
**4840-61
Blade Stop Spacer**

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



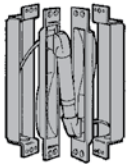
**4840-419
PA Flush Panel Adapter**

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



**4840-459
Door Loop Kit**

- Surface mounted, flexible metal loop transfers pressurized air via pneumatic tubing from frame to closer end cap
- Extra caps allow tubing to run on frame surface or concealed in the frame.



**4840-460
Pneumatic Transfer Hinge**

- Transfers pressurized air via pneumatic tubing from frame to door leaf for fully concealed installations
- Preparation of a raceway is required from the hinge stile of the door to the top rail for concealment of the pneumatic tubing within the door leaf

How-to-order 4840 Series closers

Specify finish

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

Closer options

Finishes

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

Arm

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

Screw pack

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

Installation accessories

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

Special template

- ST- _____

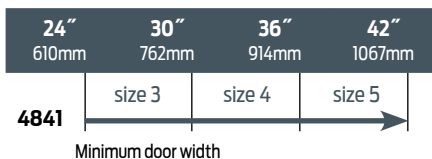
Closer will be shipped with:

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

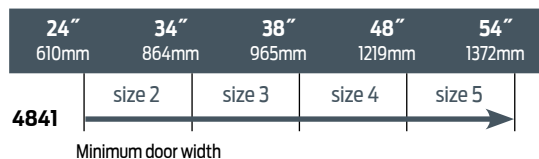
Table of sizes

- Non-sized 4841 cylinder is adjustable from size 1 through size 5 and is shipped set to size 3
- Closing power of 4841 closers may be increased 50%

Exterior (and Vestibule) door width



Interior door width

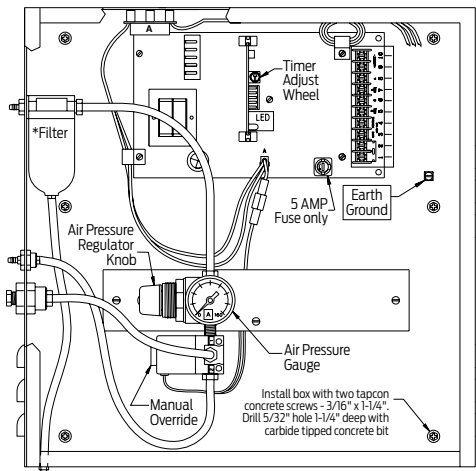


→ Indicates recommended range of door width for closer size.

CONTROL BOXES

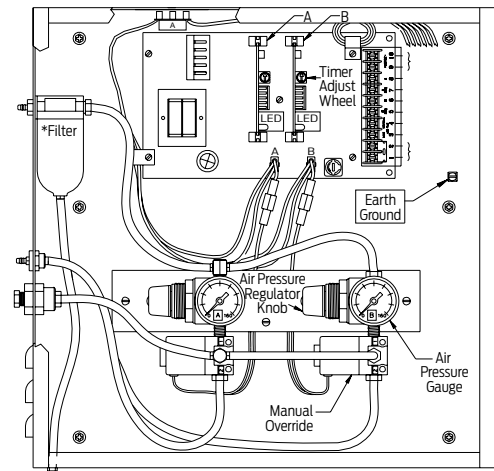
Heavy duty, surface mounted control box contains one or two electrically controlled pneumatic circuits. Air filtration, pneumatic regulation, and system timing is performed by the control box. 7980 Series control boxes also contain a built-in air pump to power the system. Each pneumatic circuit can be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

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



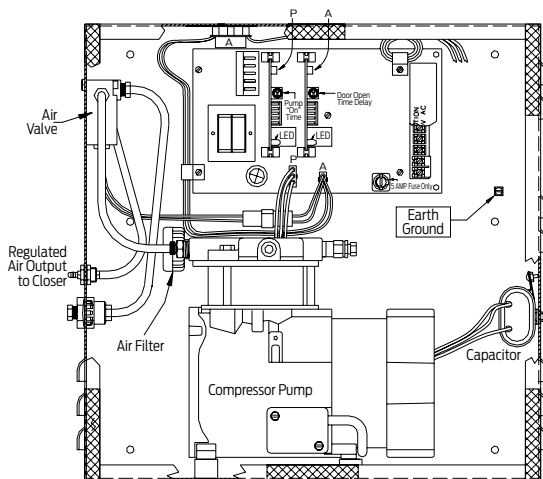
7901 AND ES7901 CONTROL BOX

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



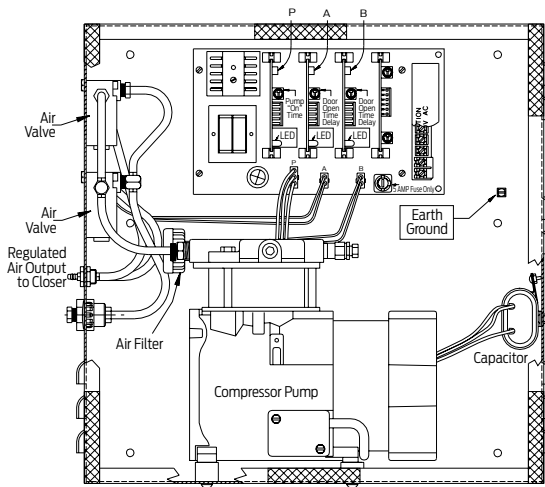
7902 AND ES7902 CONTROL BOX

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



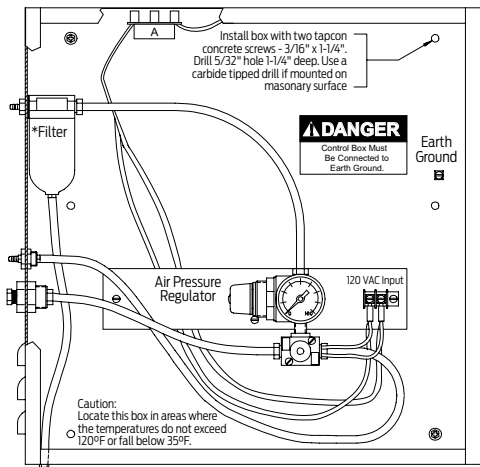
7981 AND ES7981 CONTROL BOX

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



7982 AND ES7982 CONTROL BOX

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



7949 and ES7949 Control Box

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

Optional "ES" Boxes

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

Control Box Installation Notes

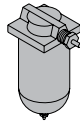
- Locate a 7900 Series control box so no more than 100 linear feet of LCN 925 pneumatic tubing is required between the control box and door. Maximum 50 linear feet for a 7980 and 7949 Series
- Locate a 7900/7980/7949 Series control box where the temperatures do not exceed 120°F or fall below 35°F
- 7901,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

Accessories



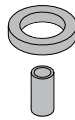
-329
Air Filter

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



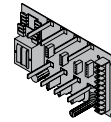
-329G
Air Filter

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



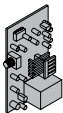
-929
Filter and Seal

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



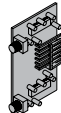
-900
Power Supply Board

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



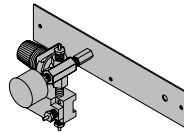
-903
Timer Card

- 0 to 30 second timer module
- Plugs into the power supply board, -900. 7901 (A slot) Series control box requires 1 each.
- 7902 (A/B slots) and 7981 (P/A slots) Series control boxes require 2 each
- 7982 (P/A/B slots) Series control box requires 3 each



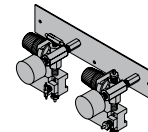
-3426
Sequencer Card

- Dual, 0 to 30-second sequence timer module for 7902 and 7982 Series control boxes
- Can be added to a standard 7902 or 7982 Series control box to convert to a sequential operation.
- Sequencer card, -3426 is included when ordering a 7902S or 7982S Series control box



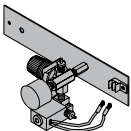
-941
Valve Assembly

- Regulator valve assembly for 7901 Series control box



-942
Valve Assembly

- Regulator valve assembly for 7902 Series control box



-941C
Valve Assembly

- Regulator valve assembly for 7949 Series blow open control box



-3299A
Solenoid Valve Assembly

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



-3299B
Solenoid valve assembly

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

Accessories



-3390A Relay Package "A"

- ES relay assembly for 7901 and 7981 Series control boxes or the 'A' circuit ES relay assembly in a 7902 or 7982 Series control boxes
- Includes 390 relay, base, and wires
- Can be added to standard 7901, 7902, 7981, or 7982 Series control boxes to convert to ES operation
- Relay package, -3390A is included when ordering a 7901ES, 7902ES, 7981ES, or 7982ES Series control box



-3390B Relay Package "B"

- ES relay assembly for 'B' circuit in 7902 or 7982 Series control boxes
- Includes -390 relay, base, and wires
- Can be added to standard 7902 or 7982 Series control boxes to convert to ES operation
- Relay package, -3390B is included when ordering a 7902ES or 7982ES Series control box



-3390C Relay Package "C"

- ES relay assembly in 7949 Series blow open control box
- Includes -390C relay, base, and wires
- Can be added to standard 7949 Series blow open control box to convert to ES operation
- Relay package, -3390C is included when ordering a 7949ES Series control box



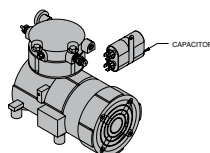
-962 Isolator

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



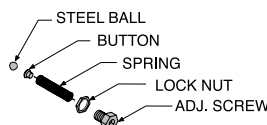
-293G Muffler

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



-3960 Compressor Assembly

- Internal air pump assembly for 7981 or 7982 Series control box
- Includes starter capacitor, -962 Isolators, and -329 air filter



-3592 Compressor Service Kit

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



925 Pneumatic Tubing

- 1/8" (3mm) I.D. flexible pneumatic tubing for use with standard barbed fittings provided on pneumatic control boxes and operators
- Order by linear footage required
- 925 tubing is not fire-rated
- Contact LCN for applications where tubing must run through rated plenums

ELECTRIC AUTO EQUALIZERS

These Auto Equalizer products are an addition to the original pneumatic drive system. People moving through a door can use it as a normal rack & pinion door closer or, at the touch of a button, open the door automatically. An integrated digital control suite provides all electrical control functions. These self-contained units are suitable for use on single leaf doors or pair of doors where each leaf is equipped with an operator. The operator provides all the control and power elements into a single operator package, only some actuators are required to complete the system.

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

UNIQUE FEATURES

■ Digital Control Box

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

■ Dual Independent Program Memories

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

■ On-Board Diagnostics

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

■ On-Board Power Supply

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

■ "No Destruct" Drive System

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

■ Electronic Circuit Protection

The high voltage input circuit is protected by a one amp slow blow fuse. The low voltage output circuits by self-resetting fuses.

■ Visual Function Indicators

LED's allow direct observation of these inputs:

- input power
- fire alarm input
- normal trigger (actuator) input
- sequential trigger (actuator) input
- hold open/alternate action (actuator) input
- lockout timer
- safety sensor (clear) input
- safety sensor (active) input

■ Programming Mode

Allows tailoring the following functions to meet specific site conditions:

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

ELECTRIC AUTO EQUALIZER SYSTEMS

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

STANDARDS, LISTINGS & APPROVALS

- UL listed for Fire Door Operator (GUJY) and Door Operator System (+DDR) file R18222.
- Tested and certified under ANSI Standard A156.19. Refer to Section 2.1 and consult factory for details.
- ANSI Standard A117.1, Section 4.13.13.
- ADA law, Section 4.13.12.
- Listed for positive pressure plus UL 10B and UL 10C.
- Wiring is compliant with both UL 325 and the NEC. Separation of high and low voltage.
- Consult the factory for other listings such as; State and Local Government regulations.
- UL 10 C Listed for Fire Rated Door Operators with Automatic Closers, File No. (GUJY).

WARRANTY

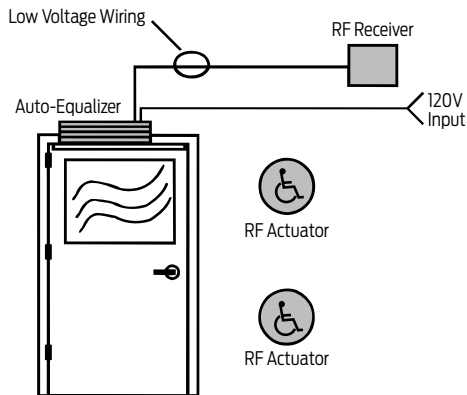
- 2 year limited warranty. See General Information Section for complete details.

MAINTENANCE

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

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

SINGLE DOOR SYSTEMS



SINGLE DOOR SYSTEM (WIRELESS)

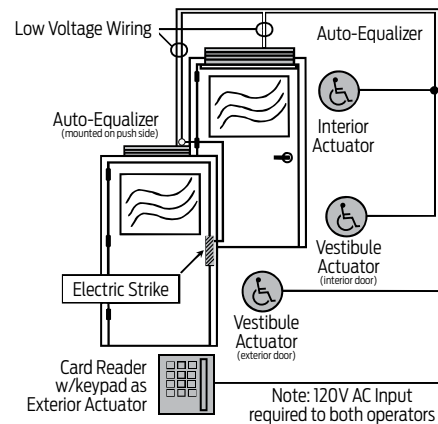
- An Interior Door
- No guide rails or safety devices
- Free Swinging (or Dogged) Door

How It Works:

- Wireless RF actuators and receiver, powered by the Auto Equalizer simplify installation and minimize installation costs
- For automatic door operation, touching either actuator signals the receiver and controller module to open the door to 90°
- The door is held there until the system times out, then full spring power is applied to reliably close and latch the door.
- Door opening speed and hold open time are adjustable on the controller
- Closing power and speed are adjustable on the cylinder assembly
- If not actuated, the Auto Equalizer functions as a full featured door closer

Bill of Materials:	Qty.	Part No.	Description
	1	4631	Auto Equalizer
	2	8310-3856WS	Wireless Actuators
	1	8310-865	Wireless Receiver

VESTIBULE ENTRY OPERATION



VESTIBULE ENTRY SYSTEM (WIRED)

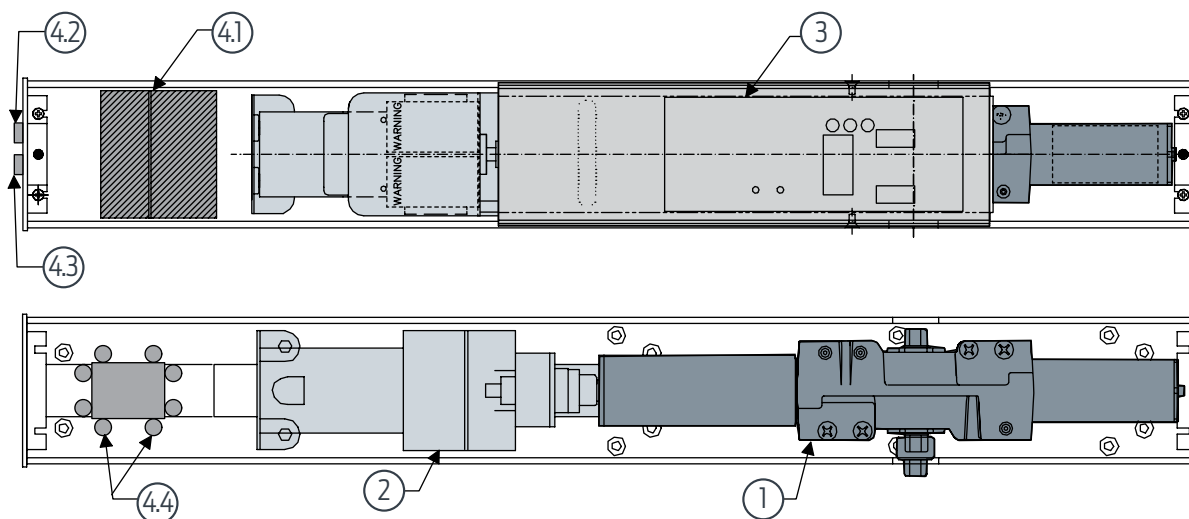
- Exterior & Vestibule doors
- Sequential Operation
- No guide rails or safety devices
- Controlled Access, Free Egress

How It Works:

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

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

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



1 - DOOR CLOSER ASSEMBLY

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

2 - ELECTRIC MOTOR/CLUTCH ASSEMBLY

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

3 - DIGITAL CONTROLLER MODULE

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

4.X - FIELD WIRING

4.1

- Input power; 120V AC @ 1.5 amperes
- On-board, low voltage power supply provides both 12V and 24V DC @ 1.0 ampere (maximum combined load) for LCN actuators, RF receivers, and electric strikes or magnetic locks
- Slow blow and self-resetting fuses protect input and output power from voltage spikes
- Terminal strips simplify field wiring

4.2

- On/Off Switch

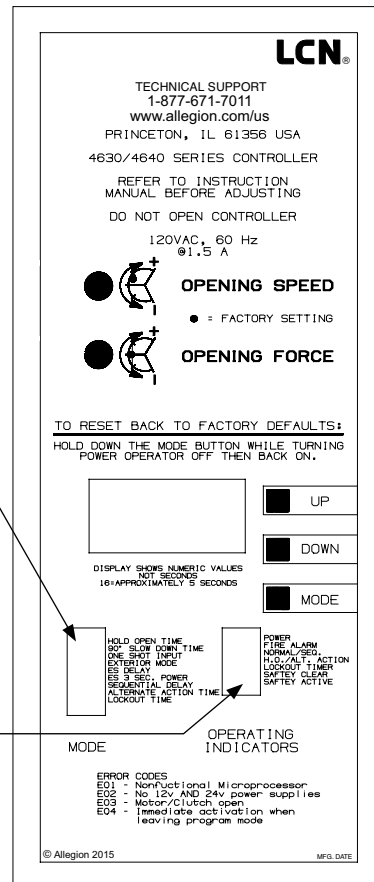
4.3

- Hold Open Switch

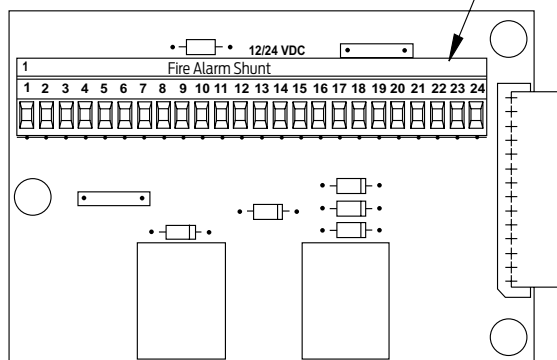
4.4

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

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



FIELD CONNECTION TERMINALS



LCN LOW VOLTAGE (CLASS 2 NEC) ELECTRICAL CONNECTIONS

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

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

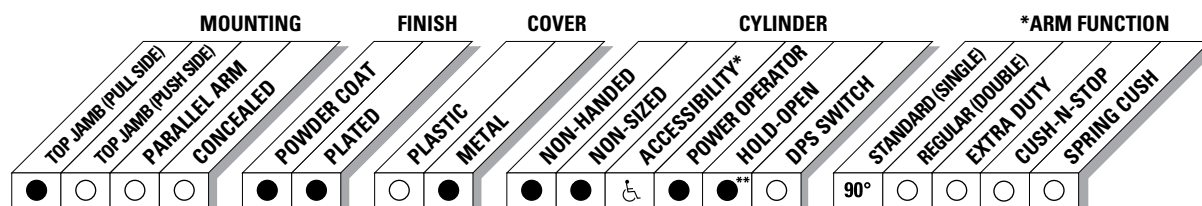


The 4630 AUTO EQUALIZER™ is LCN's SMART & RELIABLE electrically powered low-energy power operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally required automatic opening.

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

**Special
Templates**

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



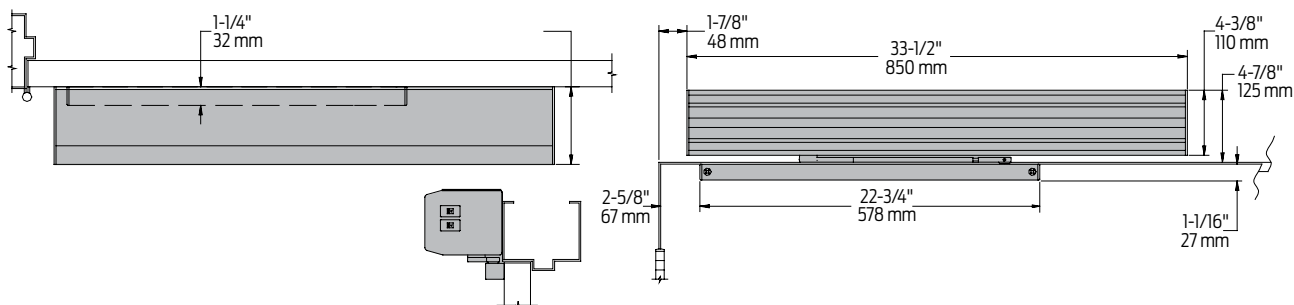
● AVAILABLE
○ NOT AVAILABLE

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

4630 Series Auto Equalizer

Mounting details

Top Jamb (Pull Side) Mounting



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	<ul style="list-style-type: none"> ■ Variable by adjustments to the electronic control module located on the operator assembly ■ Maximum hold open time adjustable up to approximately five minutes
System Diagram	See "AUTOMATIC OPERATORS" section pages 35 for typical system wiring and pages 37-38 for electrical data
Maximum Opening	<ul style="list-style-type: none"> ■ Templating allows 90° power opening and 170° manual opening ■ Please note that many track style door closers are capable of allowing 180° of door swing ■ Track style closers are at their weakest closing force at 180° ■ Consult factory for applications where exterior or large/heavy door must swing 180°

Notes:

- Actuators are sold separately, see pages 115-131
- Comes with a digital control box utilizing a 4040 heavy duty door closer with on-board diagnostics and power supply
- Has a factory default memory that include "No Destruct" drive system
- Guard rails or safety mats not required
- 4630 has easily accessible switches to provide on/off and continuous hold open functions
- CS options provides concealed on/off power switch
- Control module provides timing and sequential door functions, electric strike controls and adjustments for opening speed and force

Cylinders



4631-3971
Cast Iron Cylinder Assembly

- Non-handed
- Standard



4631-3071
Cast Iron Cylinder Assembly

- Non-handed
- Mounting plate
- Includes 4630-3454 Motor Clutch, 4630-3180 I/O Board Assembly and 4630-3462 Controller
- Standard



4631-3071CS
Cast Iron Cylinder Assembly

- Non-handed
- Mounting plate
- Includes 4630-3454 Motor Clutch, 4630-3180 I/O Board Assembly and 4630-3462 Controller
- Same as a 4630-3071 assembly except on/ off switch is concealed in endcap and no hold open switch is included (Separate key switches suggested)
- Standard

Cover



4630-72MC
Metal Cover

- Non-handed
- Standard

Track



4630-3038
Standard Track

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

Arm



4630-3077T
Standard Arm

- Non-handed
- Track roller not included with arm

Installation Accessories



4630-3034
Track Roller

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

Installation Accessories



**4630-334
Switch End Cap**

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



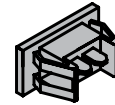
**4630-334-2
Blank End Cap**

- Black powder coat only



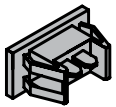
**4630-334CS
Switch End Cap**

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



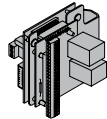
**4630-3179-1
On/Off Switch Assembly**

- Black rocker switch. Plugs into high voltage PC board



**4630-3179-2
Hold Open Switch Assembly**

- Black rocker switch
- Field wired to low voltage PC board



**4630-3180
PC Board Assembly**

- High and low voltage PC boards connected to mounting bracket



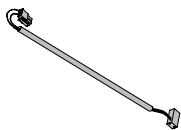
**4630-3454
Motor/Clutch Assembly**

- A geared assembly in an LCN power operator that incorporates a "no destruct" feature



**4630-3462
Control Box Assembly**

- Digital controller with built-in 12/24 VDC power supply
- Programming and timing functions are adjusted on controller



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

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



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

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

How-to-order 4630 Series closers

Specify finish

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

Closer options

Cylinder Assembly

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

Finishes

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

Screw pack

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

Special template

- ST- _____

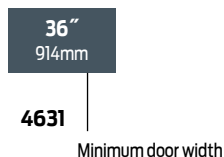
Closer will be shipped with:

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

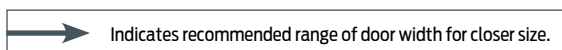
Table of sizes

- Non-Sized 4630 series cylinder is adjustable from size 1 through size 4 and is shipped set to size 3
- Closing power of 4630 Series closers may be increased 50%

Exterior (and Vestibule) door width



Interior door width



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

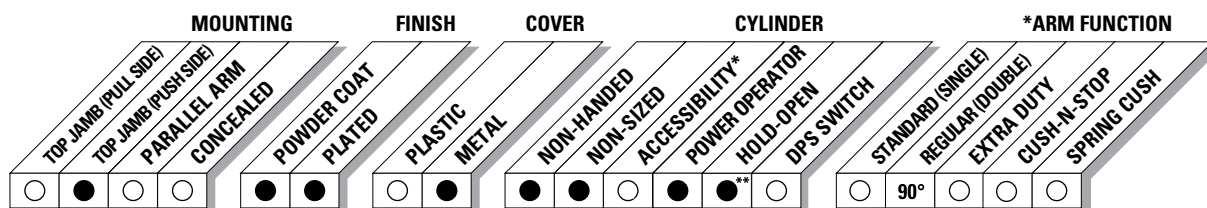


The 4640 AUTO EQUALIZER™ is LCN's SMART & RELIABLE electrically powered low-energy power operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

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

**Special
Templates**

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



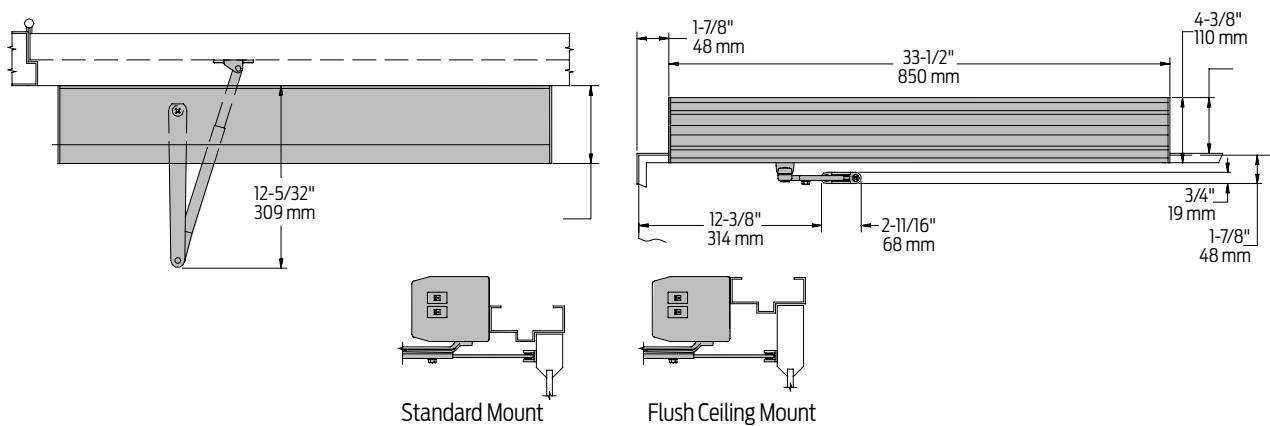
● AVAILABLE
○ NOT AVAILABLE

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

4640 Series Auto Equalizer

Mounting details

Top Jamb (Push Side) Mounting



Butt Hinges	Should not exceed 5" (127 mm) in width
Auxiliary Stop	Recommended
Reveal	<ul style="list-style-type: none"> 4-1/2" (114 mm) allows up to 90° power opening and 100° manual opening 8" (203 mm) allows up to 90° power opening and 100° manual opening with LONG ARM where standard rod and shoe is replaced with optional LONG ROD AND SHOE, 4640-79LR
Head Frame	Minimum 1-3/4" (44 mm). The standard mounting plate is also used to meet flush ceiling conditions
Top Rail	<ul style="list-style-type: none"> Minimum 1-3/4" (44 mm) Flush ceiling installation requires 3-3/4" (95 mm) minimum
Opening Time and Force	<ul style="list-style-type: none"> Variable by adjustments to the electronic control module located on the operator assembly Maximum hold open time adjustable up to approximately five minutes
System Diagram	See "AUTOMATIC OPERATORS" section page 35 for typical system wiring and pages 37-38 for electrical data
Maximum Opening	<ul style="list-style-type: none"> Templating allows 90° power opening and 100° manual opening Consult factory for all pivot mounted installations

Notes:

- Actuators are sold separately, see pages 115-131
- Comes with a digital control box utilizing a 4040 heavy duty door closer with on-board diagnostics and power supply
- Has a factory default memory that include "No Destruct" drive system
- Guard rails or safety mats not required
- 4030 has easily accessible switches to provide on/off and continuous hold open functions
- CS options provides concealed on/off power switch
- Control module provides timing and sequential door functions, electric strike controls and adjustments for opening speed and force.

Cylinders



**4642-3971
Cast Iron Cylinder Assembly**

- Non-handed
- Standard



**4642-3071
Cast Iron Cylinder Assembly**

- Non-handed
- Mounting plate
- Includes; 4640-3454 Motor Clutch, 4640-3180 I/O Board Assembly and 4640-3462 Controller
- Standard



**4642-3071CS
Cast Iron Cylinder Assembly**

- Non-handed
- Mounting plate.
- Includes; 4640-3454 Motor Clutch, 4640-3180 I/O Board Assembly and 4640-3462 Controller
- Same as a 4640-3071 assembly except on/ off switch is concealed in endcap and no hold open switch is included. (Separate key switches suggested)
- Standard

Cover



**4640-72MC
Metal Cover**

- Non-handed
- Standard

Arms



**4640-3077
Regular Arm**

- Non-handed



**4640-3077L
Long Arm**

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



**4640-79
Rod & Shoe**

- For use with regular arm



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

- Used for long arm with deep reveals

Installation Accessories



4640-334
Switch End Cap

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



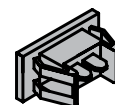
4640-334-2
Blank End Cap

- Black powder coat only



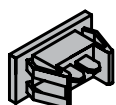
4640-334CS
Switch End Cap

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



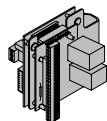
4640-3179-1
On/Off Switch Assembly

- Black rocker switch
- Plugs into high voltage PC board



4640-3179-2
Hold Open Switch Assembly

- Black rocker switch
- field wired to low voltage PC board



4640-3180
PC Board Assembly

- High and low voltage PC boards connected to mounting bracket



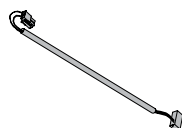
4640-3454
Motor/Clutch Assembly

- A geared assembly in an LCN power operator that incorporates a "no destruct" feature



4640-3462
Control Box Assembly

- Digital controller with built-in 12/24 VDC power supply
- Programming and timing functions are adjusted on controller



4640-3498-2
AC Power Cable

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



4640-3498-1
Ribbon Cable Connector

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

How-to-order 4640 Series closers

Specify finish

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

Closer options

Cylinder Assembly

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

Finishes

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

Arm

- Long (LONG)

Screw pack

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

Special template

- ST- _____

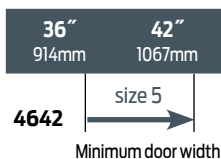
Closer will be shipped with:

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

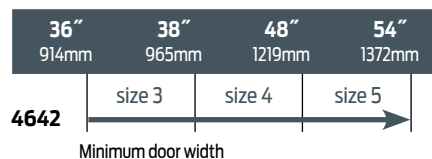
Table of sizes

- Non-sized 4640 series cylinder is adjustable from size 2 through size 5 and is shipped set to size 3
- Closing power of 4640 Series closers may be increased 50%

Exterior (and Vestibule) door width



Interior door width



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

ELECTROMECHANICAL AUTOMATIC OPERATORS

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

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

LOW ENERGY ELECTROMECHANICAL POWER OPERATORS

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

STANDARDS, LISTINGS & APPROVALS

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

WARRANTY

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

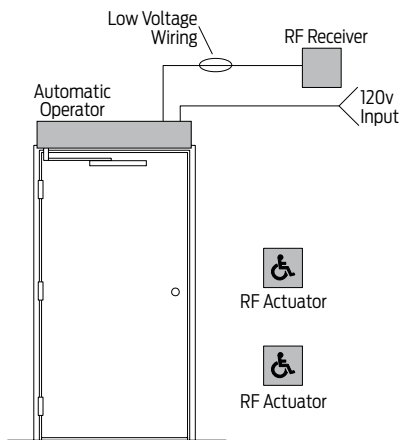
MAINTENANCE

Low Energy Electromechanical Power Operators

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

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

SINGLE DOOR SYSTEMS



SINGLE DOOR SYSTEM (WIRELESS)

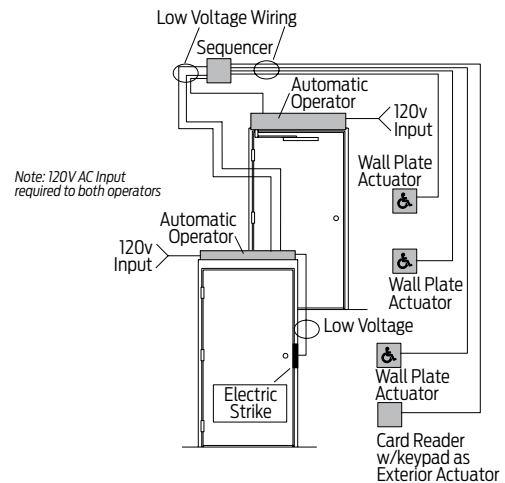
- An interior door
- Guide rails or safety devices not required
- Free swinging (or dogged) door

How It Works:

- Wireless actuators with receiver, powered by the transformer allows for easy installation
- For automatic door operation, touching either actuator signals the receiver and power operator to open the door to 90 degrees
- The door is held there until the system times out
- Door closes via spring return
- Door opening speed, closing speed and hold open time is adjustable on the control box
- If not actuated, the power operator functions as a manual door

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

VESTIBULE ENTRY OPERATION



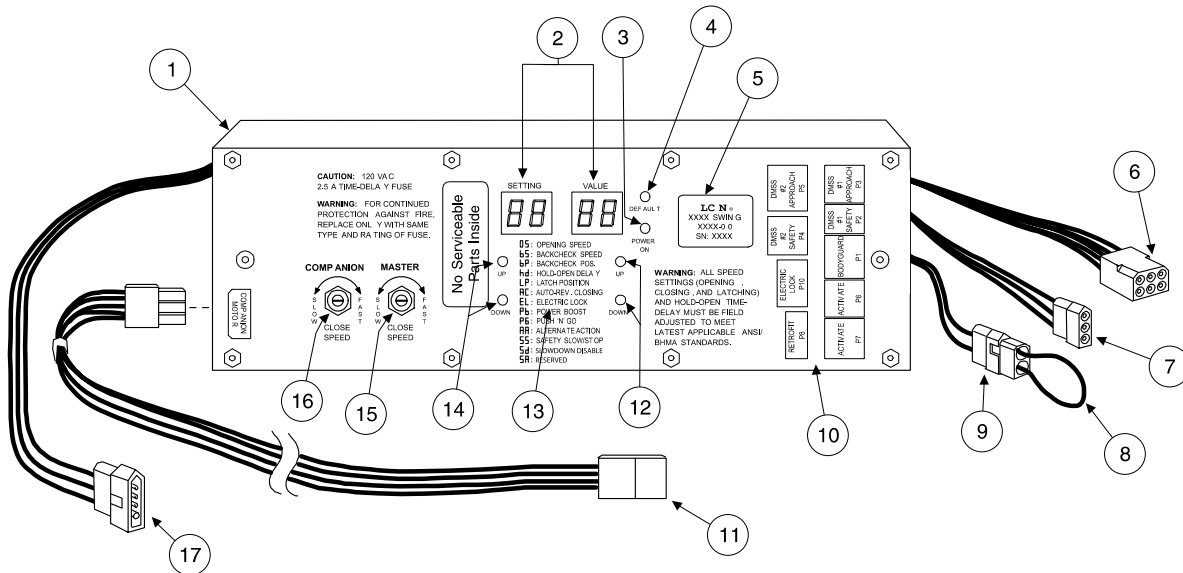
VESTIBULE ENTRY SYSTEM (WIRED)

- Exterior & vestibule doors
- Sequential operation
- Guide rails or safety devices not required
- Controlled access, free egress

How It Works:

- This installation provides both accessibility and security for building occupants
- It allows for the integration of multiple automatic operators, a card reader and electric strike
- A sequencer allows sequential operation of the two automatic operators
- Vestibule actuators allow single door ingress/ egress from the vestibule as needed
- If not actuated the power operator functions as a manual door

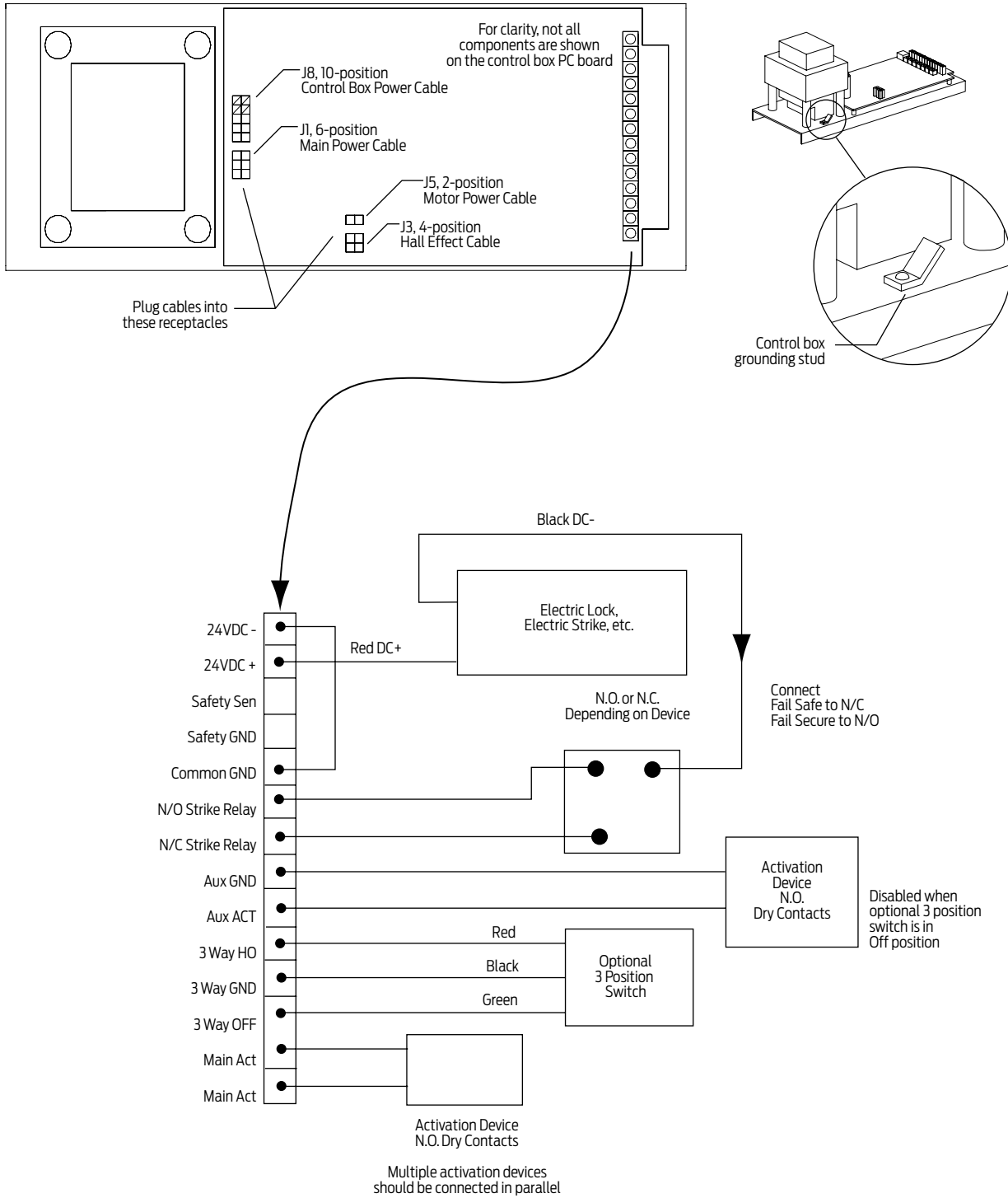
Bill Of Materials:	Qty.	Part No.	Description
	1	9542	Automatic operator (RH)
	1	9531	Automatic operator (RH)
	3	8310-853	Wall Plate Actuators
	1	8310-849	Sequencer
	Other products from Von Duprin and Schlage Electronics		



CONTROL BOX - 2800, 9500 SERIES

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

STANDARD CONTROL BOX - 9100 SERIES



GENERAL ELECTRICAL DATA

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

2800, 9500, SERIES

Electrical Data

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

9100, SERIES

Electrical Data

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

On-Board Power Supply

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

Electronic Circuit Protection

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

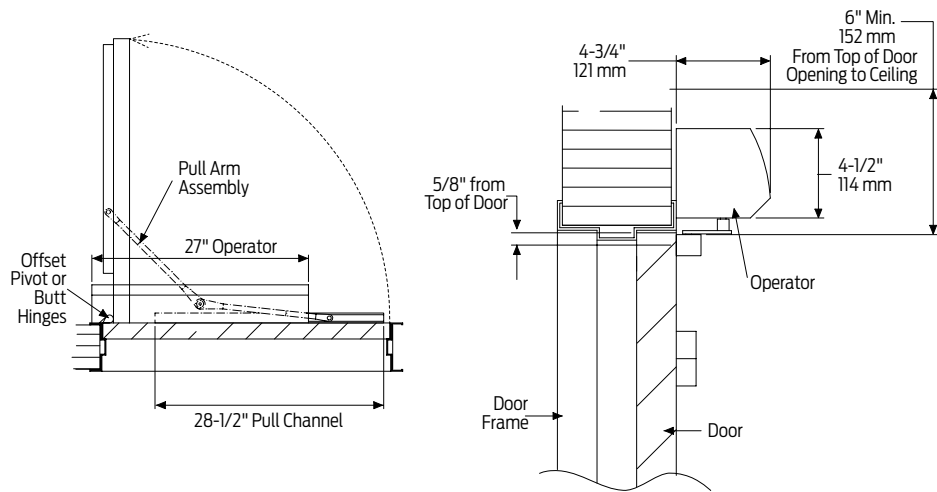
Visual Function Indicators

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

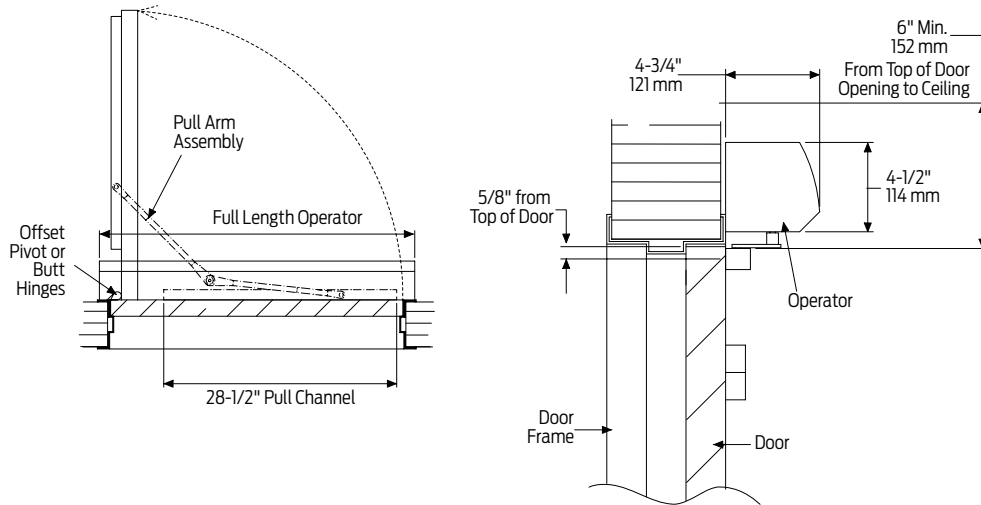
Programming Mode

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

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



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



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

Butt Hinges	Should not exceed 5" (127 mm) in width
Reveal	Should not exceed 1/8" (3 mm)
Head Frame	Minimum 2" (51 mm)
Top Rail	Minimum 2" (51 mm)
Opening and Closing Time	<ul style="list-style-type: none"> ■ Variable by adjustments to the electronic control module located on the operator assembly ■ Maximum hold open time adjustable up to approximately 30 seconds
System Diagram	See "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
Motor Gearbox Assembly

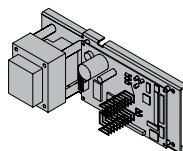
- Driving mechanism for operator (switch included)
- For 27" unit



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

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

Control Box



9130-3462
Control Box (120v)

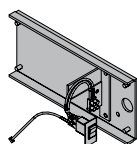
- Electronic controlling device with power supply output and power boost feature for Benchmark

Brackets



9130-3018
Mounting Bracket

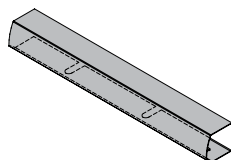
- Standard



9130-3351-2
Switch Bracket

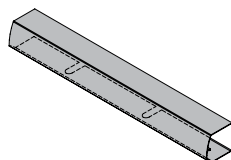
- 41" cable
- Bracket used to locate switch at end of cover on full length unit

Covers



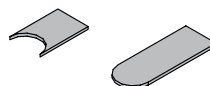
9130-72MC
Metal Cover

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



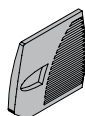
9130-72FC
Full Metal Cover

- Non-handed
- 36"
- Extruded aluminum



9130-163
Cover Insert

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



9130-163-1
Cover End Cap Insert

- Used to cover switch hole opening



9130-334
Cover End Cap

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

9130 Series Benchmark

Accessories

Tracks



9130-3038
Standard Track

- Non-handed
- Standard



9130-73
Track End Cap

- Black plastic



9130-3034
Roller Assembly

- Quiet low friction

Arms



9130-3077T
Standard Arm

- Non-handed
- Track roller not included



9130-3077PLCM
Standard Arm

- Non-handed
- Standard non-handed track

How-to-order 9130 Series closers

Specify Finish

- Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator options

Cover

- 36" Full Cover

Operator will be shipped with:

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

Table of sizes



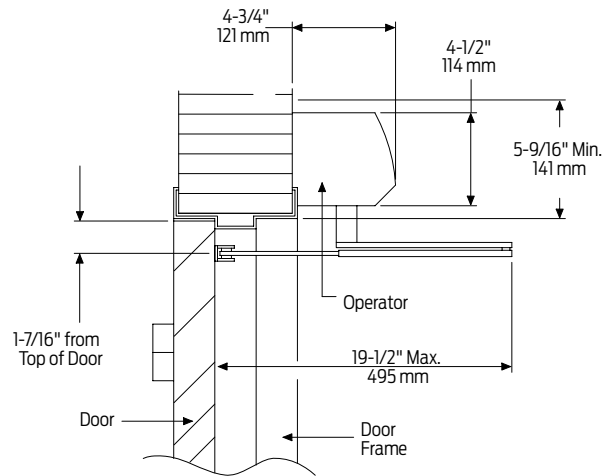
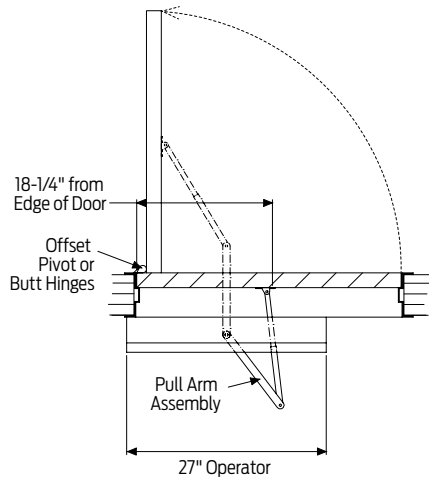
→ Indicates recommended range of door width for operator.

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

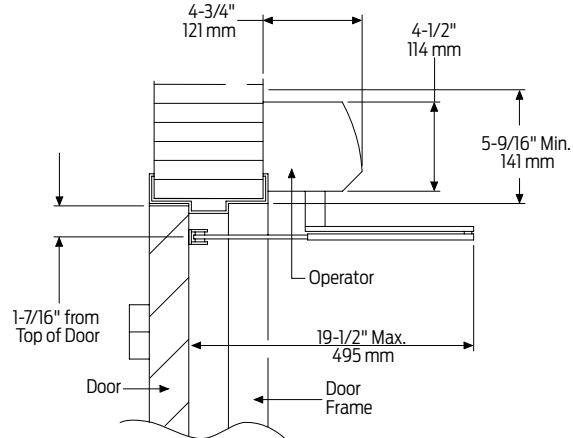
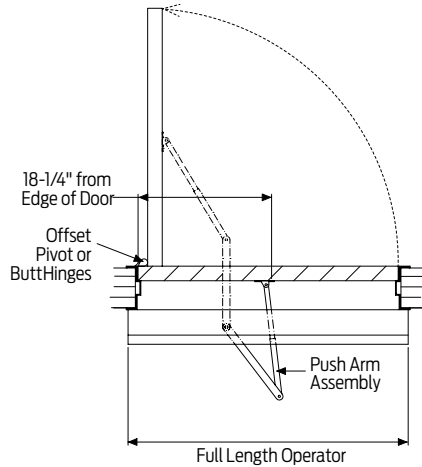
9140 Series Benchmark

Mounting details

Top Jamb Single Door Mounting



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



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

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	<ul style="list-style-type: none"> Minimum 2" (51 mm) Flush ceiling installation requires 5-1/4" (133 mm) minimum
Opening and Closing Time	<ul style="list-style-type: none"> Variable by adjustments to the electronic control module located on the operator assembly Maximum hold open time adjustable up to approximately 30 seconds
System Diagram	See "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

Motor Gearbox



9140-3454S
Motor Gearbox Assembly

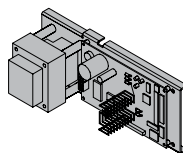
- Driving mechanism for operator (switch included)
- For 27" unit



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

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

Control Box



9130-3462
Control Box (120v)

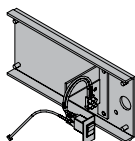
- Electronic controlling device with power supply output and power boost feature for Benchmark

Brackets



9140-3018
Mounting bracket

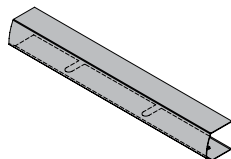
- Standard



9140-3351-1
Switch Bracket

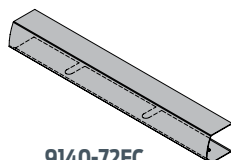
- 29" cable
- Used with a 36" door
- Used to locate switch at end of cover on full length unit

Covers



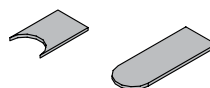
9140-72MC
Metal Cover

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



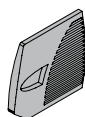
9140-72FC
Full Metal Cover

- Non-handed
- 36"
- Extruded aluminum cover



9140-163
Cover Insert

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



9140-163-1
Cover End Cap Insert

- Used to cover switch hole opening



9140-334
Cover End Cap

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

Arms



9140-3077
Regular arm

- Non-handed



9140-3077L
Long push arm

- Non-handed



9140-79
Rod and shoe

- For use with regular arm



9140-79LR
Long rod and shoe

- Used with long arm, for deep reveals

How-to-order 9140 Series closers

Specify Finish

- Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator options

Cover

- 36" Full Cover

Arm

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

Operator will be shipped with:

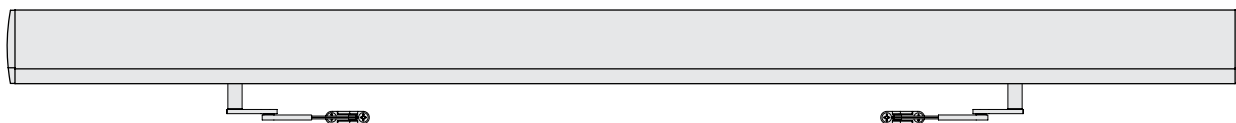
- Standard motor gearbox
- Standard control box
- Mounting bracket
- 27" metal cover
- Standard arm (3077)
- Standard track w/track roller
- Wood and machine screw pack
unless options listed below are selected

Table of sizes



→ Indicates recommended range of door width for operator.

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



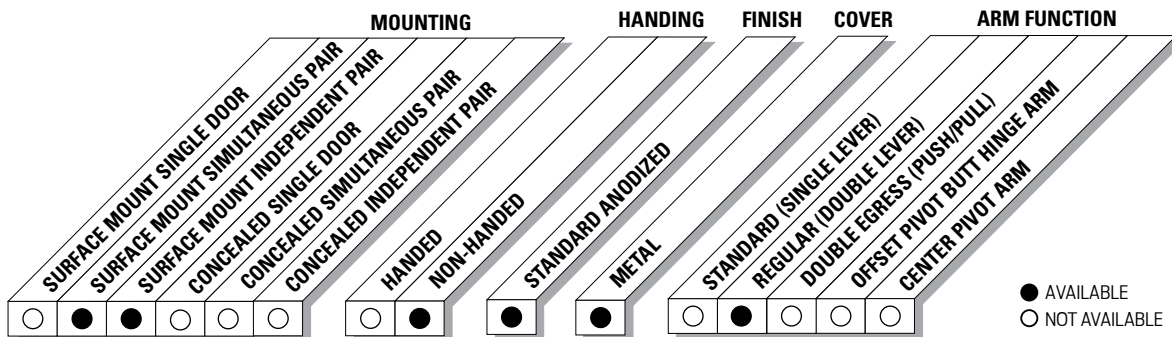
The 9150 BENCHMARK by LCN is an electrically powered low-energy operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for automatic opening applications that occasionally require manual opening. The BENCHMARK is a cost-effective solution for retrofitting an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

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

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

**Special
Templates**

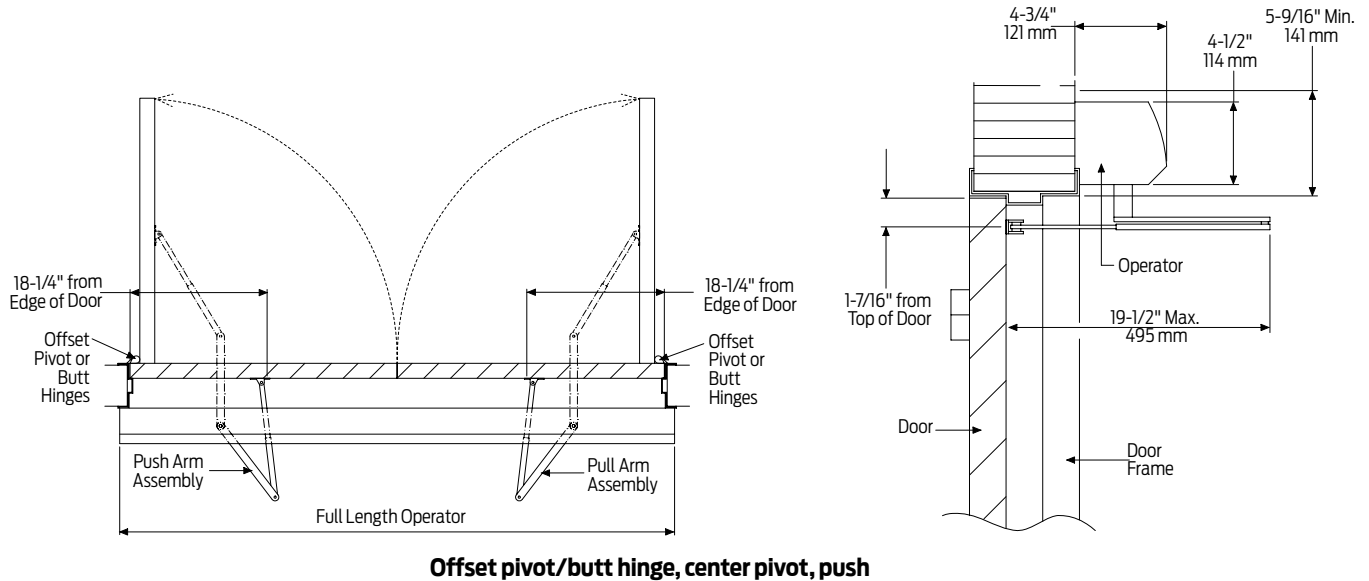
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



9150 Series Benchmark

Mounting details

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	<ul style="list-style-type: none"> ■ Minimum 2" (51 mm) ■ Flush ceiling installation requires 5-1/4" (133 mm) minimum
Opening and Closing Time	<ul style="list-style-type: none"> ■ Variable by adjustments to the electronic control module located on the operator assembly ■ Maximum hold open time adjustable up to approximately 32 seconds
System Diagram	See "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

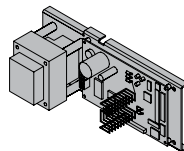
Motor Gearbox



9150-3454S
Motor Gearbox Assembly

- Driving mechanism for operator (switch included)

Control Box



9150-3462
Control Box (120v)

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

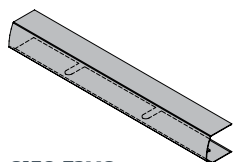
Brackets



9150-3018
Mounting Bracket

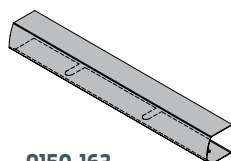
- Standard

Covers



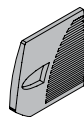
9150-72MC
Metal Cover

- Non-handed
- 72"
- Extruded aluminum cover
- Standard



9150-163
Cover Insert

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



9150-163-1
Cover End Cap Insert

- Used to cover switch hole opening



9150-334
Cover End Cap

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

Arms



9150-3077
Regular arm

- Non-handed



9150-3077L
Long arm

- Non-handed



9150-79
Rod and shoe

- For use with regular arm



9150-79LR
Long rod and shoe

- Used with long arm, for deep reveals

9150 Series Benchmark

Ordering Information

How-to-order 9150 Series closers

Specify Finish

- Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator options

Arm

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

Operator will be shipped with:

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

Table of sizes

Notes:

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

Digital Control Suite

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

Dual Independent Program Memories

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

On-Board Diagnostics

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

On-Board Power Supply

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

Plug and Play Sensors

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

Electronic Circuit Protection

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

Visual Function Indicators

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

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

Programming Mode

Allows tailoring the following functions to meet specific site conditions

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

Push 'N Go

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

Auto Reverse

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

Safety Slow/Stops Function

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

Power Boost

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

Microprocessor

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

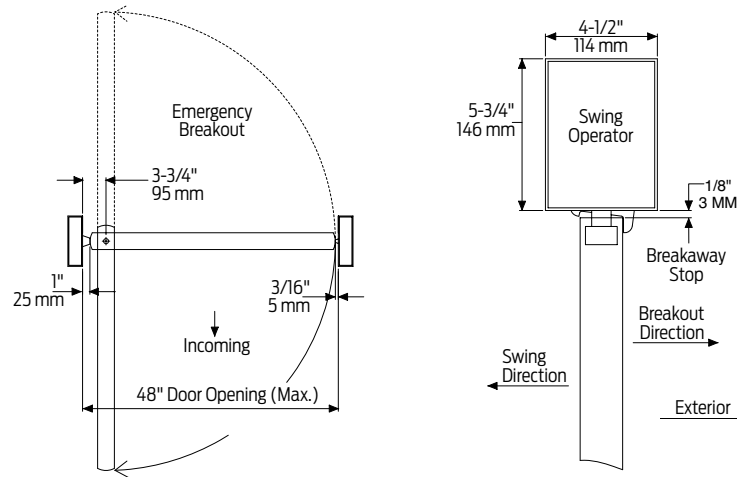
Electric Lock Delay

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

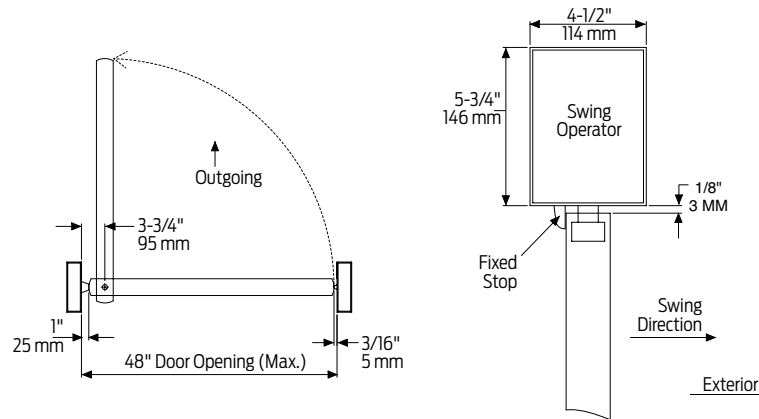
2810 Series Senior Swing

Mounting details

Concealed Single Door Mounting



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

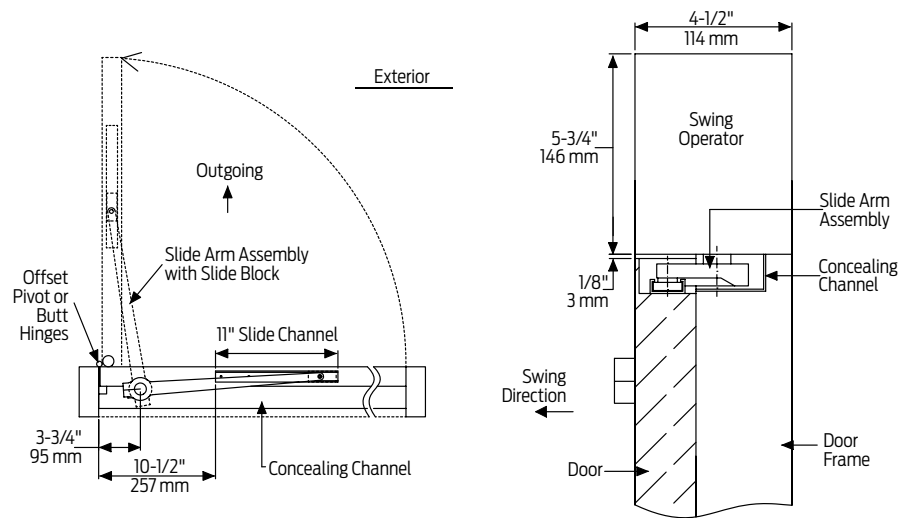


Center pivot, fixed stop, push
Shown w/ 3-3/4" pivot and finger guard

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	<ul style="list-style-type: none"> ■ Variable by adjustments to the electronic control box ■ Maximum hold open time adjustable up to approximately 32 seconds
Door Stop	Required for each door panel
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 <ul style="list-style-type: none"> ■ 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



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

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	<ul style="list-style-type: none"> ■ Variable by adjustments to the electronic control box ■ Maximum hold open time adjustable up to approximately 32 seconds
Door Stop	Required for each door panel
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 <ul style="list-style-type: none"> ■ 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

Motor Gearbox



**2810-3454
Motor Gearbox**

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

Mount Brackets



**2810-375
Mounting Bracket**

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



**2810-275
Mounting Bracket**

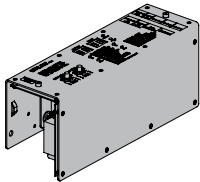
- Motor gearbox mounting bracket for 2-3/4" center pivot installations
- Front bracket



**2810-3018
Rear Mounting Bracket**

- Motor gearbox mounting bracket
- Rear bracket

Control Box



**2810-3462
Control Box**

- Senior swing
- Electronic controlling device for Senior Swing

Headers



**2810-3572HL
Header**

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



**2810-3572DD
Header**

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

End Cap



**2810-334
Header End Caps**

- With openings for wiring

Arms



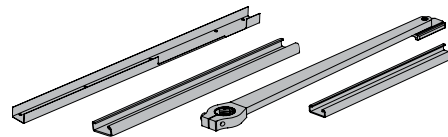
**2810-3077CP
Center Pivot Arm**

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



**2810-3077OP
Offset Pivot Arm**

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



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

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

Channels



2810-3072
Concealing Channel

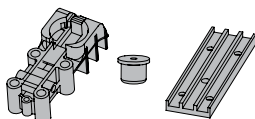
- Used to conceal arm in overhead concealed applications
- For offset pivot installations only
- If ordering separately specify length and hand



2810-168
Slide channel

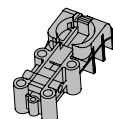
- Offset pivot or butt hinge installations only
- Mounts in top rail of door
- Allows arm to slide

Pivots



2810-3107
Bottom Pivot Assembly

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



2810-107
Bottom Pivot Body

- For center pivoted installations



2810-110
Pivot Post

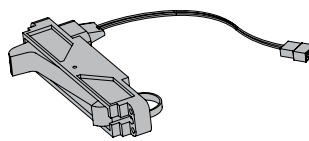
- Connects pivot body to bottom pivot plate for center pivoted installations



2810-117
Bottom Pivot Plate

- Applied to floor for center pivoted installations

Installation Accessories



2810-384B
Door Stop Breakaway

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



2810-384F
Door Stop Fixed

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



2810-12
Filler Plate Blank

- Completes length of header box



2810-11A
Spindle Plate

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



2810-11B
Spindle Plate

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

How-to-order 2810 Series

Select installation type

- 2811

Specify arm

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

Specify hand

- RH
- LH

Specify header/length

- HL_ (Specify length 33" to 49" offset pivot)
- HL_ (Specify length 36" to 49" center pivot)
- DD_ (Specify length 49" to 98")

Specify finish

- Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator will be shipped with:

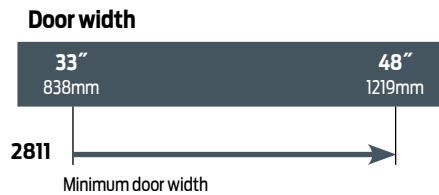
- Motor gearbox,
- Control box,
- Header (at specified length, 36" standard),
- Wood and machine screw pack
unless options listed below are selected.

Operator options

Stops

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

Table of sizes



➔ Indicates recommended range of door width for operator.

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

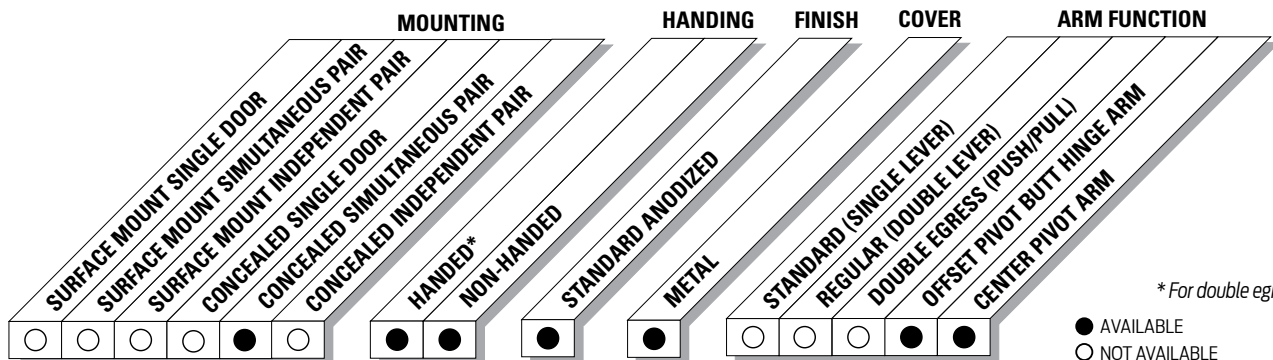


The 2850 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operator when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

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

**Special
Templates**

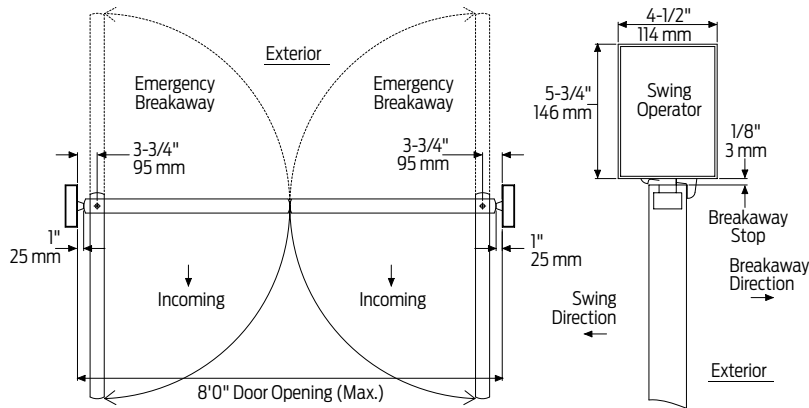
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



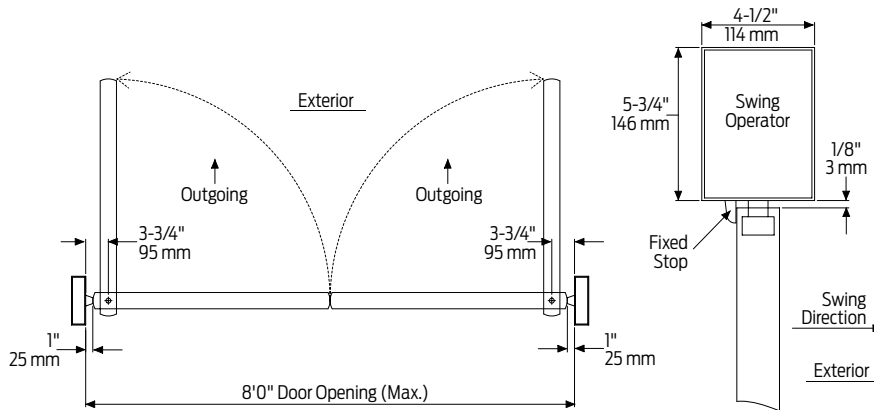
2850 Series Senior Swing

Mounting details

Concealed Simultaneous Pair



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

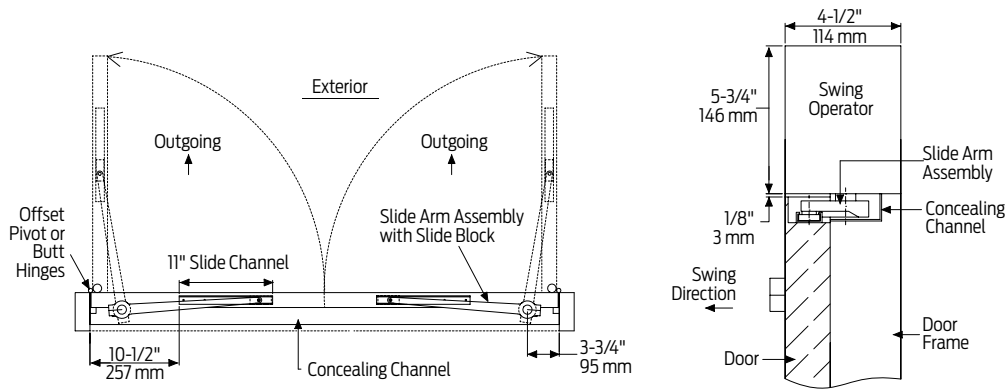


Center pivot, fixed stop, push
Shown w/ 3-3/4" pivot

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	<ul style="list-style-type: none"> Variable by adjustments to the electronic control box Maximum hold open time adjustable up to approximately 32 seconds.
Door Stop	Required for each door panel
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



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

Head Frame	Minimum 52" (L) x 5-3/4" (H) x 4-1/2" (W) (1524 mm x 146 mm x 114 mm)
Top Rail	Minimum 2" (51 mm)
Opening and Closing Time	<ul style="list-style-type: none"> ■ Variable by adjustments to the electronic control box ■ Maximum hold open time adjustable up to approximately 32 seconds
Door Stop	Required for each door panel
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

Motor Gearbox



**2850-3454
Motor Gearbox**

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

Mount Brackets



**2850-375
Mounting Bracket**

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



**2850-275
Mounting Bracket**

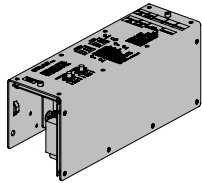
- Motor gearbox mounting bracket for 2-3/4" center pivot installations
- Front bracket



**2850-3018
Rear Mounting Bracket**

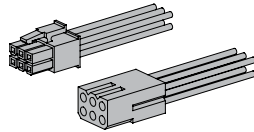
- Motor gearbox mounting bracket
- Rear bracket

Control Box



**2850-3462
Control box**

- Senior swing
- Electronic controlling device for Senior Swing



**2850-982
Companion Cable**

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

Header



**2850-3572HL
Header**

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

End Cap



**2850-334
Header End Caps**

- End cap with openings for wiring

Arms



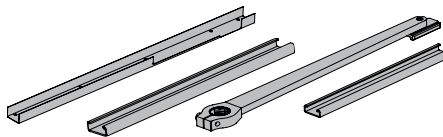
**2850-3077CP
Center pivot arm**

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



**2850-3077OP
Offset pivot arm**

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



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

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

Channels



2850-3072
Concealing Channel

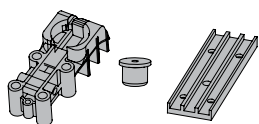
- Used to conceal arm in overhead concealed applications
- For offset pivot installations only
- If ordering separately specify length and hand



2850-168
Slide Channel

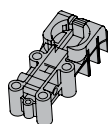
- Offset pivot or butt hinge installations only
- Mounts in top rail of door
- Allows arm to slide

Pivots



2850-3107
Bottom Pivot Assembly

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



2810-107
Bottom Pivot Body

- Pivot body for center pivoted installations



2850-110
Pivot Post

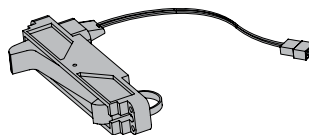
- Connects pivot body to bottom pivot plate for center pivoted installations



2850-117
Bottom Pivot Plate

- Applied to floor for center pivoted installations

Installation Accessories



2850-384B
Door Stop Breakaway

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



2850-384F
Door Stop Fixed

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



2850-12
Filler Plate Blank

- Completes length of header box



2850-11A
Spindle Plate

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



2850-11B
Spindle Plate

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

2850 Series Senior Swing

Ordering Information

How-to-order 2850 Series

Select installation type

- 2853

Specify arm

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

Specify hand

- RH
- LH

Specify header/length

- HL_ (Specify length 52" to 98")

Specify finish

- Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator will be shipped with:

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

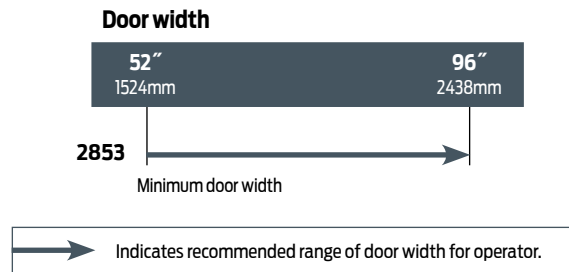
Operator options

Stops*

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

*Available with Center Pivoted installations only

Table of sizes



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

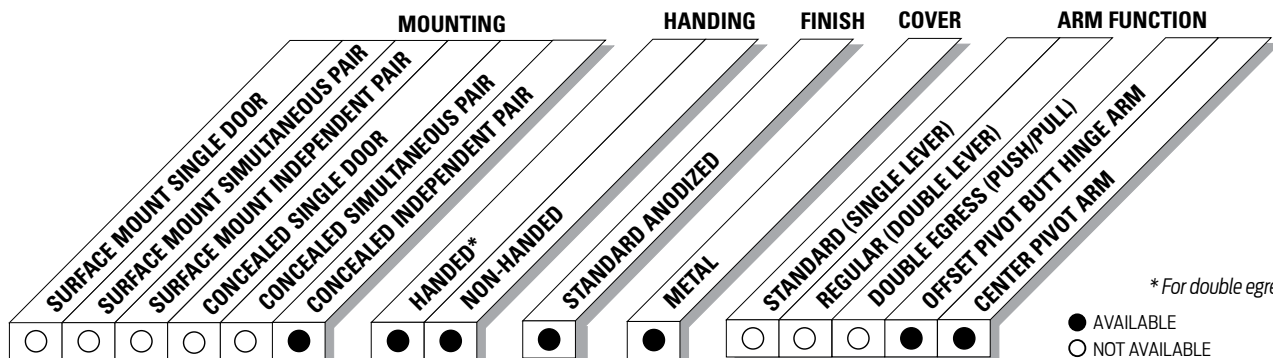


The 2860 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operator when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

Certifications	Grade 1 - ANSI A156.19, UL325/228, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Fasteners	Wood and machine screw packs
Handing	Handed	Mounting	Independent pair, overhead concealed, center pivot, offset pivot, butt hinge
Door Width	<ul style="list-style-type: none"> ■ Minimum combined door with 52" - 96" ■ Simultaneous pair - width per leaf 26" minimum to 48" maximum 	Arms	Offset Pivot Arm or Center Pivot Arm
Warranty	2 years	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Anodized Aluminum ■ Anodized Dark Bronze

**Special
Templates**

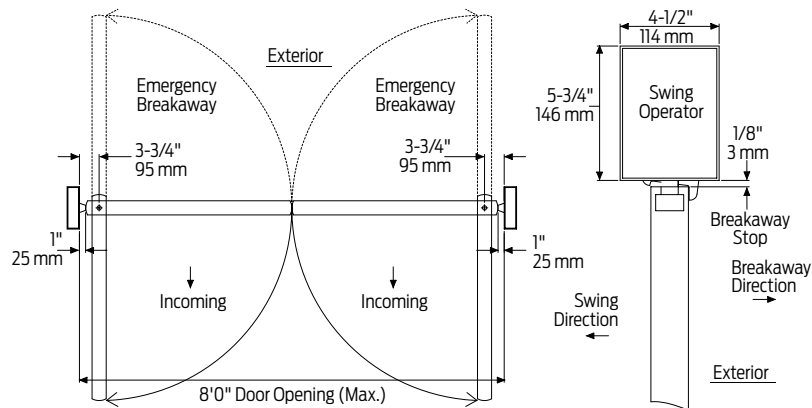
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



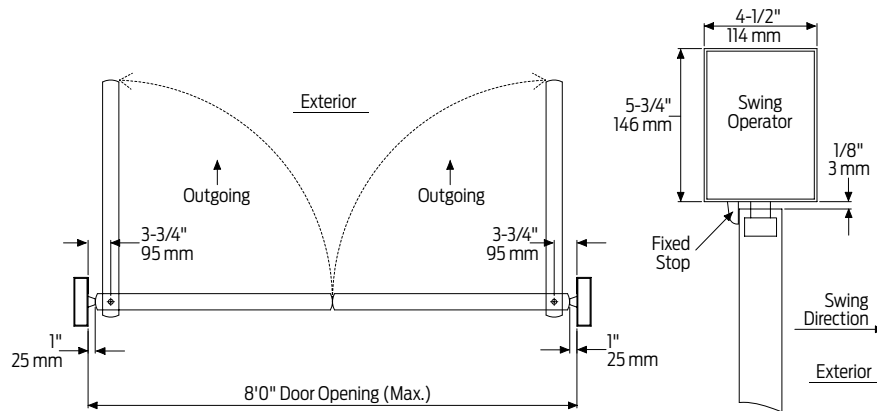
2860 Series Senior Swing

Mounting details

Concealed Independent Pair



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

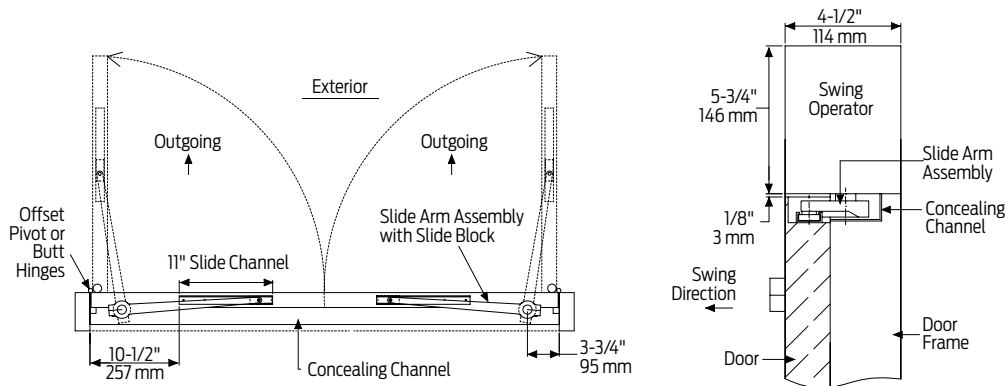


Center pivot, fixed stop, push
Shown w/ 3-3/4" pivot

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	<ul style="list-style-type: none"> ■ Variable by adjustments to the electronic control box ■ Maximum hold open time adjustable up to approximately 32 seconds.
Door Stop	Required for each door panel
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



Offset pivot/butt hinge, push

Head Frame	Minimum 65" (L) x 5-3/4" (H) x 4-1/2" (W) (1651 mm x 146 mm x 114 mm)
Top Rail	Minimum 2" (51 mm)
Opening and Closing Time	<ul style="list-style-type: none"> ■ Variable by adjustments to the electronic control box ■ Maximum hold open time adjustable up to approximately 32 seconds
Door Stop	Required for each door panel
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

Motor Gearbox



2860-3454
Motor gearbox

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

Mount Brackets



2860-375
Mounting Bracket

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



2860-275
Mounting Bracket

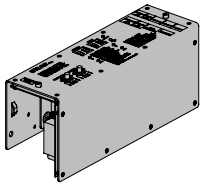
- Motor gearbox mounting bracket for 2-3/4" center pivot installations
- Front bracket



2860-3018
Rear Mounting Bracket

- Motor gearbox mounting bracket
- Rear bracket

Control Box



2860-3462
Control box

- Electronic controlling device for Senior Swing

Header



2860-3572HL
Mounting Header

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

End Cap



2860-334
Header End Caps

- With openings for wiring

Arms



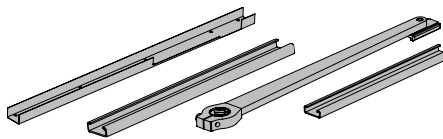
2860-3077CP
Center Pivot Arm

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



2860-3077OP
Offset Pivot Arm

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



2860-3077OPCM
Offset Pivot Arm Assembly

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

Channels



2860-3072
Concealing Channel

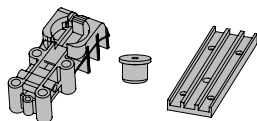
- Used to conceal arm in overhead concealed applications
- For offset pivot installations only
- If ordering separately specify length and hand



2860-168
Slide Channel

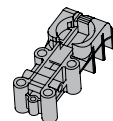
- Offset pivot or butt hinge installations only
- Mounts in top rail of door
- Allows arm to slide

Pivots



2860-3107
Bottom Pivot Assembly

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



2860-107
Bottom Pivot Body

- Pivot body for center pivoted installations



2860-110
Pivot Post

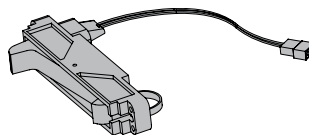
- Connects pivot body to bottom pivot plate for center pivoted installations



2860-117
Bottom Pivot Plate

- Applied to floor for center pivoted installations

Installation Accessories



2860-384B
Door Stop Breakaway

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



2860-384F
Door Stop Fixed

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



2860-12
Filler Plate Blank

- Completes length of header box



2860-11A
Spindle Plate

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



2860-11B
Spindle Plate

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

2860 Series Senior Swing

Ordering Information

How-to-order 2860 Series

Select installation type

- 2863

Specify arm

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

Specify hand

- RH
- LH

Specify header/length

- HL_ (Specify length 65" to 98")

Specify finish

- Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator will be shipped with:

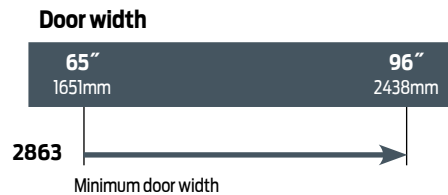
- Standard motor gearbox (1 LH & 1 RH)
- Standard control box (2 ea)
- Header (at specified length - 72" standard)
- 2-3/4" pivot point
- Wood and machine screw pack
unless options listed below are selected.


Operator options

Stops*

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

Table of sizes



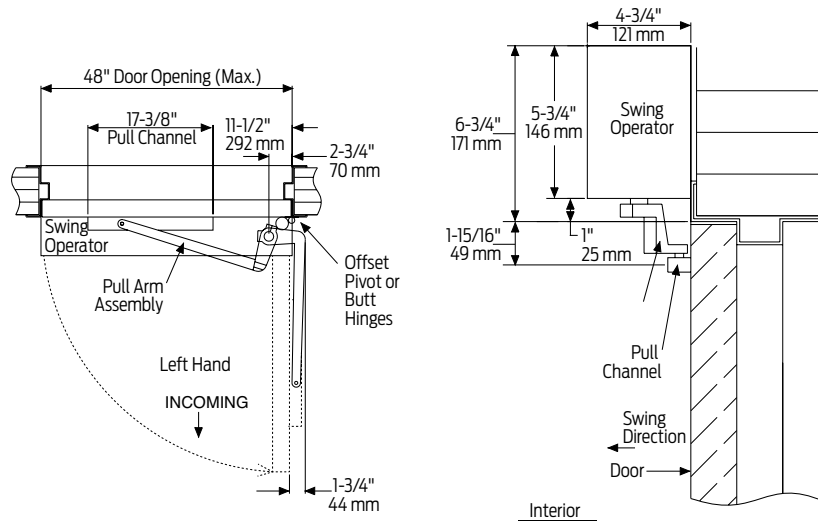
 Indicates recommended range of door width for operator.

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

9530 Series Senior Swing

Mounting details

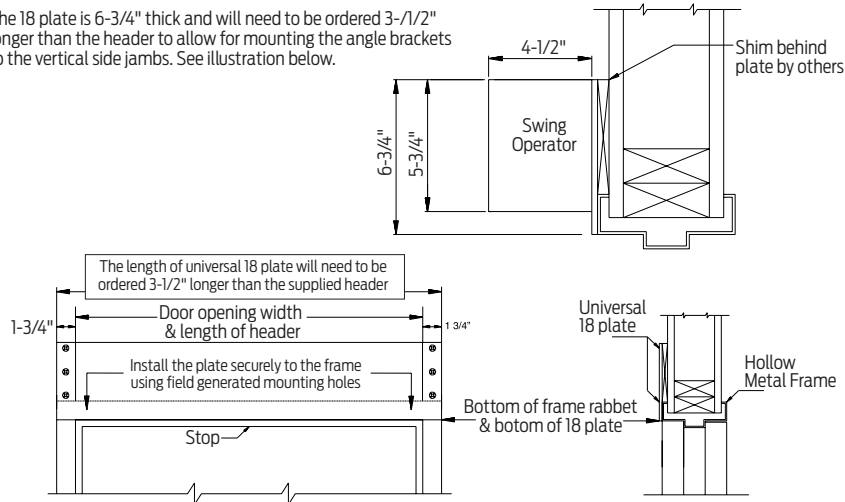
Top Jamb Single Door Mounting



Offset pivot/butt hinge, center pivot, pull

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

The 18 plate is 6-3/4" 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	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	<ul style="list-style-type: none"> 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

Motor Gearbox



**9530-3454
Motor Gearbox**

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

Mount Brackets



**9530-275
Mounting Bracket**

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



**9530-3018
Rear Mounting Bracket**

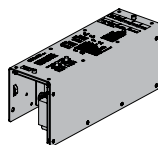
- Motor gearbox mounting bracket
- Rear bracket



**9530-334-1
Angled Bracket**

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

Control Box



**9530-3462
Control Box**

- Electronic controlling device for Senior Swing

Headers



**9530-3572HL
Header**

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



**9530-3572DD
Header**

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

End Caps



**9530-334
Header End Caps**

- With openings for wiring



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

- Metal finish end cap

Arms



9530-3077PLCM
Standard Arm Assembly

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



9530-3077T
Standard Arm

- Handed
- Track roller not included

Tracks



9530-3038
Track

- Non-handed
- Includes 3034 & 73



9530-73
Track End Cap

- Black plastic end caps



9530-3034
Roller

- Quiet low friction roller assembly

Installation Assembly



9530-11A
Spindle Plate

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



9530-12
Filler

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



9530-18
Mounting Plate

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

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

How-to-order 9530 Series closers

Specify hand

- RH
- LH

Specify header/length

- HL__ (Specify length 33" to 48")
- DD__ (Specify length 49" to 98")

Specify finish

- Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator will be shipped with:

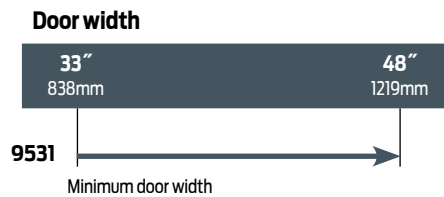
- Standard motor gearbox
 - Standard control box
 - Header (at specified length, 36" standard)
 - Standard arm (3077T)
 - 2-3/4" pivot point
 - Standard track w/track roller
 - Machine screw pack
- unless options listed below are selected

Operator options

Mounting plate

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

Table of sizes



→ Indicates recommended range of door width for operator.

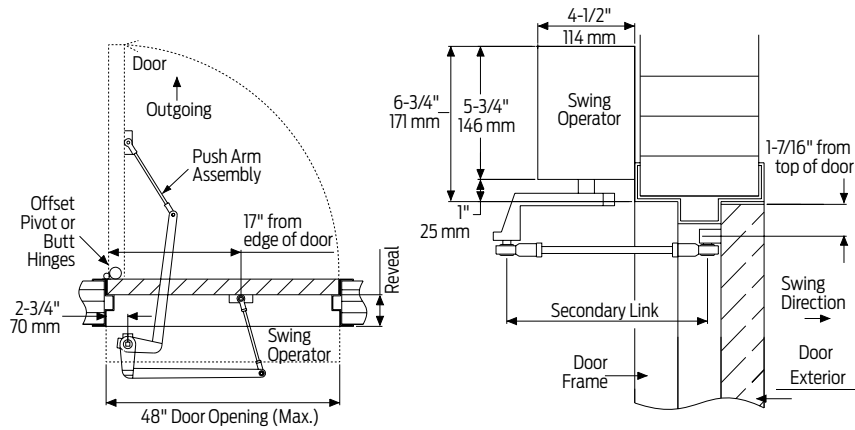
NOTE: For all Senior Swing Series.

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

9540 Series Senior Swing

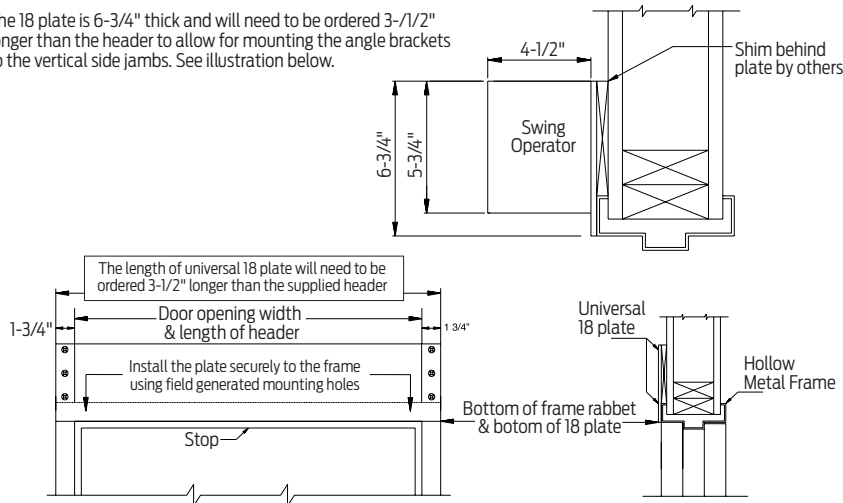
Mounting details

Top Jamb Single Door Mounting



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

The 18 plate is 6-3/4" thick and will need to be ordered 3-1/2" longer than the header to allow for mounting the angle brackets to the vertical side jambs. See illustration below.



Hollow metal frame
Suggested Installation.

Butt Hinges	Should not exceed 5" (127 mm) in width
Reveal	push installations should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM
Head Frame	Minimum 1-3/4" (44 mm). Face frame 6-3/4" (171 mm) total operator clearance
Top Rail	Minimum 2-3/4" (70 mm)
Opening and Closing Time	<ul style="list-style-type: none"> ■ 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

Motor Gearbox



9540-3454
Motor Gearbox

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

Mount Brackets



9540-275
Mounting Bracket

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



9540-3018
Rear Mounting Bracket

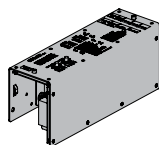
- Motor gearbox mounting bracket
- Rear bracket



9540-334-1
Angled Bracket

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

Control Box



9540-3462
Control Box

- Electronic controlling device for Senior Swing

Headers



9540-3572HL
Header

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



9540-3572DD
Header

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

End Caps



9540-334
Header End Caps

- With openings for wiring



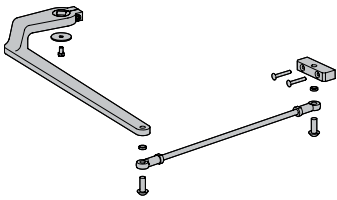
9540-334-2
End Dress Plate

- Metal finish end cap

9540 Series Senior Swing

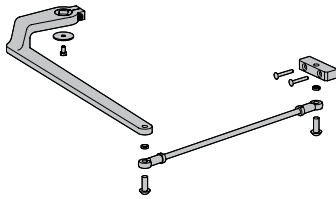
Accessories

Arms



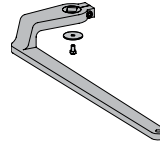
9540-3077 Regular Arm Assembly

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



9540-3077L Regular Long Arm Assembly

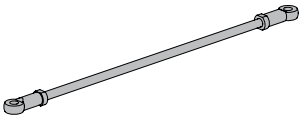
- Handed
- Includes 77 main arm assembly and 79LR linkage assembly



9540-77 Main Arm

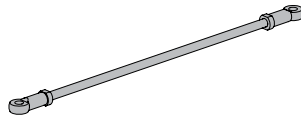
- Handed
- Attaches to motor gearbox

Tracks



9540-79 Linkage Assembly - 15"

- Threaded rod attaches to door
- Extends from main arm



9540-79LR Linkage Assembly - 32"

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

Installation Accessories



9540-11A Spindle Plate

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



9540-12 Filler Plate Blank

- Completes length of header box (specify length)



9540-18 Mounting Plate

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

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

How-to-order 9540 Series closers

Specify hand

- RH
- LH

Specify header/length

- HL__ (Specify length 33" to 48")
- DD__ (Specify length 49" to 98")

Specify finish

- Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator will be shipped with:

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

Operator options

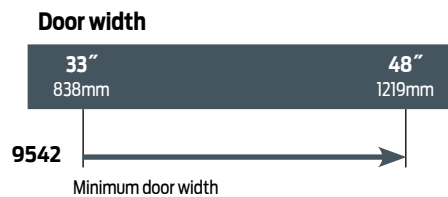
Mounting plate

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

Arm

- Long Arm (3077L)

Table of sizes



→ Indicates recommended range of door width for operator.

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

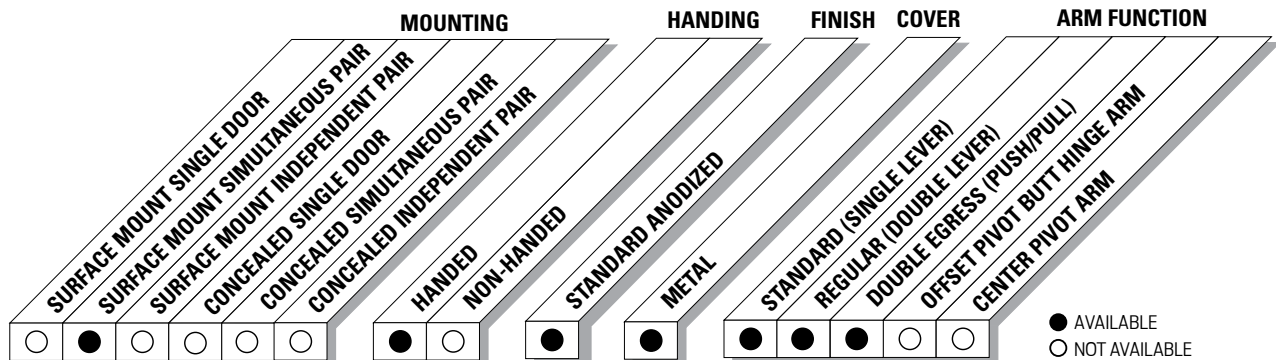


The 9550 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

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

**Special
Templates**

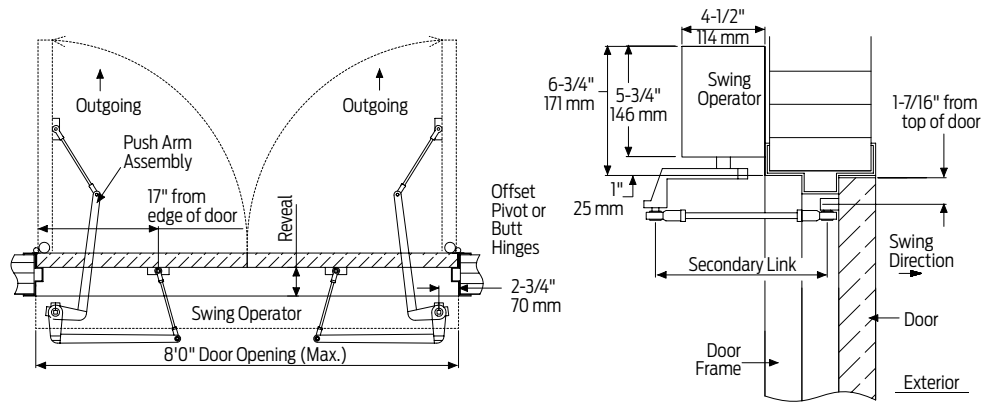
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



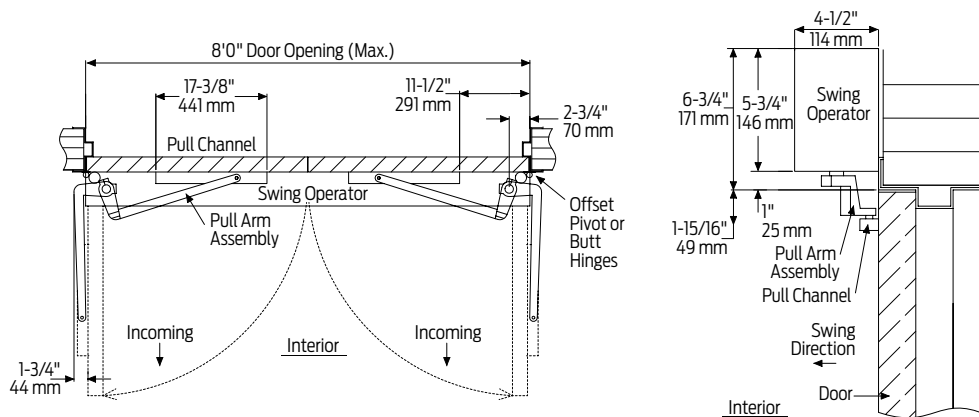
9550 Series Senior Swing

Mounting details

Top Jamb Simultaneous Pair Mounting



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

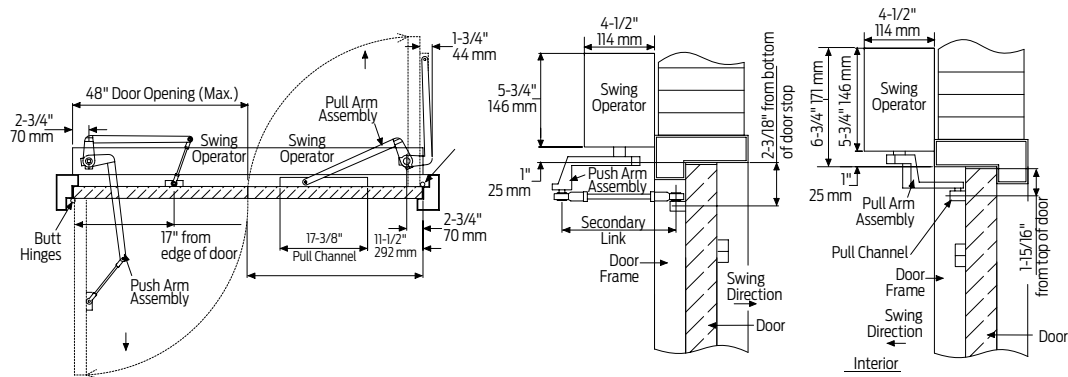


Offset pivot/ butt hinge, center pivot, pull
NOTE: Cannot be used with swing clear hinges, pocket pivots or balanced doors.

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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Variable by adjustments to the electronic control box Maximum hold open time adjustable up to approximately 32 seconds.
Door Stop	Required for each door panel
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

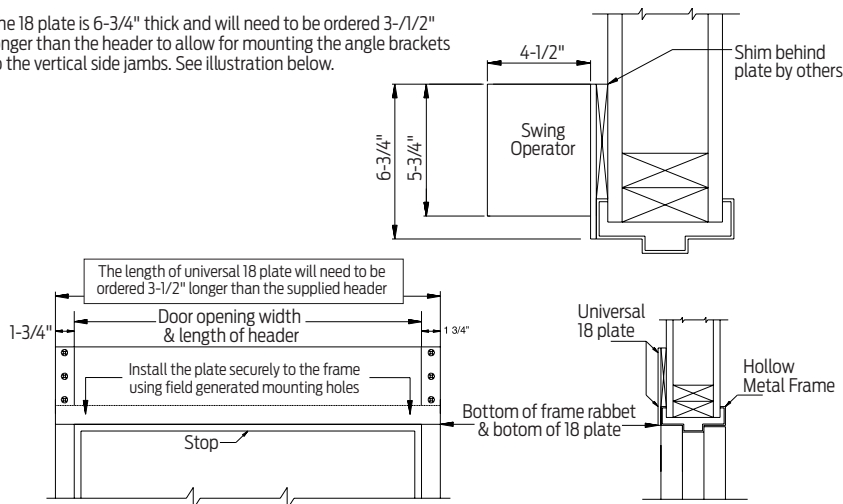


RH double egress

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 6-3/4" 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Variable by adjustments to the electronic control box Maximum hold open time adjustable up to approximately 32 seconds.
Door Stop	Required for each door panel
System Diagram	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
Maximum Opening	Template allows 90 degree power opening and 90 degree manual opening

Notes:

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

9550 Series Senior Swing

Accessories

Motor Gearbox



9550-3454
Motor Gearbox

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

Mount Brackets



9550-275
Mounting Bracket

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



9550-3018
Rear Mounting Bracket

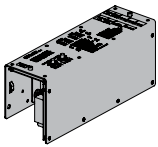
- Motor gearbox mounting bracket



9550-334-1
Angled Bracket

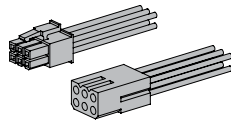
- Mounting bracket for surface applications (includes 2 mounting brackets)

Control Box



9550-3462
Control Box

- Electronic controlling device for Senior Swing



9550-982
Companion Cable

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

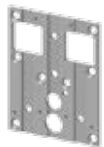
Header



9550-3572HL
Header

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

End Caps



9550-334
Header End Caps

- With openings for wiring



9550-334-2
End Dress Plate

- Metal finish end cap

Tracks



9550-3038
Track

- Non-handed
- Standard



9550-73
Track End Cap

- Black plastic end caps



9550-3034
Roller

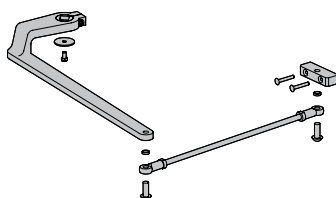
- Quiet low friction roller assembly

Arms



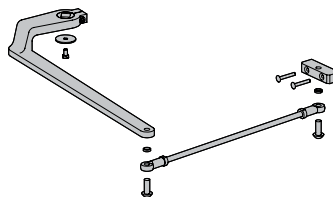
9550-3077Plcm
Standard Arm Assembly

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



9550-3077
Regular Arm Assembly

- Handed
- Includes 77 main arm assembly and 79 linkage assembly



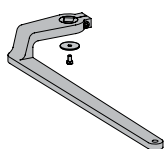
9550-3077L
Regular Long Arm Assembly

- Handed
- Includes 77 main arm assembly and 79LR linkage assembly



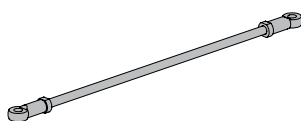
9550-3077T
Standard Arm

- Handed
- Track roller not included



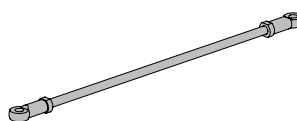
9550-77
Main Arm

- Handed
- Attaches to motor gearbox



9550-79
Linkage Assembly

- 15"
- Threaded rod attaches to door
- Extends from main arm



9550-79LR
Linkage Assembly

- 32"
- Threaded long rod attaches to door
- Extends from main arm
- Used for reveal 10" to 20"

Installation Assembly



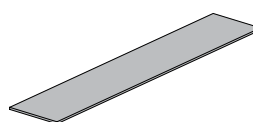
9550-11A
Spindle Plate

- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 2-3/4" offset pivot or butt hinge installations



9550-12
Filler Plate

- Blank
- Completes length of header box
- Specify length



9550-18
Mounting Plate

- Optional mounting plate for standard hollow metal door frames
- Specify length 68-1/2" to 101-1/2" maximum when using angle brackets
- Specify length 65" to 98" maximum when using dress plates.

NOTE: The length of a universal 18 plate will need to be ordered 3-1/2" longer than the supplied header when using angle brackets.

How-to-order 9550 Series closers

Specify hand

- RH
- LH

Specify header/length

- HL_ (Specify length 52" to 98") regular or long arm
- HL_ (Specify length 60" to 98") for standard or DE arm

Specify finish

- Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator will be shipped with:

- Standard motor gearbox (SF) (2 ea)
- Standard control box (SC)
- Metal cover (at specified length 72" standard)
- Regular arm (2 ea)
- 2-3/4" pivot point
- Machine screw pack
unless options listed below are selected

Operator options

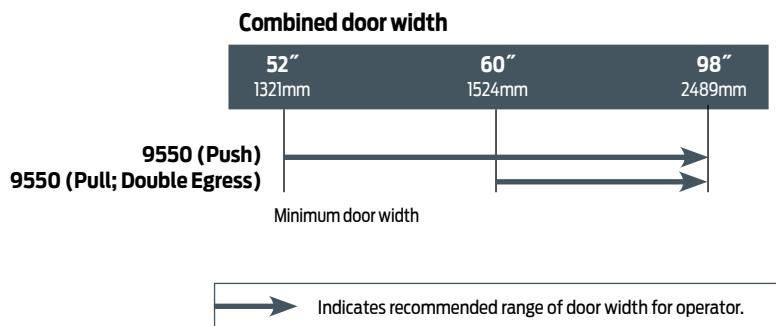
Mounting plate

- Plate, ___ (Specify Length 52" to 101-1/2")

Arm

- Standard Arm (2 ea) w/Standard Track (2 ea)
- Double Egress includes Standard Arm w/Track (1 ea) & Regular Arm (1 ea)
- Long Arm (3077L)

Table of sizes



*NOTE: For all Senior Swing Series.
Simultaneous Pair – Width per leaf 26" minimum (push) 30" minimum (pull) to 48" maximum.*

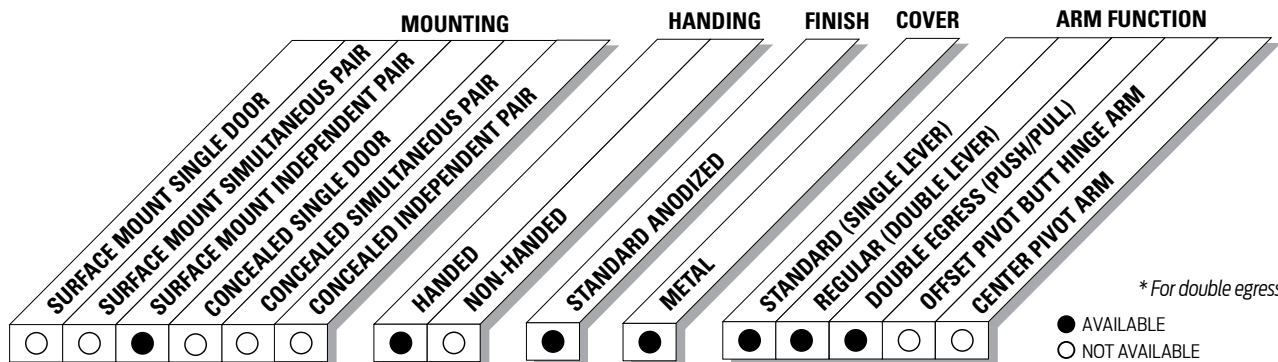


The 9560 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

Certifications	Grade 1 - ANSI A156.19, UL325/228, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	Cover	Metal, Standard
Handing	Handed	Fasteners	Machine screw pack
Warranty	2 years	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	<ul style="list-style-type: none"> ■ Anodized Aluminum ■ Anodized Dark Bronze

**Special
Templates**

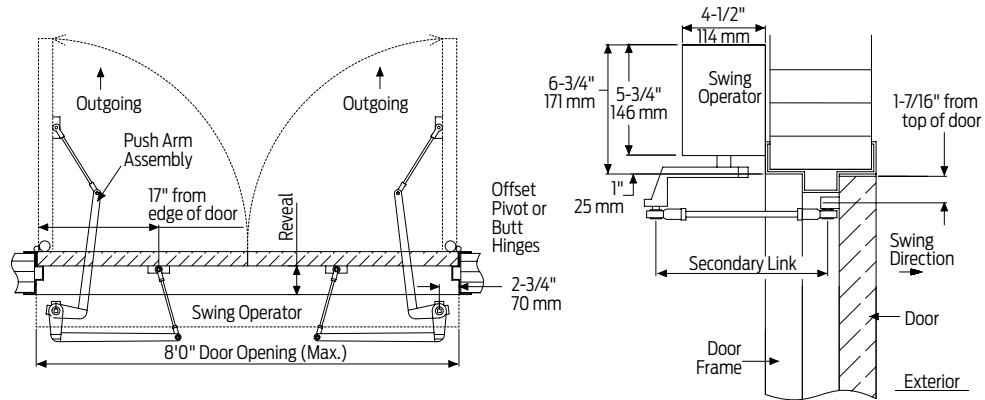
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



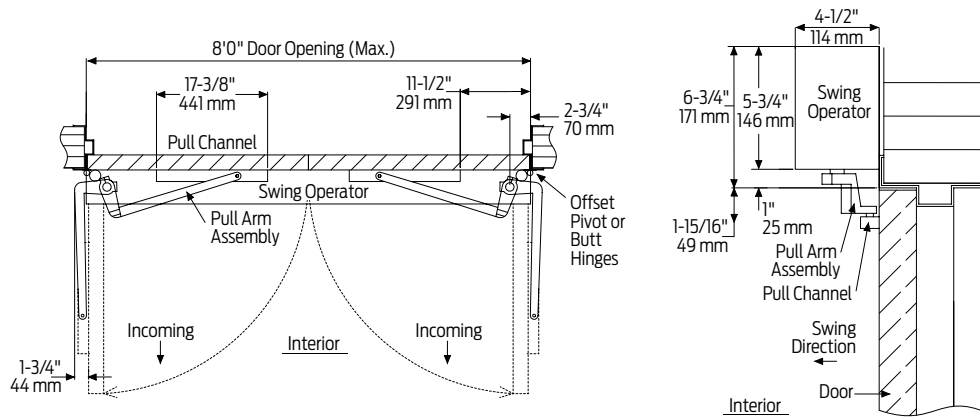
9560 Series Senior Swing

Mounting details

Top Jamb Independent Pair Mounting



Offset pivot/butt hinge, center pivot, push
Consult factory for all balanced door installations.

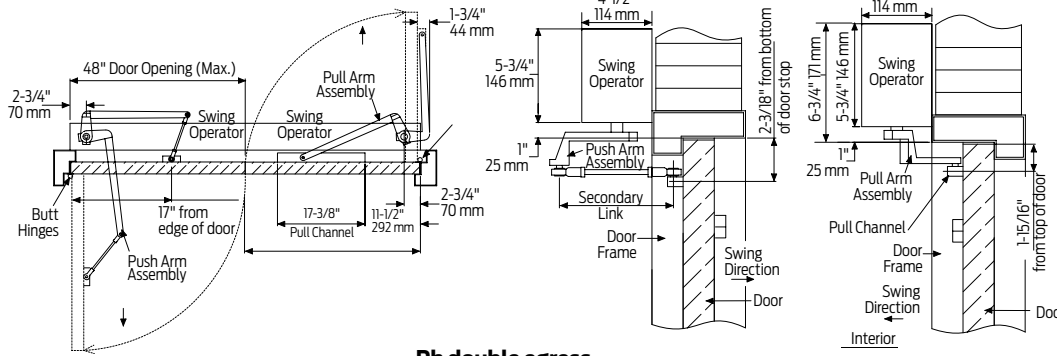


Offset pivot/butt hinge, center pivot, pull
NOTE: Cannot be used with swing clear hinges, pocket pivots or balanced doors.

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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Variable by adjustments to the electronic control box Maximum hold open time adjustable up to approximately 32 seconds.
Door Stop	Required for each door panel
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:

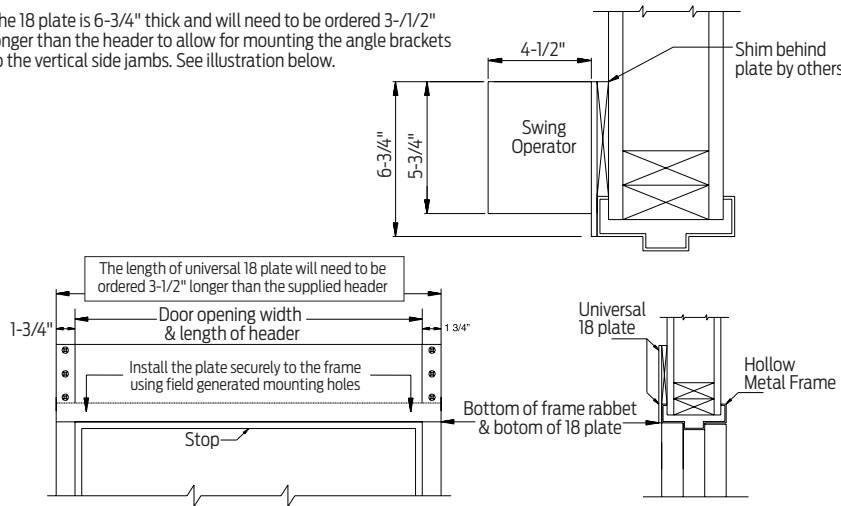
- Push N' Go permits non-switch activation with a power boost providing additional latching force
- Electromechanical unit with microprocessor control
- Digital keypad for easy setup
- 72" header length is standard. Specify 65" - 98" max
- Pull, push, or double egress applications available
- Adjustable 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 6-3/4" 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Variable by adjustments to the electronic control box Maximum hold open time adjustable up to approximately 32 seconds.
Door Stop	Required for each door panel
System Diagram	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
Maximum Opening	Template allows 90 degree power opening and 90 degree manual opening

Notes:

- Push N! Go permits non-switch activation with a power boost providing additional latching force
- Electromechanical unit with microprocessor control
- Digital keypad for easy setup
- 72" header length is standard. Specify 65" - 98" max
- Pull, push, or double egress applications available
- Adjustable hold open period of 2 - 32 seconds in automatic or manual mode
- Actuators available separately, see pages 115-131

9560 Series Senior Swing

Accessories

Motor Gearbox



9560-3454
Motor Gearbox

- Senior swing
- Handed
- Driving mechanism for operator
- Provides maximum 15 lbs opening force

Mounting Brackets



9560-275
Mounting Bracket

- Motor gearbox mounting bracket for 2-3/4" center pivot installations
- Front bracket



9560-3018
Rear Mounting Bracket

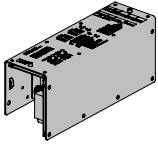
- Motor gearbox mounting bracket



9560-334-1
Angled Bracket

- Mounting bracket for surface applications
- Includes 2 mounting brackets

Control Box



9560-3462
Control Box

- Electronic controlling device for Senior Swing

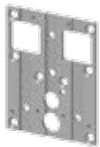
Header



9560-3572HL
Header

- Pair door, two operators
- Specify length 65" to 98" maximum
- Standard

End Caps



9560-334
Header End Caps

- With openings for wiring



9560-334-2
End Dress Plate

- Metal finish end cap

Tracks



9560-3038
Track

- Non-handed
- Standard



9560-73
Track End Cap

- Black plastic end caps



9560-3034
Roller

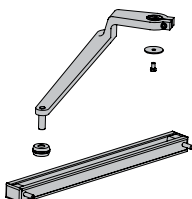
- Quiet low friction roller assembly

Arms



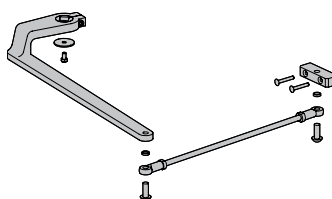
9560-3077T
Standard Arm

- Handed
- Track roller not included



9560-3077
Regular Arm Assembly

- Handed
- Includes 77 main arm assembly and 79 linkage assembly



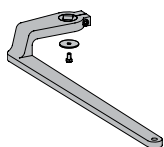
9560-3077L
Regular Long Arm Assembly

- Handed
- Includes 77 main arm assembly and 79LR linkage assembly



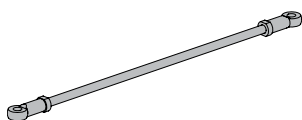
9560-3077PLCM
Standard Arm Assembly

- Handed
- Includes 3077 regular arm assembly, 3038 track, and 3034 track roller



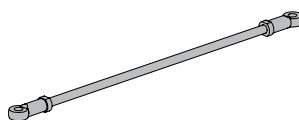
9560-77
Main Arm

- Handed
- Attaches to motor gearbox



9560-79
Linkage Assembly

- 15"
- Threaded rod attaches to door
- Extends from main arm
- Used for reveal 1" to 10"



9560-79LR
Linkage Assembly

- 32"
- Threaded long rod attaches to door
- Extends from main arm.
- Used for reveal 10" to 20"

Installation Accessories



9560-11A
Spindle Plate

- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 2-3/4" offset pivot or butt hinge installations



9560-12
Filler Plate

- Blank
- Completes length of header box
- Specify length



9560-18
Mounting Plate

- Optional mounting plate for standard hollow metal door frames
- Specify length 68-1/2" to 101-1/2" maximum when using angle brackets
- Specify length 65" to 98" maximum when using dress plates.

NOTE: The length of a universal 18 plate will need to be ordered 3-1/2" longer than the supplied header when using angle brackets.

How-to-order 9560 Series

Specify hand

- RH
- LH

Specify header/length

- HL__ (Specify length 65" to 98") regular or long arm

Specify finish

- Standard Anodized Finish _____
Aluminum or Dark Bronze

Operator will be shipped with:

- Standard motor gearbox (SF) (2 ea)
 - Standard control box (SC)
 - Metal cover (at specified length 72" standard)
 - Regular arm (2 ea)
 - 2-3/4" pivot point
 - Machine screw pack
- unless options listed below are selected.

Operator options

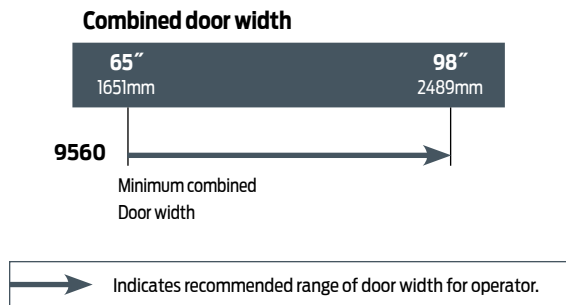
Mounting plate

- Plate, __ (Specify Length 65" to 101-1/2")

Arm

- Standard Arm (2 ea) w/Standard Track (2 ea)
- Double Egress - Includes Standard Arm w/Track (1 ea) & Regular Arm (1 ea)
- Long Arm (3077L)

Table of sizes



*NOTE: For all Senior Swing Series
Independent Pair – Width per leaf 30" minimum to 48" maximum.*

The actuators and accessories on the following pages are to be used with LCN automatic operators. When using actuators supplied by others, such as card readers, consult the factory.

The desired function, traffic patterns and physical design of the opening will determine the type of actuators used. Generally, for twoway traffic, an actuator is required on both the interior and exterior side of the door. Each actuator is packaged with a decal to be applied to the controlled door. Scanners operate on 12V or 24V AC/DC and may be powered by the LCN electrohydraulic/electromechanical operators. The 7900 series control box requires separate power supply for scanners. Actuators provide normally open (N.O.) dry contacts.

Automatic Operator Actuators & Accessories



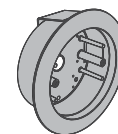
8310-856
Wall Mounted Actuator

- Hardwired low voltage actuator with round, stainless steel touch plate in 4-1/2" (114mm) diameter
- Engraved blue filled handicap symbol conforms to most accessibility codes
- Designed to mount in a flush or surface mount box (sold separately) in/on a vertical surface near the controlled door
- Optional mounting in single gang electrical box (by others)
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard



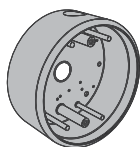
8310-856T
Wall Mounted Actuator

- Same as the 8310-856, with the added engraving of "Push to Open"



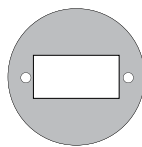
8310-868F
Flush Mount Box

- Rugged Plastic Box, 4-1/2" Round
- Optional accessory - can be used w/any 4-1/2" round actuator



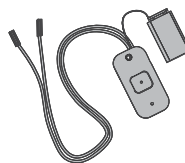
8310-868S
Surface Mount Box

- Rugged Plastic Box, 4-1/2" Round
- Optional accessory - can be used w/any 4-1/2" round actuator



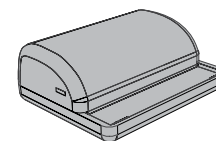
8310-800
Weather/Trim Ring

- Weather/Trim Ring, 4-1/2" Round
- Optional accessory - must be used w/any 4-1/2" round plastic mounting box



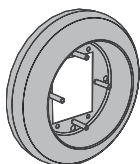
8310-844
Transmitter

- Transmitter, Wireless, 1 Channel, 9v battery included
- Use to convert standard wall mount actuator to wireless
- Requires 8310-865 Receiver



8310-865
Receiver

- Receiver, Wireless, 1 Channel, w/ Sequencing Feature
- Used in conjunction w/ Wireless Actuators & Transmitter(s)



8310-874
Escutcheon

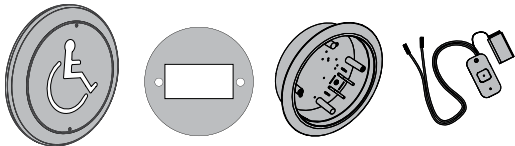
- Tapered stainless steel escutcheon covers the gap between the wall and the back of the wall plate actuators when mounted in electrical boxes (by others) to minimize cart damage or vandalism
- Optional accessory - can be used w/any 4-1/2" round actuator
- Not to be used with wireless function

8310 Series

Auto Operator Actuators & Accessories

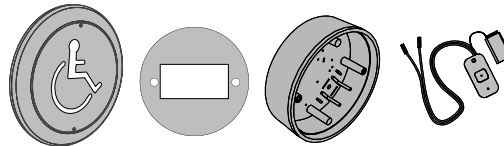
4-1/2" Surface and Flush
Mounts

Automatic Operator Actuators & Accessories



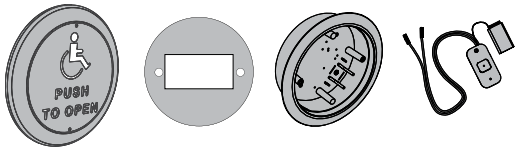
8310-3856WF
Flush Mount Kit

- Actuator, 4-1/2" Round, Logo, Wireless
- Includes 8310-856 Actuator, 8310-844 Transmitter, 8310-868F Flush Box, 8310-800 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



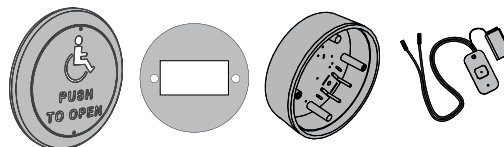
8310-3856WS
Surface Mount Kit

- Actuator, 4-1/2" Round, Logo, Wireless
- Includes 8310-856 Actuator, 8310-844 Transmitter, 8310-868S Surface Box, 8310-800 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



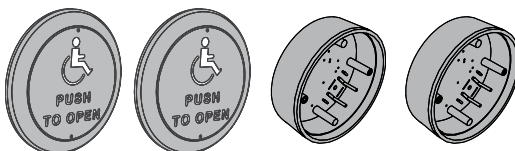
8310-3856TWF
Flush Mount Kit

- Actuator, 4-1/2" Round, Logo, Text, Wireless,
- Includes 8310-856T Actuator, 8310-844 Transmitter, 8310-868F Flush Box, 8310-800 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



8310-3856TWS
Surface Mount Kit

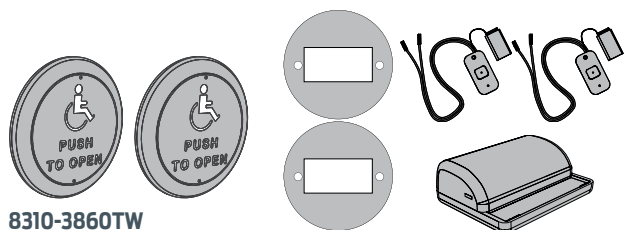
- Actuator, 4-1/2" Round, Logo, Text, Wireless,
- Includes 8310-856T Actuator, 8310-844 Transmitter, 8310-868S Surface Box, 8310-800 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



8310-3860T
Surface Mount Kit

- Actuator Package, 4-1/2" Round
- Includes 8310-856T (2) Wall Mount Actuator, 8310-868S Surface Mount Box.

NOTE: Weather/Trim Rings are sold separately



8310-3860TW
Surface Mount Kit

- Actuator Package, 4-1/2" Round, Wireless
- Includes 8310-856T (2) Wall Mount Actuator, 8310-868S (2) Surface Mount Box, 8310-800 (2) Weather/Trim Ring, 8310-844 (2) Transmitter, 8310-865 Receiver

Automatic Operator Actuators & Accessories



8310-852
Wall Mounted Actuator

- Hardwired low voltage actuator with round, stainless steel touch plate in 6" (152mm) diameter
- Engraved blue filled handicap symbol conforms to most accessibility codes
- Designed to mount in a flush or surface mount box (sold separately) in/on a vertical surface near the controlled door
- Optional mounting in single gang electrical box (by others) or double gang box (4" x 4" by others)
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard.



8310-852T
Wall Mounted Actuator

- Same as the 8310-852, with the added engraving of "Push to Open"



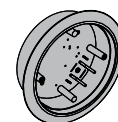
8310-852WP
Wall Mounted Actuator

- Wireless, low profile, low voltage actuator with round, stainless steel touch plate in 6" (152mm) diameter
- Engraved blue filled handicap symbol conforms to most accessibility codes
- Surface mount box includes integral transmitter w/ battery and actuator switch
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard
- Requires 8310-865 Receiver



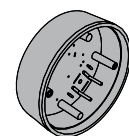
8310-852TWP
Wall Mounted Actuator

- Same as the 8310-852WP, with the added engraving of "Push to Open"



8310-869F
Flush Mount Box

- Rugged Plastic Box, 6" Round
- Optional accessory - can be used w/ any 6" round actuator



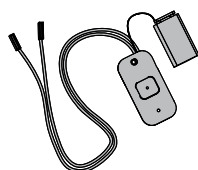
8310-869S
Surface Mount Box

- Rugged Plastic Box, 6" Round
- Optional accessory - can be used w/ any 6" round actuator



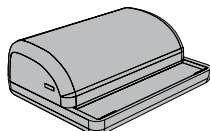
8310-802
Weather/Trim Ring

- Plastic Weather/Trim Ring, 6" Round
- Optional accessory - can be used w/ any 6" round plastic mounting box.



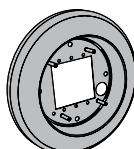
8310-8/444
Transmitter

- Transmitter, Wireless, 1 Channel, 9v battery included
- Use to convert standard wall mount actuator to wireless
- Requires 8310-865 Receiver



8310-865
Receiver

- Receiver, Wireless, 1 Channel, w/ Sequencing Feature
- Used in conjunction w/ Wireless Actuators & Transmitter(s)



8310-876
Escutcheon

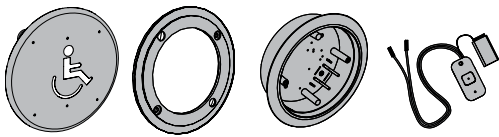
- Tapered stainless steel escutcheon covers the gap between the wall and the back of the wall plate actuators when mounted in electrical boxes (by others) to minimize cart damage or vandalism
- Optional accessory - Can be used w/ any 6" round actuator
- Not to be used with wireless function

8310 Series

Auto Operator
Actuators &
Accessories

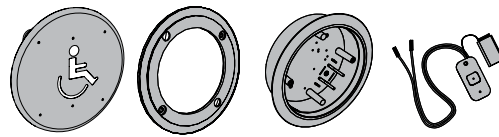
6" Surface and Flush
Mounts

Automatic Operator Actuators & Accessories



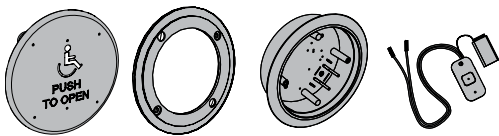
8310-3852WF Flush Mount Kit

- 6" Round, Logo, Wireless
- Includes 8310-852 Actuator, 8310-844 Transmitter, 8310-869F Flush Box, 8310-802 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



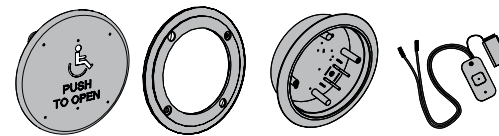
8310-3852WS Surface Mount Kit

- 6" Round, Logo, Wireless,
- Includes 8310-852 Actuator, 8310-844 Transmitter, 8310-869S Surface Box, 8310-802 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



8310-3852TWF Flush Mount Kit

- 6" Round, Logo, Text, Wireless,
- Includes 8310-852T Actuator, 8310-844 Transmitter, 8310-869F Flush Box, 8310-802 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



8310-3852TWS Surface Mount Kit

- 6" Round, Logo, Text, Wireless,
- Includes 8310-852T Actuator, 8310-844 Transmitter, 8310-869S Surface Box, 8310-802 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)

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



8310-818
Jamb Mounted Actuator

- Hardwired low voltage actuator with rectangular stainless steel touch plate.
- 1-1/2" (38mm) wide by 4-3/4" (121mm)
- Engraved blue filled handicap symbol conforms to most accessibility codes
- Designed to mount in a frame cutout (template provided) projecting approximately 1/2" (12mm) from the frame
- Optional mounting in surface or flush mount box (sold separately)
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard



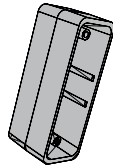
8310-818T
Jamb Mounted Actuator

- Same as the 8310-818, with the added engraving of "Push to Open"



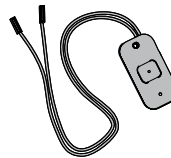
8310-819F
Flush Mount Box

- Rugged Plastic Jamb Box
- 1-1/2" x 4-3/4" rectangle, optional accessory - can be used w/ any 1-1/2" x 4-3/4" jamb mount actuator



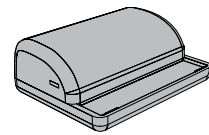
8310-819S
Surface Mount Box

- Rugged Plastic Jamb Box
- 1-1/2" x 4-3/4", rectangle
- Optional accessory - can be used w/ any 1-1/2" x 4-3/4" jamb mount plastic mounting box



8310-844J
Transmitter

- Wireless, 1 Channel, Jamb Mount, 3v battery included
- Used to convert standard jamb mount actuator to wireless when used w/ 819F or 819S boxes. Requires 8310-865 Receiver (interior use only)



8310-865
Receiver

- Wireless, 1 Channel, w/ Sequencing Feature
- Used in conjunction w/ Wireless Actuators & Transmitter(s)

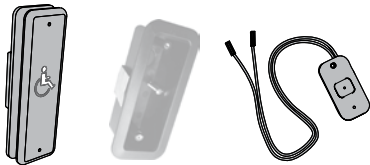
8310 Series

Auto Operator
Actuators &
Accessories

1-1/2" x 4-3/4" Surface
and Flush Mounts

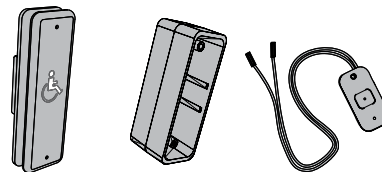
NOTE: LCN recommends for all jamb mount actuators be used on an interior installation only.

Automatic Operator Actuators & Accessories



8310-3818WF
Flush Mount Kit

- Actuator, 1-1/2" x 4-3/4" Rectangle, Logo, Wireless
- Includes 8310-818 Actuator, 8310-844J Transmitter, 8310-819F Flush Box
- Requires 8310-865 Receiver (not part of kit)



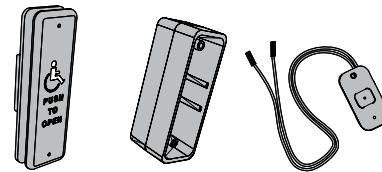
8310-3818WS
Surface Mount Kit

- Actuator, 1-1/2" x 4-3/4" Rectangle, Logo, Wireless
- Includes 8310-818 Actuator, 8310-844J Transmitter, 8310-819S Surface Box
- Requires 8310-865 Receiver (not part of kit)



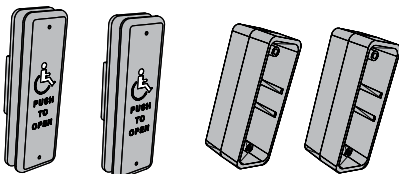
8310-3818TWF
Flush Mount Kit

- Actuator, 1-1/2" x 4-3/4" Rectangle, Logo, Wireless
- Includes 8310-818T Actuator, 8310-844J Transmitter, 8310-819F Flush Box
- Requires 8310-865 Receiver (not part of kit)



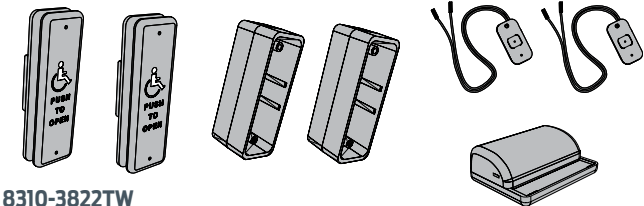
8310-3818TWS
Surface Mount Kit

- Actuator, 1-1/2" x 4-3/4" Rectangle, Logo, Wireless
- Includes 8310-818T Actuator, 8310-844J Transmitter, 8310-819S Surface Box
- Requires 8310-865 Receiver (not part of kit)



8310-3822T
Surface Mount Kit

- Actuator Package, 1-1/2" x 4-3/4", Jamb Mount
- Includes 8310-818T (2) Jamb Mount Actuator, 8310-819S (2)
- Surface Mount Box



8310-3822TW
Surface Mount Kit

- Actuator Package, 1-1/2" x 4-3/4", Wireless, Jamb Mount
- Includes 8310-818T (2) Jamb Mount Actuator, 8310-819S (2)
- Surface Mount Box, 8310-844J (2) Jamb Mount Transmitter, 8310-865 Receiver

8310 Series

Auto Operator Actuators & Accessories

4-3/4" Square Surface
and Flush Mounts

Automatic Operator Actuators & Accessories



8310-853
Wall Mounted Actuator

- Hardwired low voltage actuator with stainless steel touch plate in 4-3/4" (121mm) square
- Engraved blue filled handicap symbol conforms to most accessibility codes
- Designed to mount in a flush or surface mount box (sold separately) in/on a vertical surface near the controlled door
- Optional mounting in single gang electrical box (by others) or double gang box (4" x 4" by others) or on an 8310-866 bollard post
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard



8310-853T
Wall Mounted Actuator

- Same as the 8310-853, with the added engraving of "Push to Open"



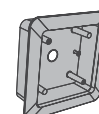
8310-853WP
Surface Mounted Actuator

- Wireless, low profile, low voltage actuator with round, stainless steel touch plate in 4-3/4" (121mm) square
- Engraved blue filled handicap symbol conforms to most accessibility codes
- Surface mount box includes integral transmitter w/ battery and actuator switch
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard
- Requires 8310-865 Receiver



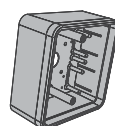
8310-853TWP
Surface Mounted Actuator

- Same as the 8310-853WP, with the added engraving of "Push to Open"



8310-867F
Flush Mount Box

- Rugged Plastic Box
- 4-3/4" Square
- Optional accessory - can be used w/ any 4-3/4" square actuator



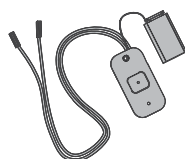
8310-867S
Surface Mount Box

- Rugged Plastic Box, 4-3/4" Square
- Optional accessory - can be used w/ any 4-3/4" square actuator



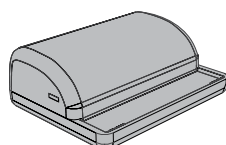
8310-801
Weather/Trim Ring

- Plastic Weather Ring, 4-3/4" Square
- Optional accessory - can be used w/ any 4-3/4" square plastic mounting box



8310-844
Transmitter

- Wireless, 1 Channel, 9v battery included
- Use to convert standard wall mount actuator to wireless
- Requires 8310-865 Receiver



8310-865
Receiver

- Wireless, 1 Channel, w/ Sequencing Feature
- Used in conjunction w/ Wireless Actuators & Transmitter(s)



8310-813
Touchless Wall Mounted Actuator

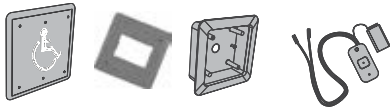
- Hardwired low voltage actuator with plastic plate in 4-3/4" (121mm) square
- Optional mounting in single gang electrical box (by others) or double gang box (4" x 4" by others)

8310 Series

Auto Operator
Actuators &
Accessories

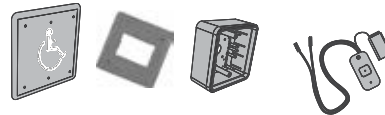
4-3/4" Square Surface
and Flush Mounts

Automatic Operator Actuators & Accessories



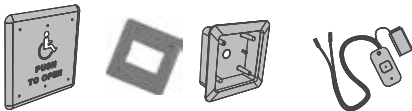
8310-3853WF Flush Mount Kit

- Actuator, 4-3/4" Square, Logo, Wireless
- Includes 8310-853, 8310-844 Transmitter, 8310-867F Flush Box, 8310-801 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



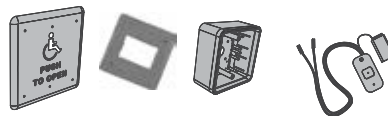
8310-3853WS Surface Mount Kit

- Actuator, 4-3/4" Square, Logo, Wireless
- Includes 8310-853, 8310-844 Transmitter, 8310-867S Surface Box, 8310-801 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



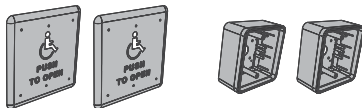
8310-3853TWF Flush Mount Kit

- Actuator, 4-3/4" Square, Logo, Text, Wireless
- Includes 8310-853T, 8310-844 Transmitter, 8310-867F Flush Box, 8310-801 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



8310-3853TWS Surface Mount Kit

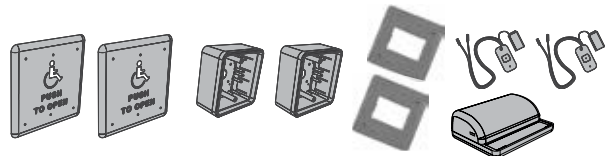
- Actuator, 4-3/4" Square, Logo, Text, Wireless
- Includes 8310-853T, 8310-844 Transmitter, 8310-867S Surface Box, 8310-801 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



8310-3857T Surface Mount Kit

- Actuator Package, 4-3/4" Square
- Includes 8310-853T (2) Wall Mount Actuator, 8310-867S (2)
- Surface Mount Box

NOTE: Weather/Trim Rings are sold separately



8310-3857TW Surface Mount Kit

- Actuator Package, 4-3/4" Square
- Includes 8310-853T (2) Wall Mount Actuator, 8310-867S (2) Surface Mount Box, 8310-801 (2) Weather/Trim Ring, 8310-844 (2) Transmitter, 8310-865 Receiver

8310 Series

Auto Operator
Actuators &
Accessories

4-3/4" Dual Square
Surface and Flush
Mounts

Automatic Operator Actuators & Accessories



8310-855 Dual Wall Mounted Actuator

- Hardwired low voltage actuator with dual rectangle, stainless steel touch plate in 4-3/4" (121mm) square
- Engraved blue filled handicap symbol w/ text, conforms to most accessibility codes
- Designed to mount in a flush or surface mount box (sold separately) in/on a vertical surface near the controlled door
- Optional mounting in double gang box (4" x 4" by others) or on an 8310-866 bollard post
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard



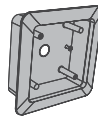
8310-801 Weather/Trim Ring

- Plastic Weather Ring, 4-3/4" Square
- Optional accessory - can be used w/ any 4-3/4" square plastic mounting box



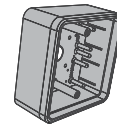
8310-844 Transmitter

- Transmitter, Wireless, 1 Channel, 9v battery included
- Use to convert standard wall mount actuator to wireless
- Requires 8310-865 Receiver



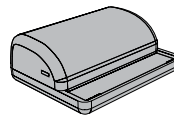
8310-867F Flush Mounted Actuator

- 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



8310-865 Receiver

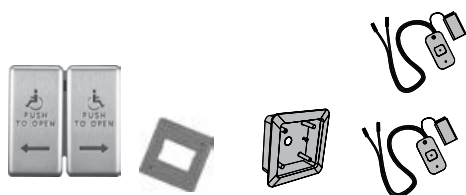
- Receiver, Wireless, 1 Channel, w/ Sequencing Feature
- Used in conjunction w/ Wireless Actuators & Transmitter(s)

8310 Series

Auto Operator
Actuators &
Accessories

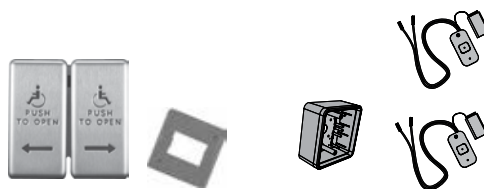
4-3/4" Dual Square
Surface and Flush Mounts

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)



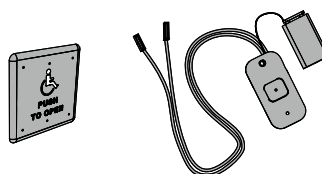
8310-3855WS Surface Mount Kit

- 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)

8310 Series

Auto Operator
Actuators &
Accessories

36" x 6" Full Length
Actuators

Automatic Operator Actuators & Accessories



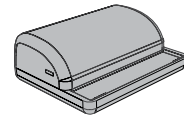
8310-836T
Full Length Actuator (FLA)

- Hardwired low voltage actuator with stainless steel touch plate with 36" x 6" activation surface
- Blue handicap symbol conforms with most accessibility codes
- Added "PUSH TO OPEN" lettering for enhanced identification
- Designed to meet California building codes and increase accessibility for wheelchair bound entrants
- Can easily be mounted to any flat surface or a bollard post



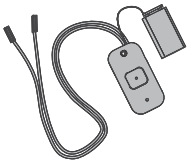
8310-836TW
Flush Length Actuator (FLA)

- Same as the 8310-836T with a built in wireless transmitter and 3v battery
- Use in conjunction with 8310-865 Receiver (not included)



8310-865
Receiver

- Wireless, 1 Channel, w/Sequencing Feature
- Used in conjunction w/ Wireless Actuators & Transmitter(s)



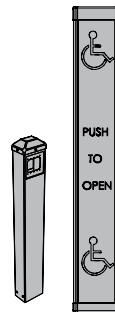
8310-844
Transmitter

- Wireless, 1 Channel, 9v Battery included.
- Used to convert standard actuators to wireless
- Requires 8310-865 Receiver
- Recommended for exterior application with 8310-836T
- Used with the 866FLA bollard post



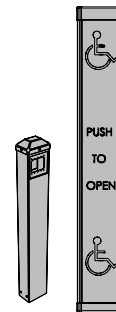
8310-866FLA
FLA Bollard Post

- A powder coated steel 42" x 4" x 6": Bollard Post, mounting base pre prepped for the 8310-836T
- Includes 8310-866 CAP, 2 mounting screws & spacer for installation



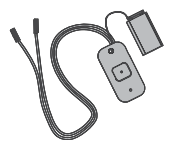
8310-3836T
FLA Bollard Mount Kit

- 36" x 6" Actuator with 8310-866FLA Bollard for wired applications



8310-3836TW
FLA Bollard Mount Kit

- 36" x 6" Actuator with 8310-866FLA Bollard and 8310-844 wireless Transmitter
- Transmitter requires 8310-865 Receiver (not included)



8310 Series

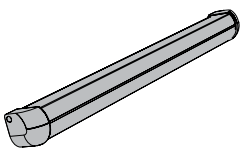
Auto Operator
Sensors &
Accessories

Sensors

The sensors and accessories on the following pages are to be used only with LCN automatic operators. When using sensors supplied by others, consult the factory.

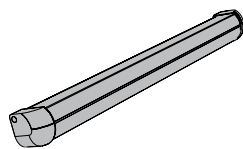
The desired function, traffic patterns and physical design of the opening will determine the type of sensors used.

Automatic Operator Sensors & Accessories



8310-804-1
Door Mount Safety Sensor

- Contains one active sensor module to detect obstruction(s) on leading edge of door



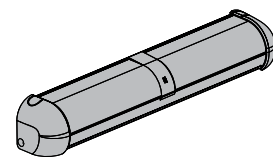
8310-804-2
Door Mount Safety Sensor

- Contains two active sensor modules to detect obstruction(s) on full face of door



8310-854
Header Mount Activation Sensor

- Activation Sensor, 'K' Band Technology
- Used to detect objects either approaching or moving away from sensor
- Uses standard 'one way' detection but additional detection can be programmed
- Optional 8310-859 Handheld Remote Control can be used to program 8310-854 sensor from a distance



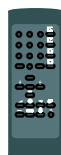
8310-877
Header Mount Safety Sensor

- Safety Sensor, 'Diffused Infrared' Technology
- Used to detect obstructions during door open and door closed position
- Nine selectable patterns
- 8310-859 Handheld Remote Control required to program 8310-877 sensor from a distance
- Includes 8310-846 Harness



8310-877S
Header Mount Safety Sensor
Spacer

- Required when 8310-804-1 or 8310-804-2 Door Mount Safety
- Spacers are used w/ 8310-877 Header Mount Safety Sensor



8310-859
Handheld Remote Control

- Used to program 8310-877 Header Mount Safety Sensor or 8310-854 Header Mount Motion Sensor



8310-846
Header Mount Harness

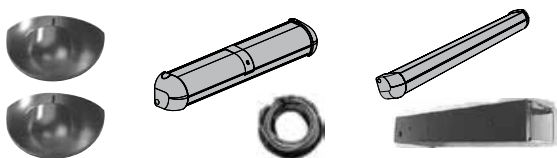
- Comes with 8310-877 Header Mount Safety Sensor



8310-847
Door Mount Harness

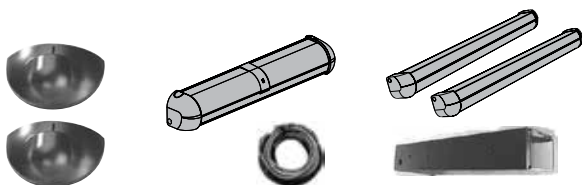
- Used with 8310-804-1 or 8310-804-2 Door Mount Safety Sensor, must order separately.
- Used with Senior Swing only, must order separately

Automatic Operator Sensors & Accessories



8310-3881L Safety Sensor Package

- Activation/Safety Sensor Package, Single Door
- Includes 8310-854 (2) Header Mount Activation Sensor, 8310-877 Header Mount Safety Sensor, 8310-877S Header Mount Spacer, 8310-804-2 Door Mount
- Safety Sensor (approach side), 8310-847 Harness (Used with Senior Swing only)



8310-3881 Safety Sensor Package

- Activation/Safety Sensor Package, Single Door
- Includes 8310-854 (2) Header Mount Activation Sensor, 8310-877 Header Mount Safety Sensor, 8310-877S Header Mount Spacer, 8310-847 Harness, 8310-804-2 (2) Door Mount Safety Sensor (approach/safety side) (Used with Senior Swing only)



8310-3883 Safety Sensor Package

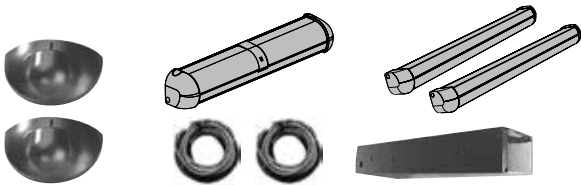
- Activation/Safety Sensor Package, Low Energy Convenience
- Single Door, Includes 8310-804-1 Door Mount Safety
- Sensor (approach side), 8310-805C Door Position Switch (Concealed), 8310-845 Programmable Relay Module (Used with Senior Swing only)

8310 Series

Auto Operator Sensors & Accessories

Packages

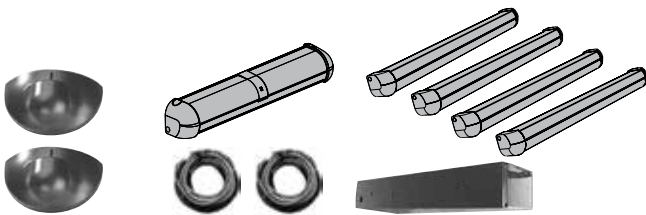
Automatic Operator Sensors & Accessories



8310-3882L Safety Sensor Package

- Activation/Safety Sensor Package, Double Door
- Includes 8310-854 (2) Header Mount Activation Sensor, 8310-877 Header Mount Safety Sensor, 8310-877S Header Mount Spacer, 8310-847 (2) Harness, 8310-804-2 (2) Door Mount Safety Sensor (approach side) (Used with Senior Swing only)

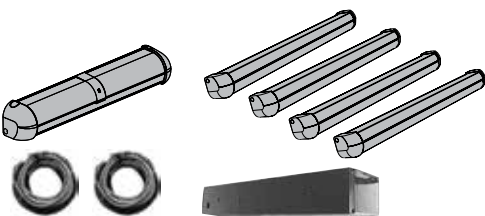
NOTE: Not for use with Double Egress



8310-3882 Safety Sensor Package

- Activation/Safety Sensor Package, Double Door
- Includes 8310-854 (2) Header Mount Sensor, 8310-877 Header Mount Sensor, 8310-877S Header Mount Spacer, 8310-847 (2) Harness, 8310-804-2 (4) Door Mount Safety Sensor (approach/safety side) (Used with Senior Swing only)

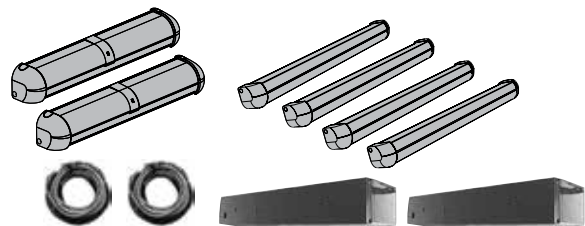
NOTE: Not for use with Double Egress



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)

NOTE: Not for use with Double Egress



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)

Automatic Operator Sensors & Accessories



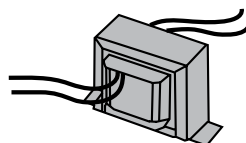
8310-805
Door Position Switch

- Surface mount
- Used when 8310-804-1 or 8310-804-2 Door Mounted Safety Sensor and 8310-845 Relay Module is installed in conjunction w/ either a electrohydraulic, pneumatic or Benchmark Automatic Operator
- Disables approach side sensor when door is closed



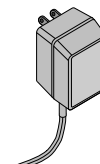
8310-805C
Door Position Switch

- Concealed
- Used when 8310-804-1 or 8310-804-2 Door Mounted Safety Sensor and 8310-845 Relay Module is installed in conjunction w/ either a electrohydraulic, pneumatic or Benchmark Automatic Operator
- Disables approach side sensor when door is closed



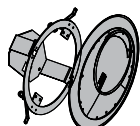
8310-824
Transformer, 24v,

- Hardwired
- Optional accessory - Used to remotely power any 24v sensor/ receiver



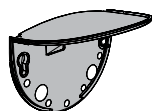
8310-824P
Transformer

- 24v, plug in
- Optional accessory - Used to remotely power any 24v sensor/ receiver



8310-854ECA
Drop Ceiling Bracket

- Bracket used w/ 8310-854 Header Mount Activation Sensor
- Optional



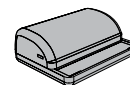
8310-854ERA
Protective Cover

- Cover used w/ 8310-854 Header Mount Activation Sensor
- Optional



8310-3803
Wireless Conversion Kit

- Jamb mount, 3v
- Converts standard jamb actuator to wireless version
- Includes 8310-865 Receiver, 8310-844J (2) Jamb Mounted
- Transmitter - Requires 8310-819S or 8310-819F Jamb Box



8310-3809
Wireless Conversion Kit

- Jamb mount, 9v
- Converts standard wall mount actuator to wireless version
- Includes 8310-865 Receiver, 8310-844 (2) Wall Mount Transmitter
- Requires Surface or Flush Box and Weather Ring



8310-3889
Safety Module Kit

- Used w/ 7901, 7902, 7981, 7982 Control Boxes.
- Includes 8310-3888 Safety Module Harness. Required when 8310-877 Header Mount Safety Sensor is used w/ Pneumatic
- Automatic Operators (2610, 4810, 4820 or 4840 Series)

8310-3888
Harness

- Safety module, service part
- Safety Module Harness for pneumatic control box

8310 Series

Auto Operator
Sensors &
Accessories

Automatic Operator Sensors & Accessories



8310-861
Transmitter

- Wireless
- 1 Channel, Handheld, 3v.
Requires 8310-865 Receiver



8310-862
Transmitter

- Wireless
- 2 Channel, Handheld, 3v.
Requires 8310-865 Receiver



8310-863
Transmitter

- Wireless
- 3 Channel, Handheld, 3v.
Requires 8310-865 Receiver



8310-864
Transmitter

- Wireless
- 4 Channel, Handheld, 3v.
Requires 8310-865 Receiver.



8310-866
Bollard Post

- A powder coated steel
42" x 4" x 6" Bollard Post,
Mounting Base and 8310-866CAP
- Actuator cut out accepts
8310-3853WB or 8310-3853TWB
wireless actuators 4-3/4" square
hard wired actuator



8310-866CAP
Bollard Post

- Plastic Cap, Protective Cover,
Service Part for 8310-866
Post

Automatic Operator Actuators & Accessories**8310-806K
Key Switch**

- Type, 3 Position (On/Off/Hold-Open)
- Optional switch used w/ Senior Swing, Benchmark, or 4630/4640 Operators with (CS) option

**8310-806R
Rocker Switch**

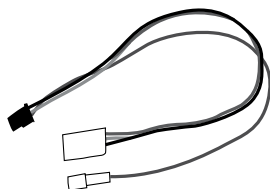
- Type, 3 Position (On/Off/Hold-Open)
- Optional switch w/ Senior Swing, Benchmark, or 4630/4640
- Operators with (CS) option

**8310-807
Line Filter**

- AC, 120v, Optional filter used w/ Senior Operators to reduce 'line noise'

**8310-845
Programmable Relay Module**

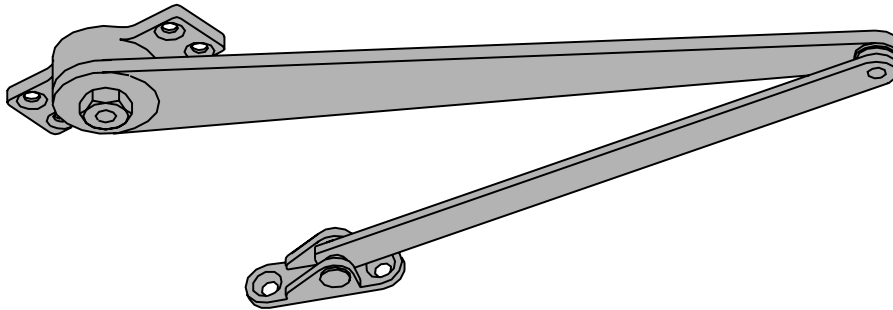
- Used to sequence door operation in Senior Swing and Benchmark for hard wired applications

**8310-887
Retrofit Cable**

- Allows newer style Senior Swing digital control to be activated by existing switches when replacing older control purchased prior to September, 2006

**8310-3134
Retrofit Cable Kit**

- Allows newer style Senior Swing Digital Control to be activated by existing switches when replacing older control purchased prior to September, 2006.
- Also includes cables to allow Safety Sensors to activate
- Includes 8310-887 plus Safety Sensor Cables



The PAH 60 is recommended for use on the inactive leaf of a pair of doors where the active leaf has a door closer installed.

Handing	Handed	Fasteners	Wood and machine screw pack
Butt Hinges	Should not exceed 5" (127 mm) in width	Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Auxiliary Stop	Recommended at hold-open point		
Top Rail	Minimum 2" (51 mm)		
Rabbet Depth	Minimum 1-1/4" (32 mm)		
Maximum opening	<ul style="list-style-type: none"> ■ Hold-open points up to 180° ■ Hold-open point adjustable at the soffit shoe 		<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes

How-to-order PAH 60 Holder

1. Specify hand

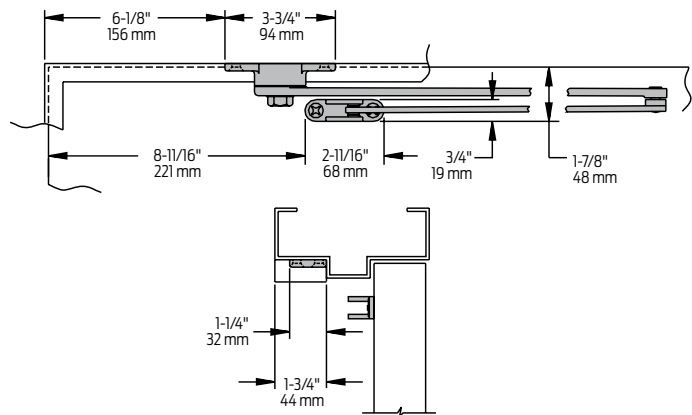
- RH
- LH

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®.

For more, visit www.allegion.com

aptiQ ■ LCN ■ **SCHLAGE** ■ STEELCRAFT ■ VON DUPRIN