



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.

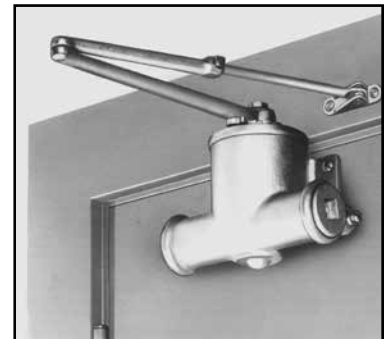
Time flew by. Mr. Norton's company began to experience difficulty. Competition was fierce. Some competitors began to infringe on patents, which drained Mr. Norton of both cash flow and other resources. Mr. Norton also made a few business decisions that would hamper company growth. The early years presented 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...

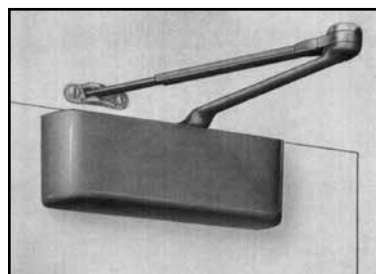
Competition drove Mr. Norton in a new direction. His air check had worked well but was slowly giving way to new technology.

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 4<sup>th</sup>.
- 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 & LCN.....A2-3  
 Table of Contents.....A4  
 Finishes.....A5  
 Warranty.....A6  
 Door Closer Specialists.....A7  
 Specifications.....A8-10  
 ANSI Cross Reference.....A11-13  
 Materials.....A14  
 Proper Door Control.....A15  
 Mechanical Considerations.....A16-21  
 Glossary of Abbreviations.....A22  
 Glossary of Terms.....A23-31

**4000 SERIES SURFACE MOUNTED CLOSERS**

Product Selection Guide.....B1-2  
 4010 Series.....B3-6  
 4010T Series.....B7-11  
 4020 Series.....B13-16  
 4020T Series.....B17-21  
 4030 Series.....B23-30  
 4030T Series.....B31-36  
 4040XP Series.....B37-45  
 4040XPT Series.....B47-53  
 4050 Series.....B55-63  
 4050T Series.....B65-71  
 4110 Series.....B73-77  
 4110T Series.....B79-83  
 4000T Series.....B85-88

**1000 SERIES SURFACE MOUNTED CLOSERS**

Product Selection Guide.....C1-2  
 1250 Series.....C3-10  
 1260 Series.....C11-18  
 1450 Series.....C19-26  
 1460 Series.....C27-34  
 1460T Series.....C35-41

**CONCEALED CLOSERS SERIES**

Product Selection Guide.....D1-2  
 2010 Series.....D3-6  
 2030 Series.....D7-11  
 3030 Series.....D13-16  
 3130 Series.....D17-20  
 5010 Series.....D21-24  
 5030 Series.....D25-28  
 6030 Series.....D29-32

**FIRE/LIFE SAFETY CLOSER/HOLDERS SERIES**

Product Selection Guide.....E1-3  
 SEM Series.....E5-10  
 3130SE Series.....E11-14  
 4040SE Series.....E15-20  
 2310ME Series.....E21-24  
 4310ME Series.....E25-29  
 4410ME Series.....E31-35  
 4310 HSA Series.....E37-40  
 4410 HSA Series.....E41-44  
 SEH Series.....E45-48

**HIGH SECURITY CLOSERS SERIES**

Product Selection Guide.....F1-2  
 2210 Series.....F3-6  
 4210 Series.....F7-10  
 4210T Series.....F11-14  
 4510 Series.....F15-18  
 4510T Series.....F19-22

**AUTOMATIC OPERATORS**

Product Selection Guide.....G1-5  
 Pneumatic Powered Systems.....G7-9  
 2610 Series.....G11-14  
 4810 Series.....G15-18  
 4820 Series.....G19-22  
 4840 Series.....G23-27  
 7900 Series Control Boxes.....G28-31  
 Electrohydraulic Powered Systems.....G32-34  
 4630/4640 Electrohydraulic Series.....G35-36  
 4630 Series.....G37-41  
 4640 Series.....G43-47  
 Electromechanical Powered Systems.....G49-53  
 Benchmark Unique Features.....G54  
 9130 Series.....G55-59  
 9140 Series.....G61-65  
 9150 Series.....G67-70  
 Senior Swing Unique Features.....G71  
 2810 Series.....G73-78  
 2850 Series.....G79-84  
 2860 Series.....G85-90  
 9530 Series.....G91-95  
 9540 Series.....G97-101  
 9550 Series.....G103-108  
 9560 Series.....G109-114  
 Actuators, Sensors & Accessories.....G115-131

**DOOR HARDWARE**

PAH60.....HI

**LCN**

121 West Railroad Avenue  
 P.O. Box 100  
 Princeton, IL 61356-0100

For SSC Representative contact information, please visit  
[www.allegion.com/us](http://www.allegion.com/us) and click "Contact Us"

To view or download an electronic copy, visit  
[www.allegion.com/us](http://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.



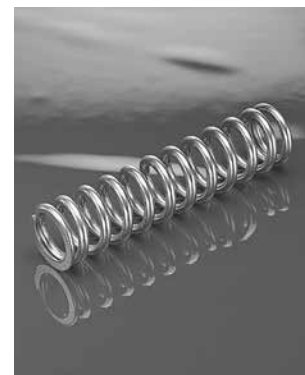
### Extensive Abuse Test

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
			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
			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.

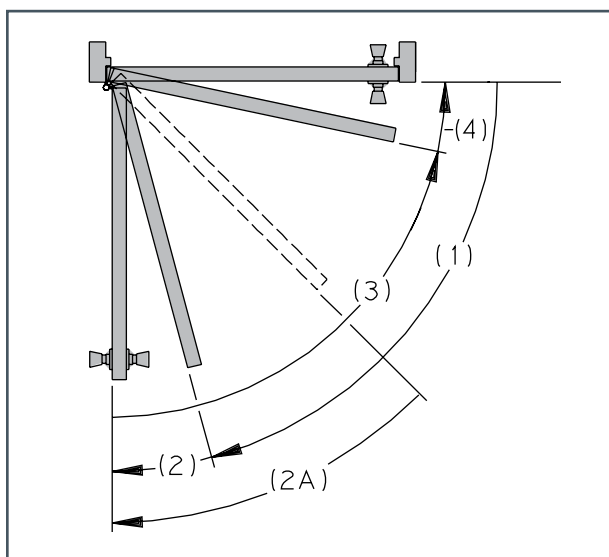
Precision machined **cast iron cylinders** and **forged steel pistons** work together because of the compatibility of their basic elements. **Heat-treated pinions** and **pistons** spread the load over a large gear tooth system to better handle the wear and stress of millions of operating cycles. Upper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

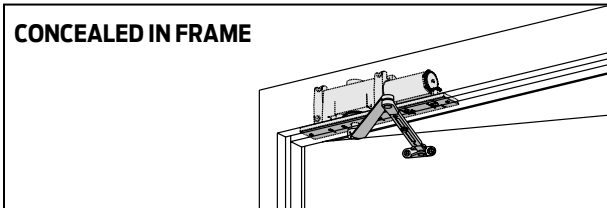
Door closers are available in two styles - concealed or surface mounted. In choosing a closer style for a particular application, consideration should be given to the type of door being controlled, frame conditions, aesthetic requirements, and control features needed. Information contained in the following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

### IF CONCEALED, WHERE?

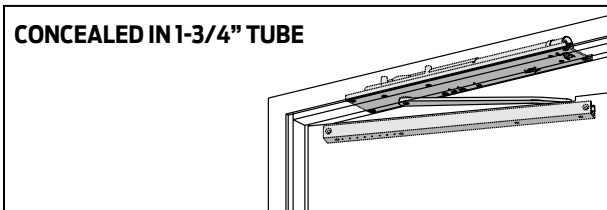
Closers concealed in the head frame over the door are out of sight and entirely out of the pedestrians way. They cannot be harmed by scrub water, cleaning chemicals or floor dirt, and are protected from airborne contaminants, like dust. They are easy to reach for regulation without removing any parts.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

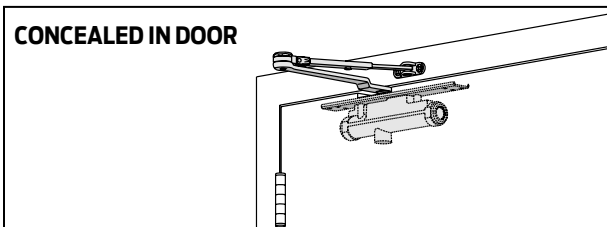
CONCEALED IN FRAME



CONCEALED IN 1-3/4" TUBE



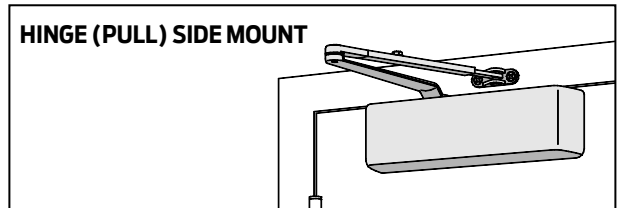
CONCEALED IN DOOR



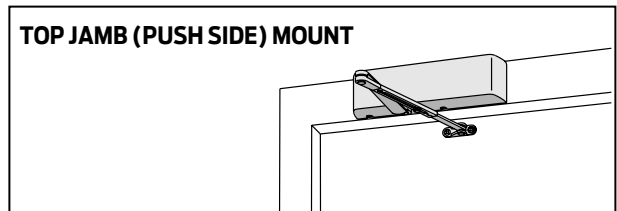
### SURFACE MOUNTED CLOSERS – LOCATION?

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

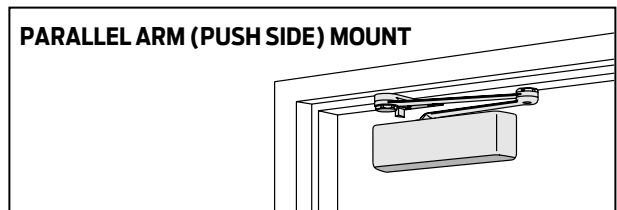
HINGE (PULL) SIDE MOUNT



TOP JAMB (PUSH SIDE) MOUNT



PARALLEL ARM (PUSH SIDE) MOUNT



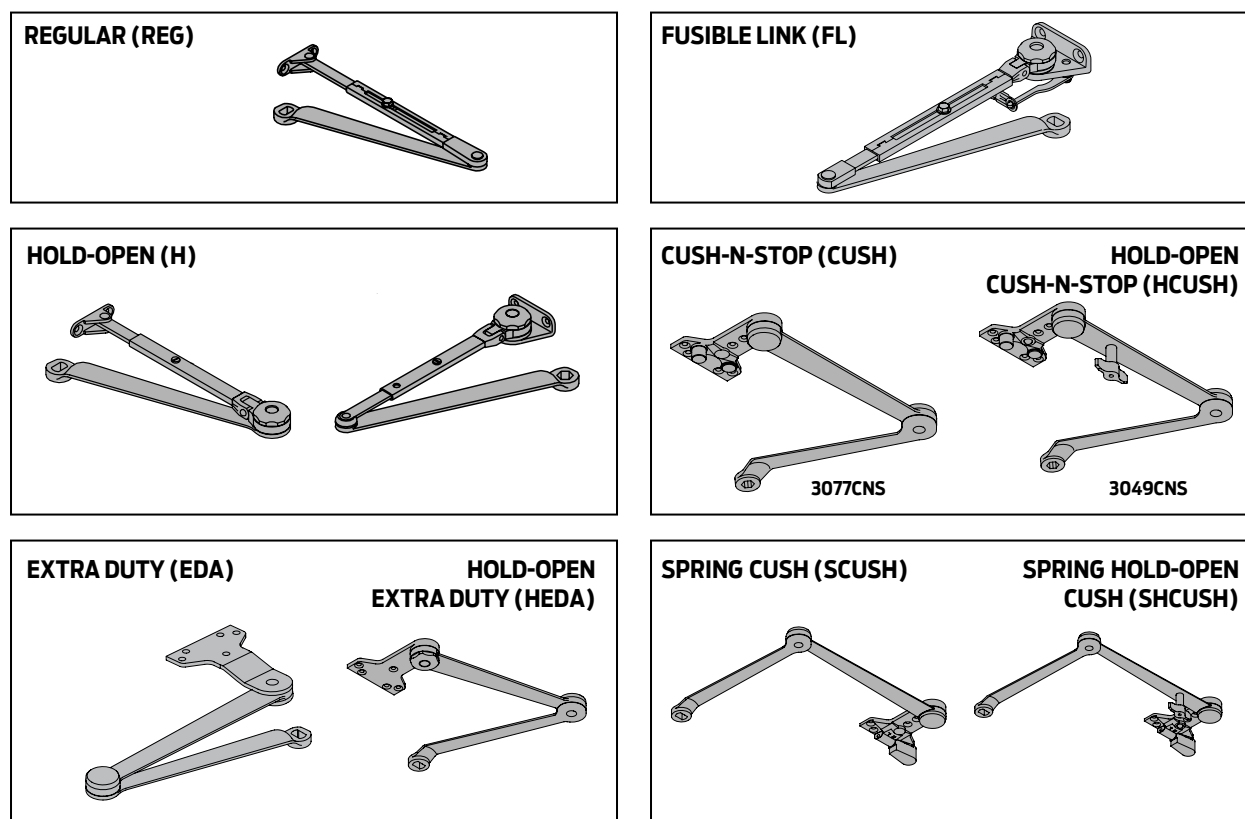
### WHERE ARE HEAVY DUTY CLOSERS REQUIRED?

Heavy duty closers should always be used in these places:

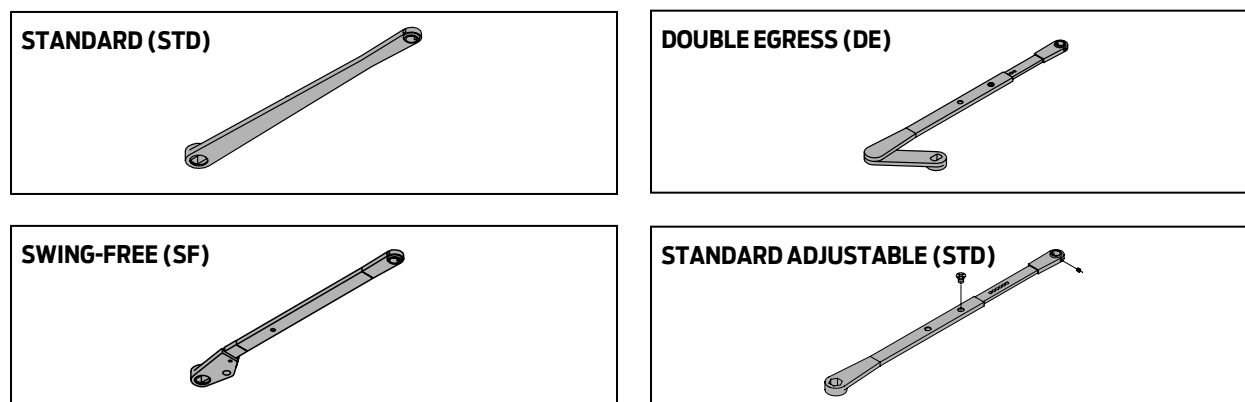
- 1) Schools or public buildings where heavy or abusive usage is expected.
- 2) Exterior doors.
- 3) Doors subject to draft, winds, or air pressure differentials.
- 4) High frequency doors such as those on department stores, malls, or mixed use tenancies.

### WHICH ARM SYSTEM?

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

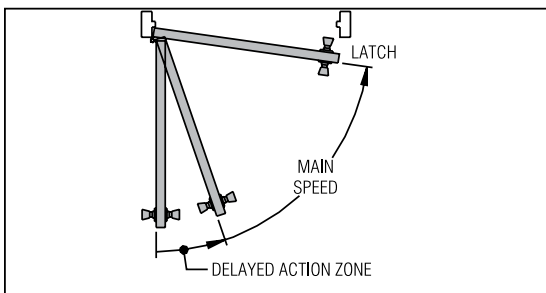


**Single lever** arm (track) closers may be used on interior or sheltered exterior doors. The hold-open function in a single lever arm system is provided by either the track or the cylinder assembly. Available single lever arms:

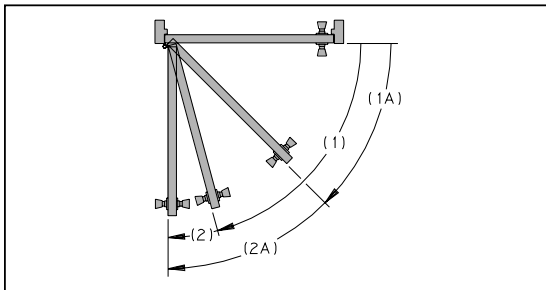


**DO YOU NEED SPECIAL CYLINDER FUNCTIONS?**

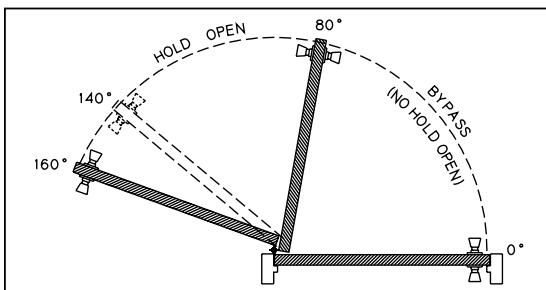
Many LCN closers can be ordered with a delayed action function built into the cylinder. **Delayed action** (DEL) is a special hydraulic circuit that provides additional time to pass through the door. A special regulating screw controls the closing speed from maximum opening through approximately 75°.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

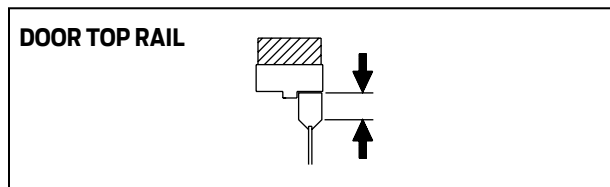
1. It is best to let the door swing as far as it can swing freely. Some closers are mounted in different locations for different degrees of opening.
2. Use a mechanical stop when a door can not swing 180° or at the selected hold-open point of a double lever arm system. The mechanical stop can be mounted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

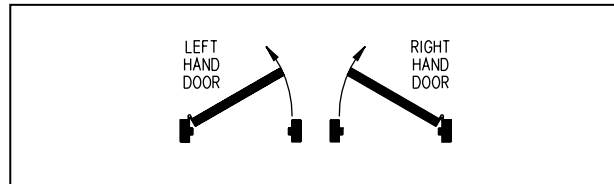
Door thickness may be a factor. A concealed-in-the-door closer should not be used in a hollow metal door less than 1-1/2" (38 mm) thick or a wood door under 1-3/4" (44 mm). Exceptionally thick doors can affect hinge and pivot centers to the extent that closer functions and geometry are also affected.

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.

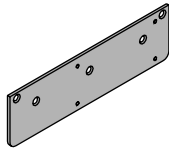
### WILL A STANDARD CLOSER AND TEMPLATE MEET YOUR NEEDS?

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?

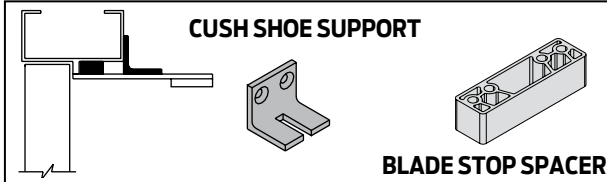
A drop plate is now commonly used to drop (lower) closers to meet special conditions or adapt a closer to door or frame surfaces that are not adequate for normal mounting patterns.

#### DROP PLATE



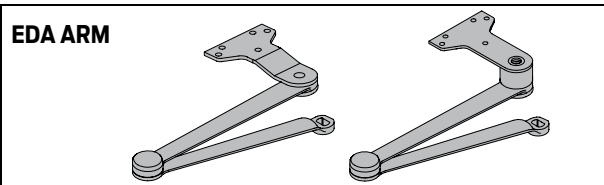
Specialized brackets, adapters, and parallel arm shoes are available to simplify the installation of closers with a variety of frame and door conditions. The most commonly used are listed with each closer. Consult LCN for assistance if you are not sure.

#### CUSH SHOE SUPPORT



#### BLADE STOP SPACER

#### EDA ARM



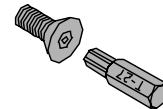
### WHAT FASTENERS SHOULD BE USED?

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**

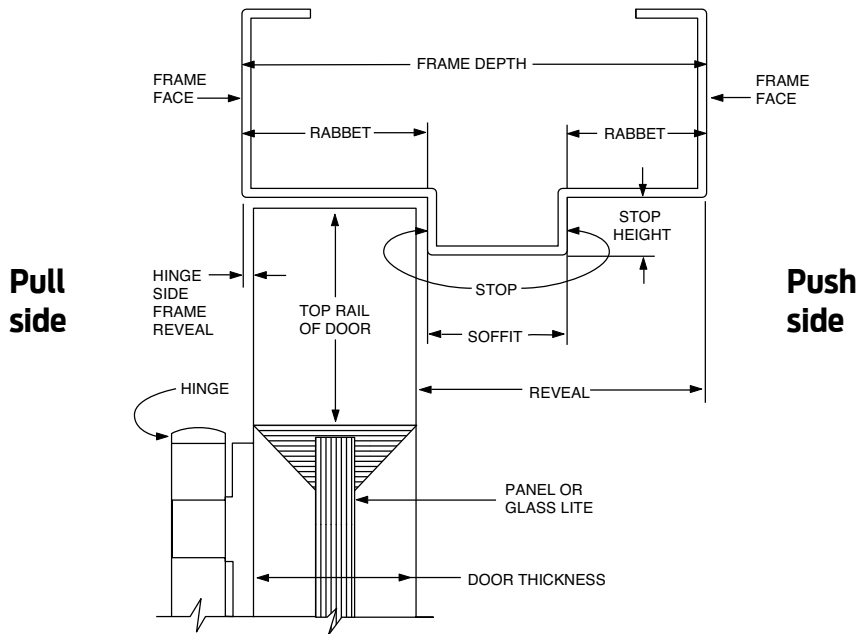
- SF - Standard Force Motor Gearbox

**Powder Coat Finishes**

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

**Miscellaneous Terms**

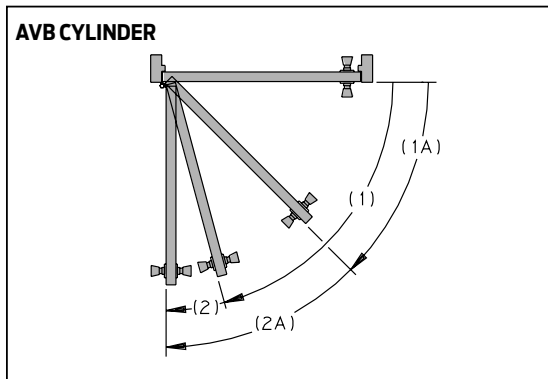
- ELR - Extra Long Rod
- SRI - Special Rust Inhibitor
- SE - Single Point Electronic
- ME - Multi-Point Electronic
- PAH - Parallel Arm Holder
- HSA - Hold Open / Scanner Activated
- ES - Electric Strike Relay (Control Boxes)
- S - Sequential (Control Boxes)
- RF - Radio Frequency
- TJ - Top Jamb
- PA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

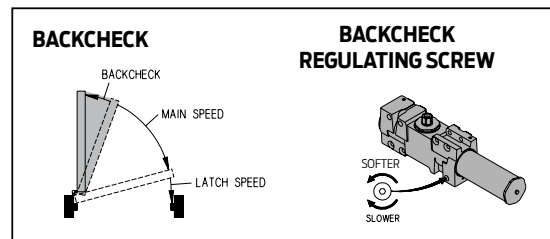
**AUTOEQUALIZER™** – An LCN specific term for an electric or a pneumatic power operator. System is low-energy & carries a two-year warranty.

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

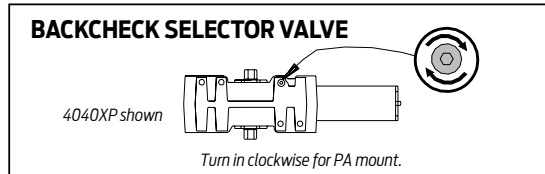
**AUXILIARY DOOR STOP** – Hardware designed and installed to limit the swing of a door.

**B**

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

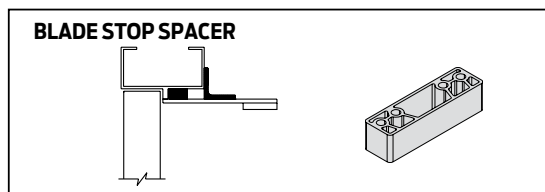


**BACKCHECK SELECTOR VALVE** – Valve used to provide proper backcheck location for 4040XP and 4050 parallel arm mounting.



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

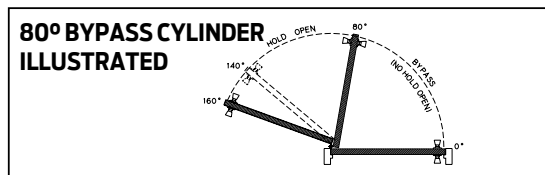
**BLADE STOP SPACER** – Spacer lowers a parallel arm 1/2" so the arm will clear a blade stop.



**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.

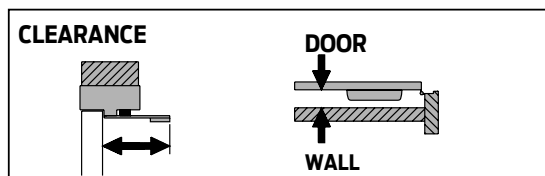


**C**  
**CASED OPENING** – Frame section without stops.

**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.

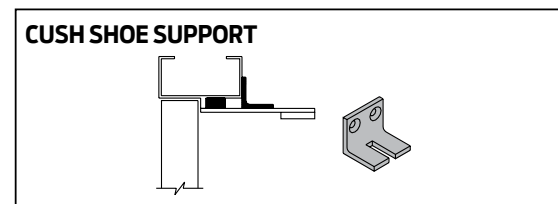
**CONTROL BOX, 2800, 9500 SERIES** – Microprocessor door control, includes adjustment for opening, closing & backcheck speeds. Features Push 'N Go & Power Boost.

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

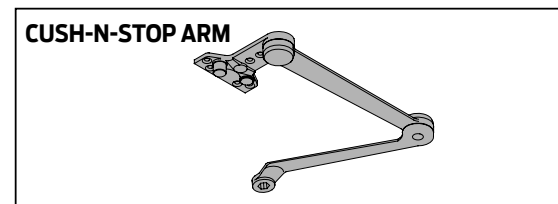
**CONTROLLER ASSEMBLY** – Digital control suite used in the LCN electric power operator. Includes adjustments for opening force and opening speed.

**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.



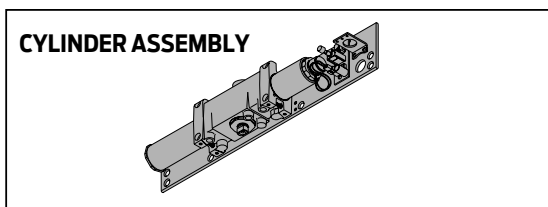
**CUSH-N-STOP ARMS (CUSH)** – Extra duty, parallel arm that includes a stop in the CUSH shoe.



**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.

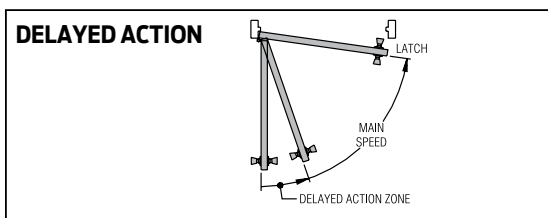


**CYLINDER ONLY** – Hydraulic cast iron cylinder.

## D

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

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



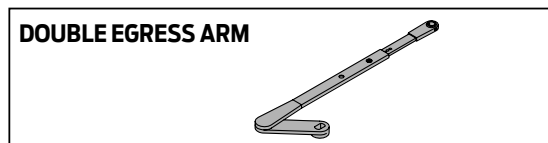
**DESIGNER SERIES COVER (DSI)** – An aesthetically pleasing cover design that appeals to many types of facilities & architects.

**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.

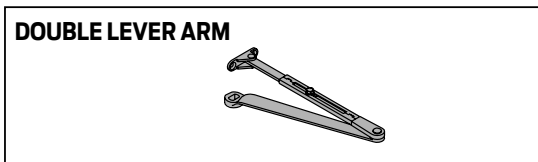
**DOUBLE DOOR HEADER** – One automatic electromechanical power operator and one manual door within the same header, for a pair of doors.

**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.

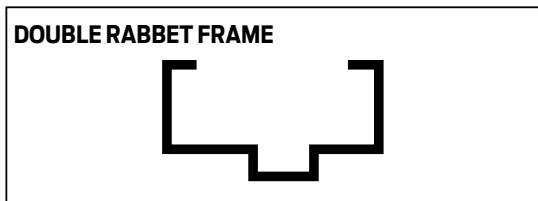
**DOUBLE EGRESS ARM (DE)** – Designed for pull side installation on double egress frames. Actual arm varies depending on selected closer.



**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.

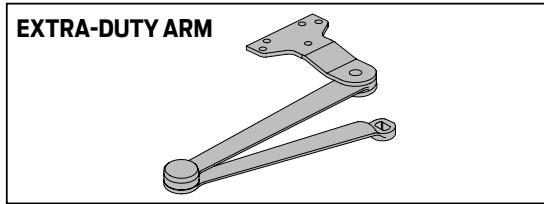
**ELECTRIC STRIKE RELAY (ES)** – An optional feature found in an LCN 7900 Series control box that can be used to control an electric strike.

**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.

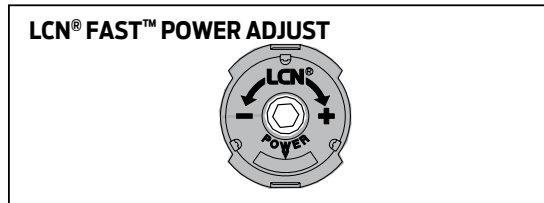
**ESCUTCHEON** – An optional, protective or decorative plate that can be installed with many surface mounted actuators.

**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.



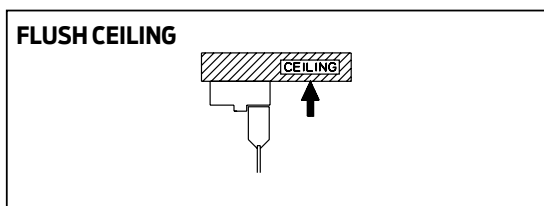
**FIFTH SCREW** – Mounting screw farthest from the door on a parallel arm shoe.

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

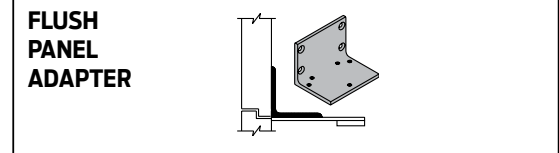
**FINISH PLATE** – Decorative plate applied to overhead concealed closer to conceal closer mounting plate and screws.

**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.



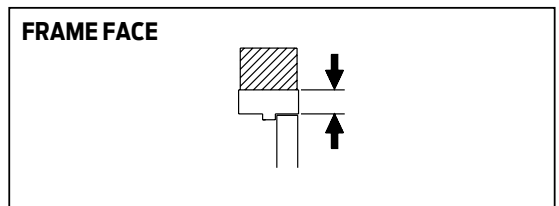
**FLUSH PANEL ADAPTER** – Adapter provides PA shoe mounting surface when door and frame are flush.



**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.

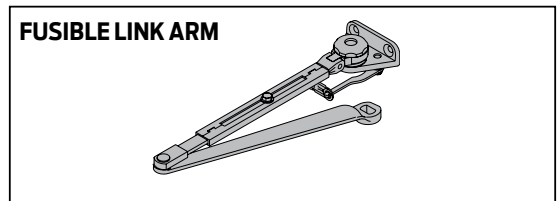
**FRAME FACE** – Exposed part of frame parallel to face of the wall.



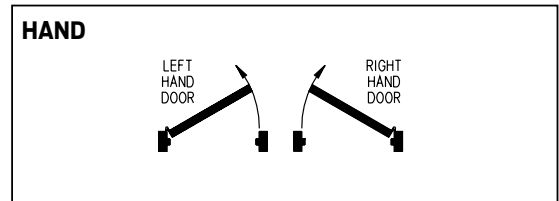
**FULL COMPLIMENT BEARINGS** – Low friction, high load needle bearings found in all LCN closers.

**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.



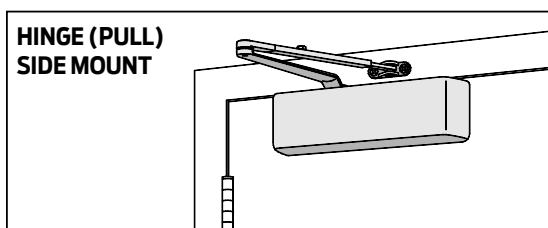
**HANDED** – Closer or part designed for ONLY right or left swinging doors.

**HEAD FRAME** – Member of the frame above the door.

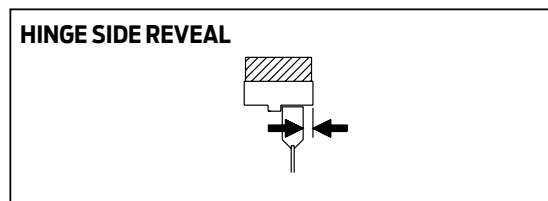
**HEADER** – Aluminum enclosure for motor gearbox & controller.

**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.

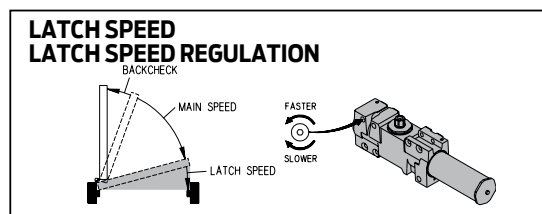
**J**

**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.

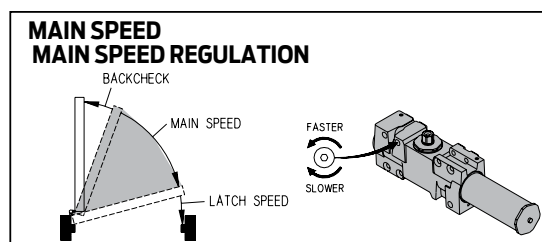
**LONG ARM (LONG)** – Extended arm for deep reveals or other special applications.

**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.

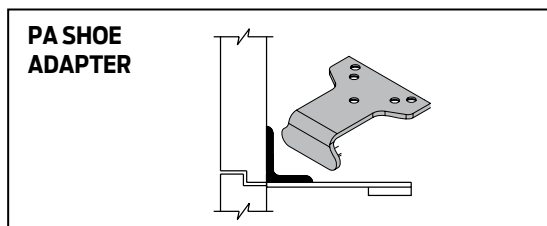
**O**

**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.

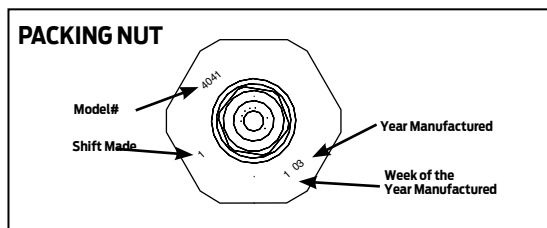
**P**

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



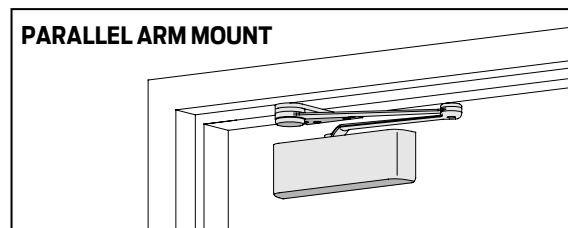
**PA SHOE** – Attaches the forearm to the soffit for a parallel arm system.

**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.

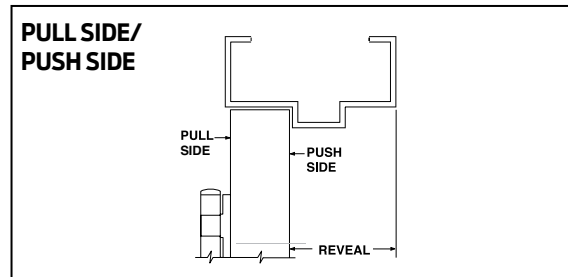
**PNEUMATIC** – This type of LCN Automatic Operator is driven by an air source. The air source can be built into the control box or provided separately within the building.

**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.

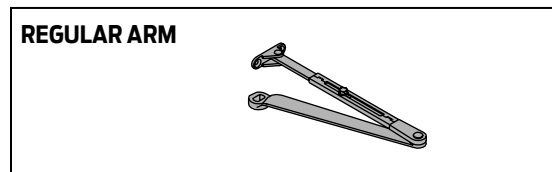
**PUSH 'N GO** – Provides power opening after partial (5°) manual opening of door.

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

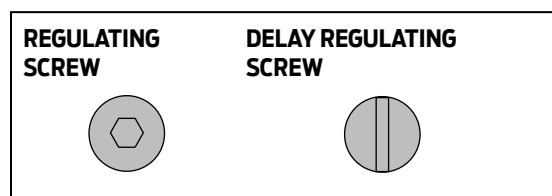
**R**  
**RABBET** – Recess or offset formed in the face to receive a door.

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

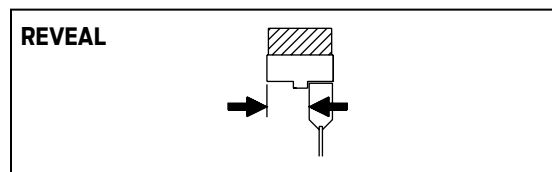
**REGULAR ARM** – A double lever, non hold-open arm.



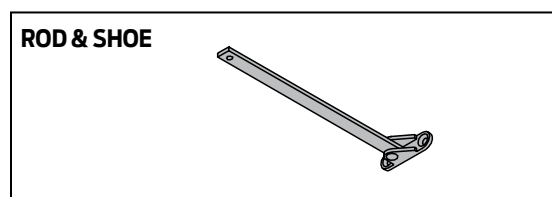
**REGULATING SCREW** – Valve that adjusts flow of hydraulic fluid within cylinder to control door closing speed.



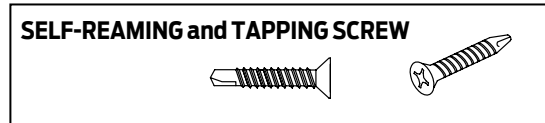
**REVEAL** – Depth measured from the frame face to the door face.



**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.

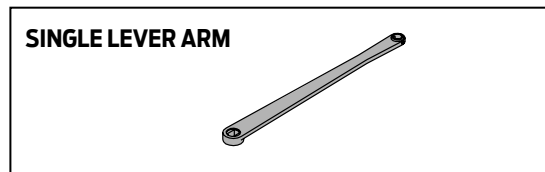
**SEQUENCE** – An option to the LCN series of automatic operators. This option allows a pair of vestibule doors to open one after the other.

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

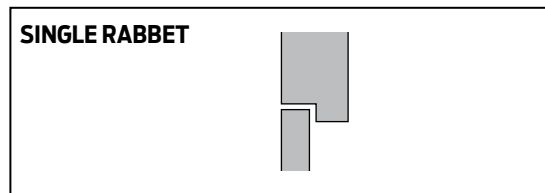
**SIMULTANEOUS PAIR** – Two automatic doors that open at the same time.

**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.

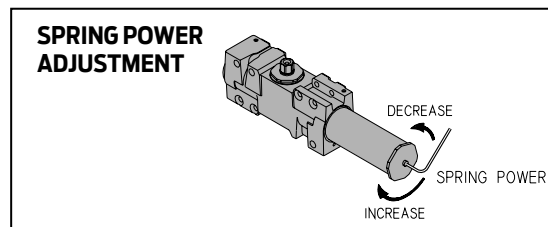
**SPECIAL TEMPLATE (ST)** – A special template is usually a modification to a standard product. Either the product itself changes location in the opening or a component is modified from the standard offering to accommodate other hardware or door and frame dimensions.

**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.

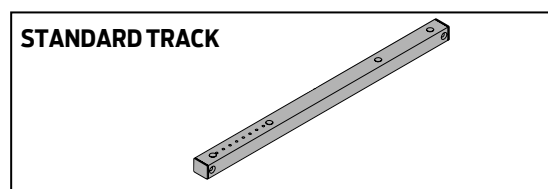
**SPRING POWER ADJUSTMENT** – Mechanical pre-loading of spring to adjust closing force.



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

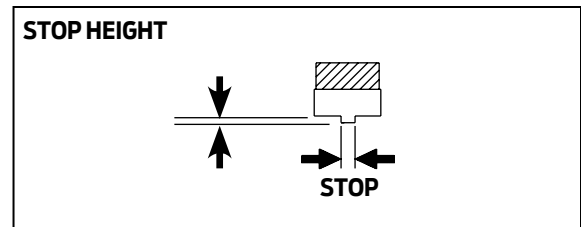
**STANDARD CYLINDER** – Cylinder with main speed, latch speed, and backcheck adjustments.

**STANDARD TRACK** – Non hold-open track.

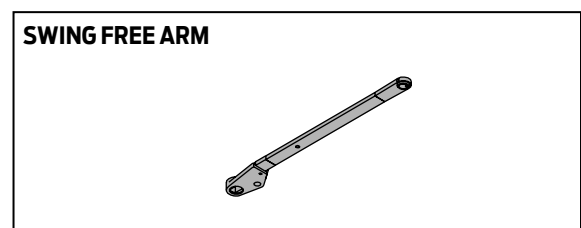


**STOP** – Part of frame against which the door closes.

**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**

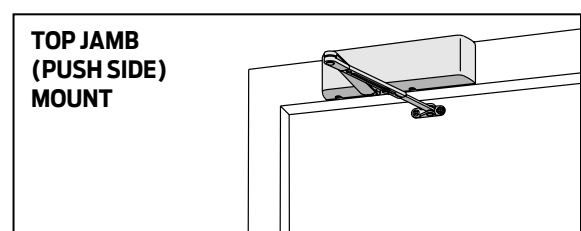
**TBSRT** – Thru bolts and self-reaming and tapping screw package.

**TBTRX** – Thru bolts and TORX security machine screw package.

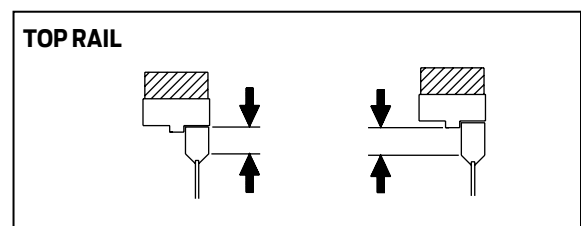
**TBWMS** – Thru bolt, wood and machine screw package.

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

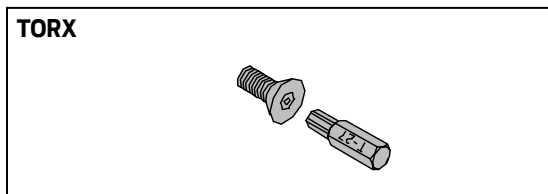
**TOP JAMB** – Mounting with closer installed on frame face.



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



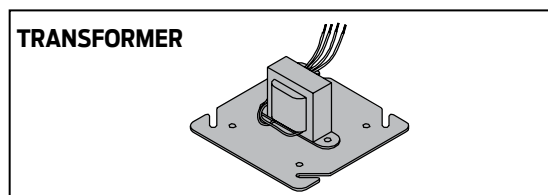
**TORX** – Security machine screw with TORX drive and security pin for tamper resistant applications.



**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

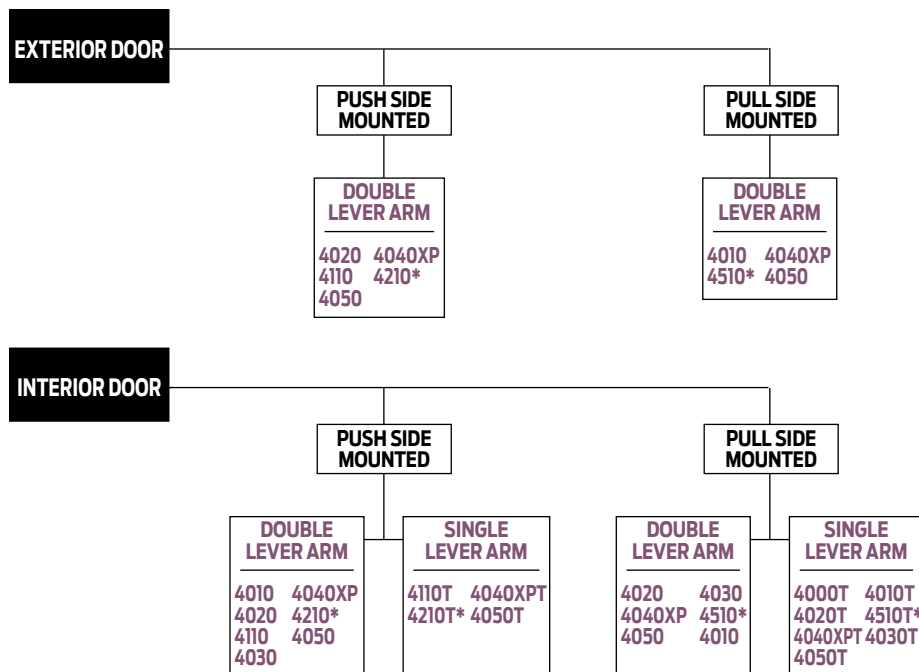
**WMS** – Standard wood and machine screw package.

**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	ED/IN/EDA	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 surface mounted closers

## APPLICATIONS

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

## FEATURES COMMON TO 4000 SERIES

- Each closer (except 4050, 4050T, 4040XP, 4040XPT, 4030, 4030T) is designed for a specific mounting; hinge side, top jamb, or parallel arm. 4040XP closer with regular or hold-open arm mounts hinge side or top jamb. 4030, 4040XP and 4050 regular parallel arm closers include 62PA SHOE required to parallel arm mount either regular or hold-open arm.
- 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.
- **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.

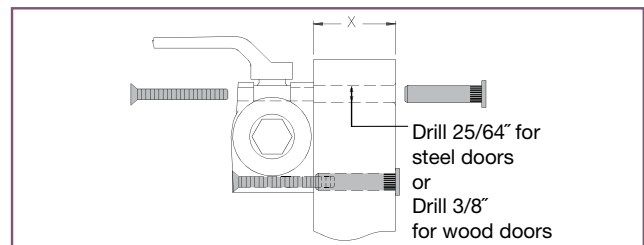
Consult factory for other listings such as; cUL, California State Fire Marshal, Bureau of Standards and Appeals.

## 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.

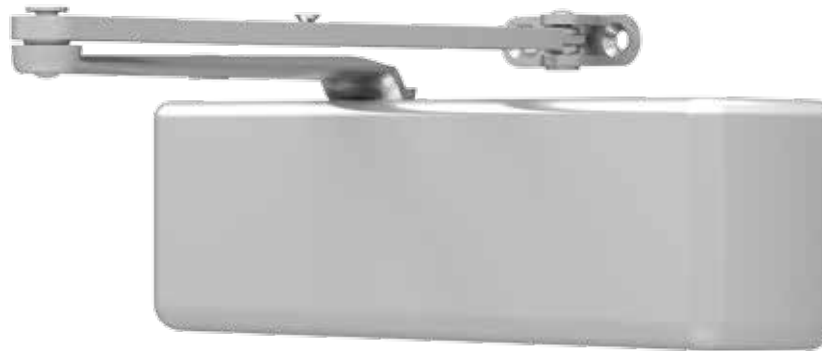


Notes:

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.

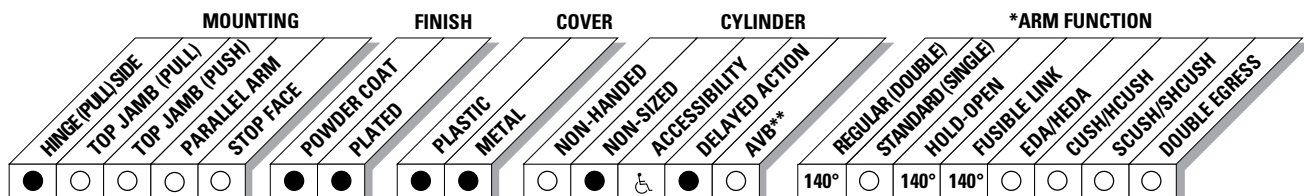


The 4010 is LCN's best performing heavy duty closer designed specifically for institutional and other rugged high traffic applications.

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

**Special Templates**

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



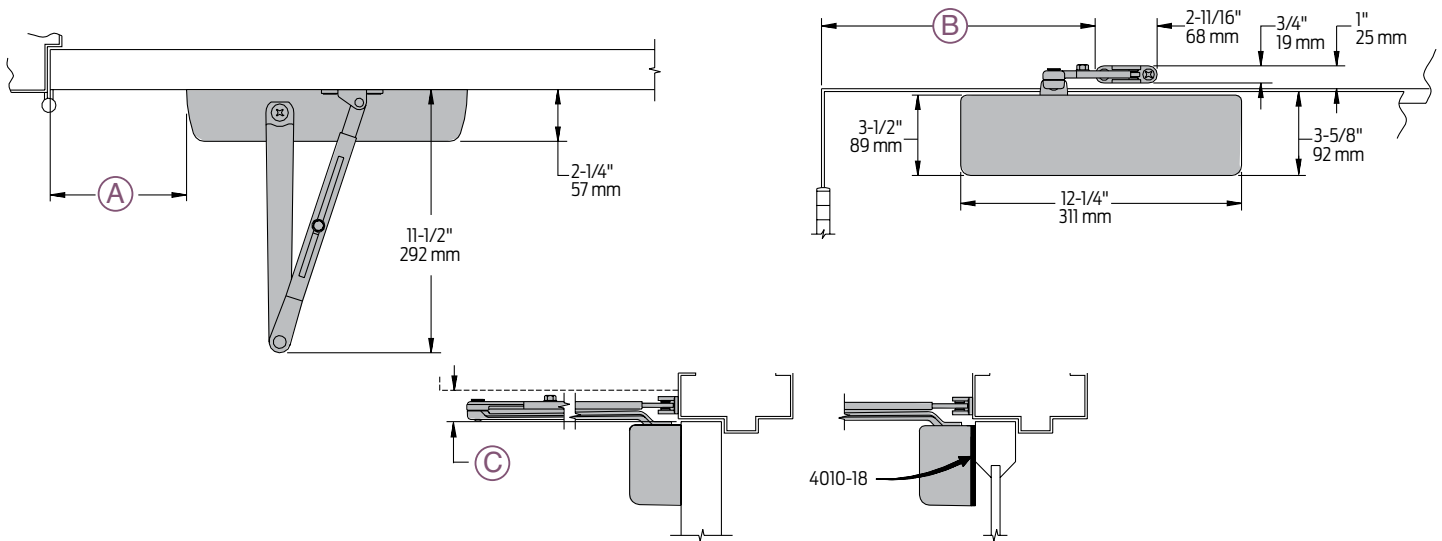
● AVAILABLE  
○ NOT AVAILABLE

♿ 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



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point or where a door cannot swing 140°
<b>Reveal</b>	Should not exceed 3/4" (19 mm). Should not exceed 1/8" (3 mm) for Fusible link arm
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Less than 3-3/4" (95 mm) requires PLATE, 4010-18</li> <li>Plate requires 2" (51 mm) minimum</li> <li>Clearance of 2-1/4" (57 mm) behind door required for 90° installation</li> </ul>
<b>Delayed Action</b>	<ul style="list-style-type: none"> <li>Add suffix "DEL" to selected cylinder</li> <li>Not available with 4016 cylinder</li> <li>Delays closing from maximum opening to approximately 70°.</li> <li>Delay time adjustable up to approximately 1 minute</li> </ul>
<b>Maximum Opening</b>	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
<b>Arm Clearance</b>	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

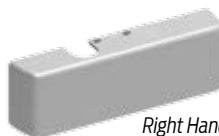
- Handed
- Standard

## 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

- Handed
- 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

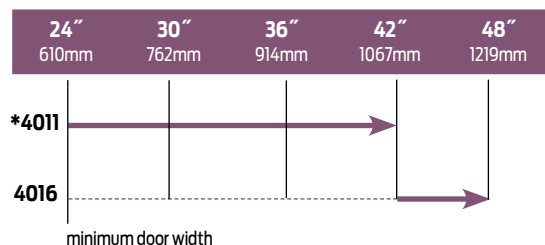
#### Special Template

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

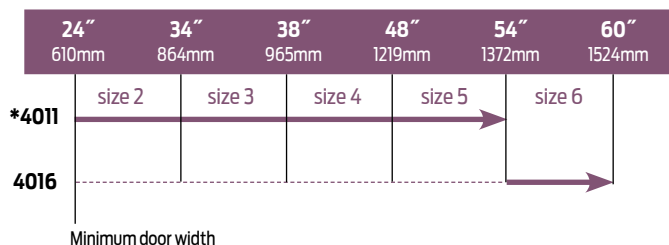
### Table of sizes

- 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	4011
5.0* lbs.	4011	4011	4011	

\* Maximum opening force.

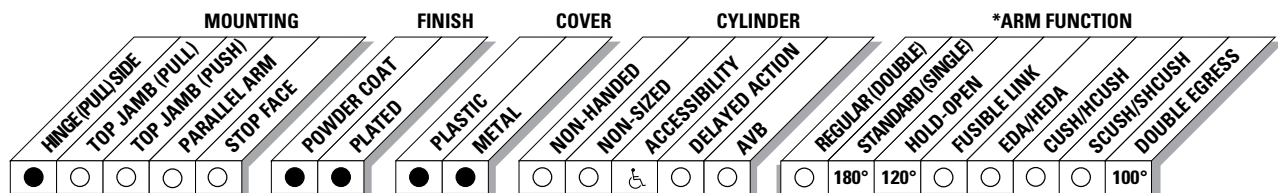


The 4010T is LCN's best performing heavy duty track closer designed specifically for interior doors in institutional and other rugged high traffic applications.

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Cover</b>	<ul style="list-style-type: none"> <li>Plastic, Standard</li> <li>Metal, Optional</li> </ul>
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>Cast Iron Body</li> <li>Full Complement Bearing</li> <li>1-1/2" Diameter Piston</li> <li>11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Fasteners</b>	Self Reaming and Tapping Screws (SRT)
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Hinge (Pull Side)
<b>Handing</b>	Handed	<b>Arms</b>	Standard Arm and Track with Roller
<b>Templating</b>	Peel-n-Stick templates - 2-1/2" x 6" Mounting Hole Pattern	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>Aluminum (689)</li> <li>Statuary Bronze (690)</li> <li>Light Bronze (691)</li> <li>Black (693)</li> <li>Dark Bronze (695)</li> <li>Brass (696)</li> <li>Custom colors optional</li> </ul>
<b>Size</b>	Sized 1, 3 or 4		<ul style="list-style-type: none"> <li>Optional SRI primer - powder coat only</li> <li>Optional plated finishes</li> </ul>
<b>Warranty</b>	30 years		

**Special Templates**

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



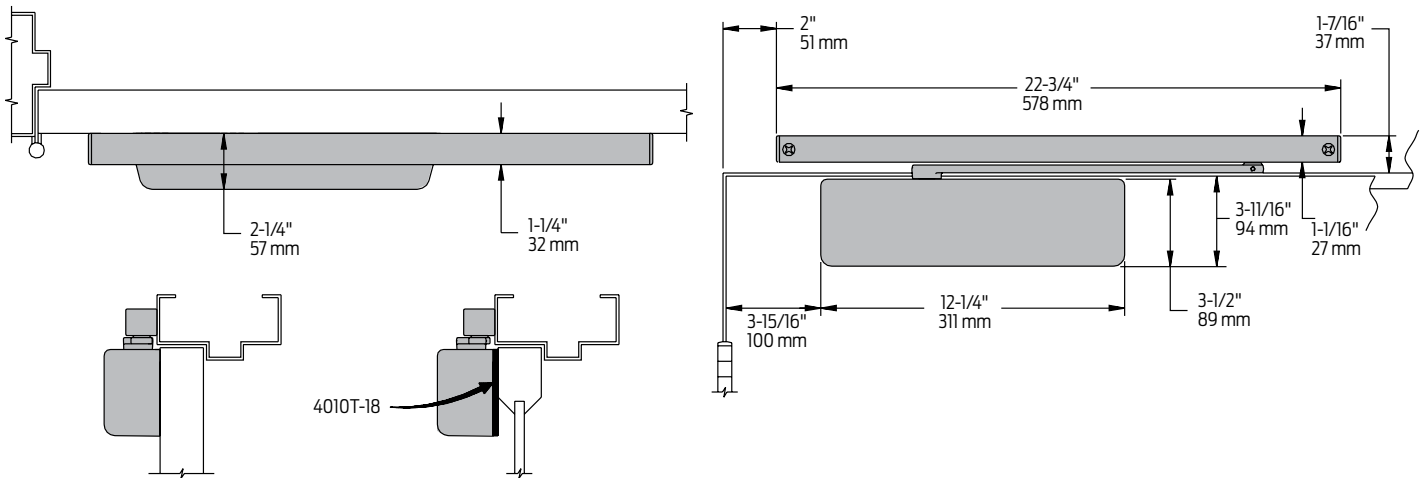
● AVAILABLE  
○ NOT AVAILABLE

♿ 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



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point or where a door cannot swing 180° <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>
<b>Reveal</b>	<ul style="list-style-type: none"> <li>Should not exceed 1/8" (3 mm) for standard arm</li> <li>Should not exceed 3-5/16" (84 mm) for double egress arm</li> </ul>
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Less than 3-3/4" (95 mm) requires PLATE, 4010T-18</li> </ul> <i>Note: Plate requires 2" (51 mm) minimum</i>
<b>Head Frame</b>	Requires 1-1/2" (38 mm) minimum
<b>Clearance</b>	<ul style="list-style-type: none"> <li>2-1/4" (57 mm) behind door required for 90° or 180° installation</li> </ul>
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>Templating allows 180° with standard arm, limited to 120° when optional bumper is installed</li> <li>Consult factory if door will be held open at 180°</li> <li>Variable hold-open angles with infinite options</li> </ul>

**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

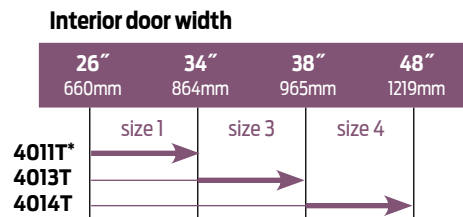
**Special Template**

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

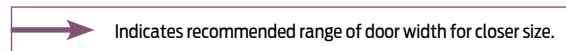
\*\* Note: Using this closer on double-egress doors and frames requires the closer to be ordered with a "DE" suffix (i.e., 4014T DE). Standard "DE" option will accommodate pull side reveals up to 3-5/16". For deeper reveals, consult factory.

**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**

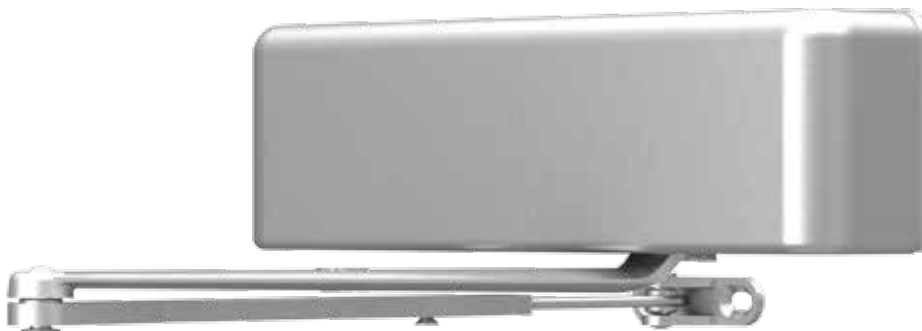
**CAUTION!** Any manual door closer, including those certified by BHMA to conform to ANSI Standard A156.4, that is selected, installed and adjusted based on ADA or other reduced opening force requirements may not provide sufficient power to reliably close and latch a door.

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.



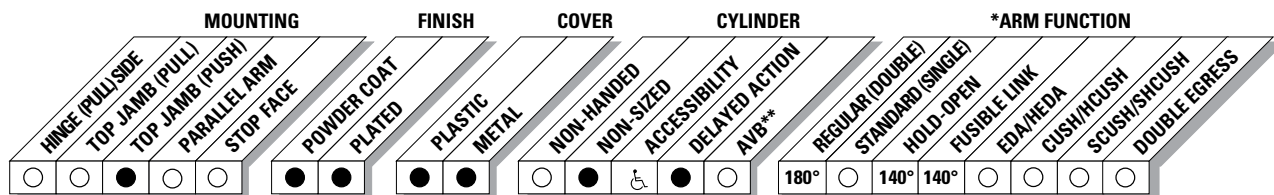


The 4020 is LCN's best performing heavy duty closer designed specifically for institutional and other rugged high traffic applications.

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

**Special Templates**

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



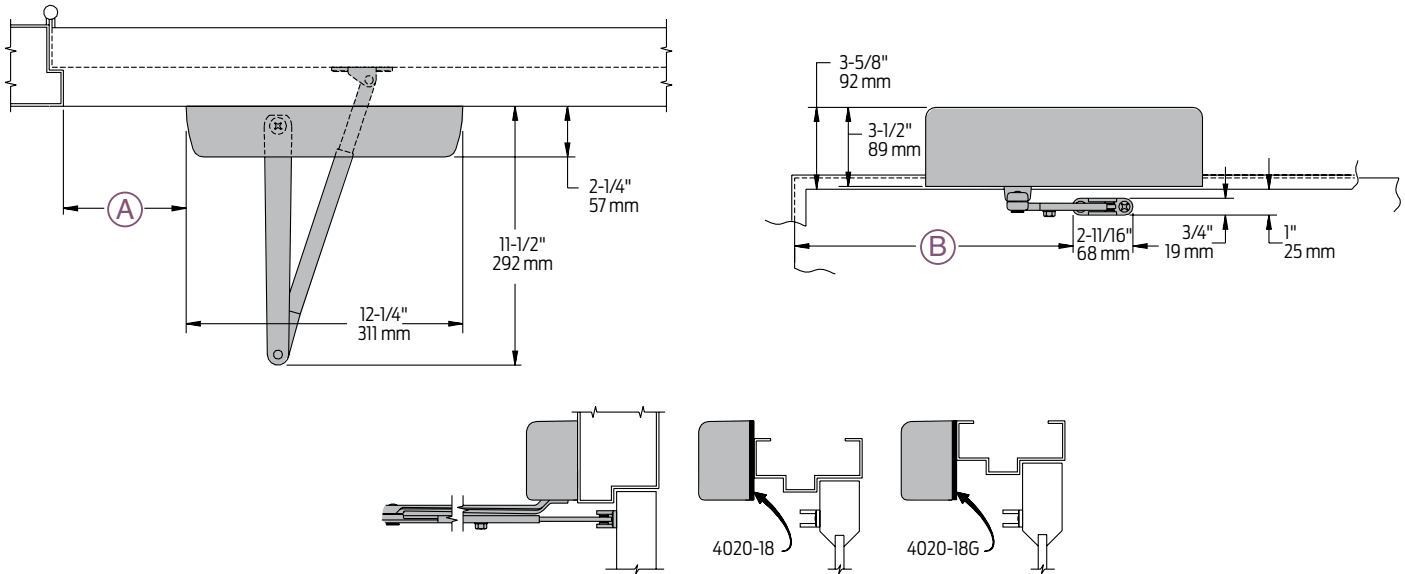
● AVAILABLE  
○ NOT AVAILABLE

♿ 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



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width												
<b>Auxiliary Stop</b>	Recommended at hold-open point or where the door cannot swing 180°												
<b>Reveal</b>	<ul style="list-style-type: none"> <li>2-9/16" (65 mm) allows 180° opening with regular arm</li> <li>4-13/16" (122 mm) allows up to 140° opening with regular arm</li> <li>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)</li> </ul>												
<b>Head Frame</b>	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.												
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Requires minimum 1-1/2" (38 mm)</li> <li>Closer on 4020-18 plate requires 2" (51 mm) minimum</li> <li>Closer on 4020-18G plate requires 2-3/4" (70 mm) minimum</li> </ul>												
<b>Delayed Action</b>	<ul style="list-style-type: none"> <li>Add suffix "DEL" to selected cylinder.</li> <li>Not available with 4026 cylinder</li> <li>Delays closing from maximum opening to approximately 75°</li> <li>Delay time adjustable up to approximately 1 minute</li> </ul>												
<b>Maximum Opening</b>	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

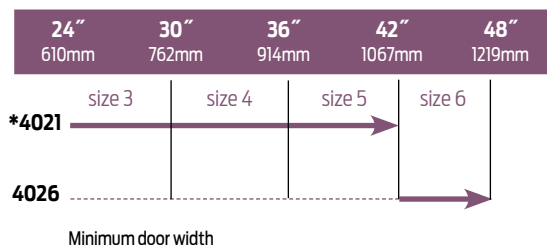
#### Special Template

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

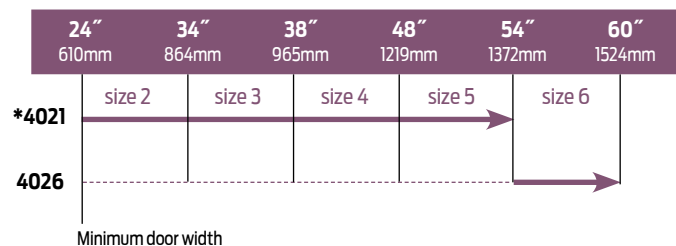
### Table of sizes

- 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.

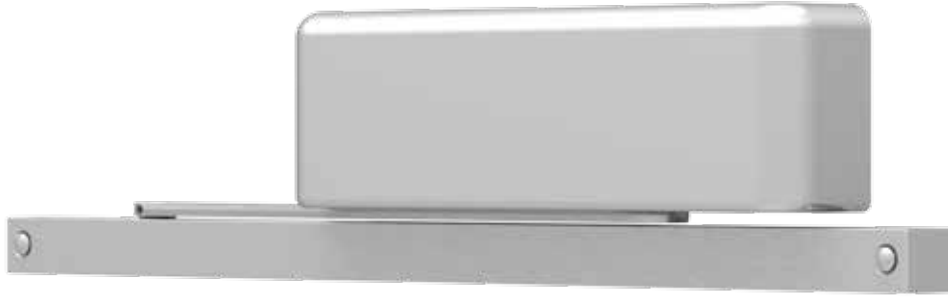
### Reduced opening force 4020 Series closers

**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.

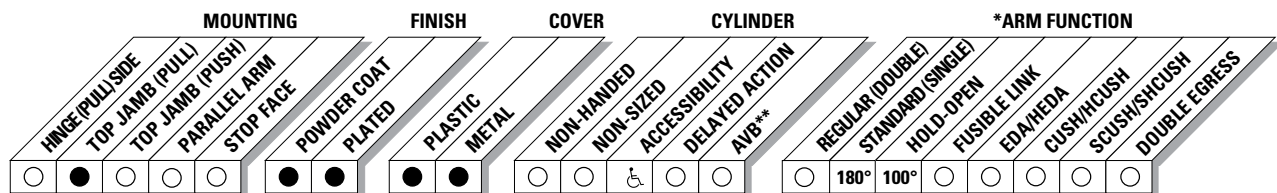


The 4020T is LCN's best performing heavy duty track closer designed specifically for interior doors in institutional and other high traffic applications.

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Cover</b>	<ul style="list-style-type: none"> <li>■ Plastic, Standard</li> <li>■ Metal, Optional</li> </ul>
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-1/2" Diameter Piston</li> <li>■ 11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Fasteners</b>	Self Reaming and Tapping Screws (SRT)
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Top Jamb (Pull Side)
<b>Handing</b>	Handed	<b>Arms</b>	Standard arm, track with roller
<b>Templating</b>	Peel-n-Stick templates - 2-1/2" x 6" Mounting Hole Pattern	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Aluminum (689)</li> <li>■ Statuary Bronze (690)</li> <li>■ Light Bronze (691)</li> <li>■ Black (693)</li> <li>■ Dark Bronze (695)</li> <li>■ Brass (696)</li> <li>■ Custom colors optional</li> </ul>
<b>Size</b>	Sized 1, 3 or 4		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
<b>Warranty</b>	30 years		

**Special Templates**

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



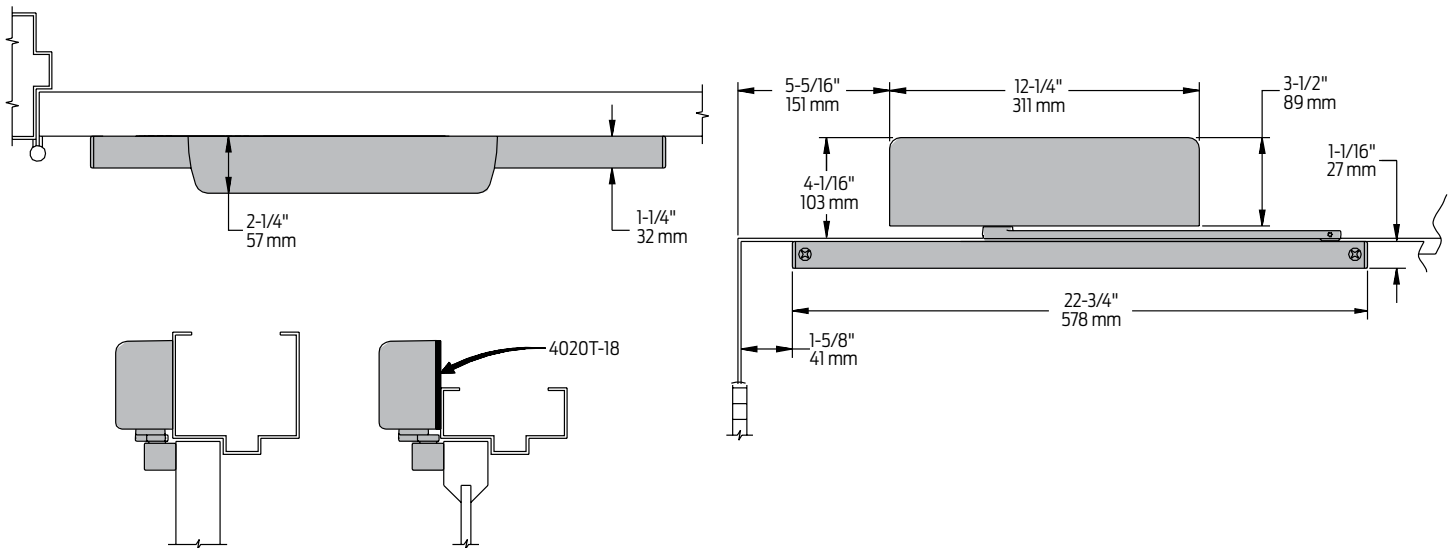
● AVAILABLE  
○ NOT AVAILABLE

♿ 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



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point or where a door cannot swing 180° <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>
<b>Reveal</b>	Should not exceed 1/8" (3 mm)
<b>Head Frame</b>	<ul style="list-style-type: none"> <li>■ Less than 3-7/8" (98 mm), requires PLATE, 4020T-18</li> <li>■ Plate requires 1-3/4" (44 mm) minimum</li> </ul>
<b>Clearance</b>	1-1/2" (38 mm) behind door required for 90° or 180° installation
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>■ Templating allows 180° with standard track arm, limited to 100° with optional bumper installed</li> <li>■ Consult factory if door will be held open at 180°</li> <li>■ Variable hold-open angles with infinite options</li> </ul>

**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**

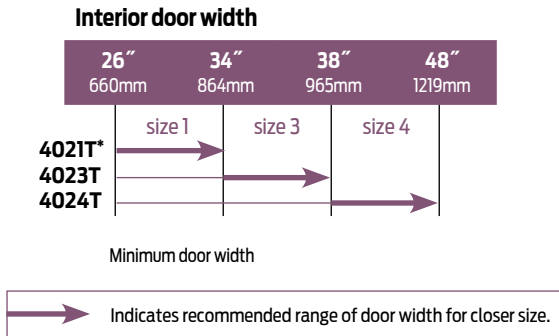
- Plate, 4010T-18

**Special Template**

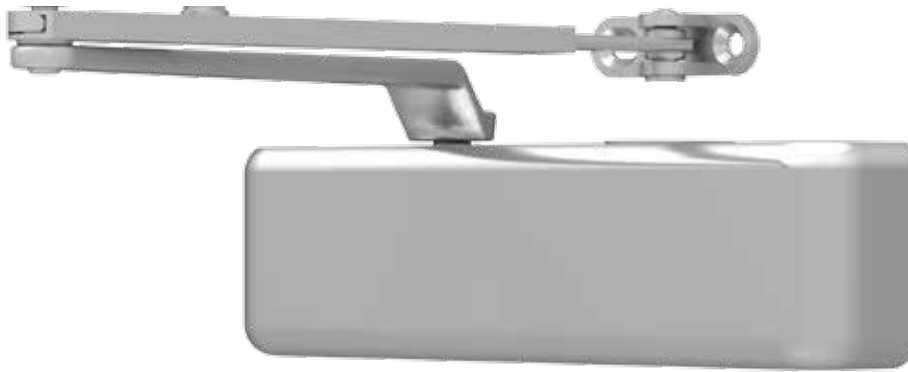
- ST- \_\_\_\_\_

**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





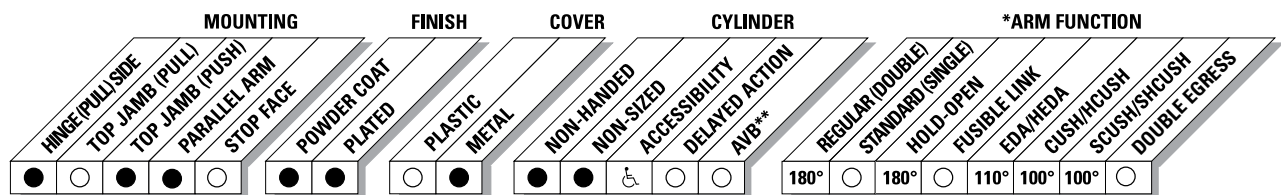


The 4030 is a cast iron, universal closer designed specifically for doors in moderate traffic conditions. This versatile closer compliments the rest of the heavy duty 4000 Series and offers the choice of three mountings and multiple arm options.

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Cover</b>	Metal, Standard
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-1/8" Diameter Piston</li> <li>■ 1/2" Diameter Single Heat Treated Pinion Journal</li> </ul>	<b>Fasteners</b>	Self Reaming and Tapping Screws (SRT)
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Hinge (Pull Side), Top Jamb (Push Side), Parallel Arm (Push Side)
<b>Handing</b>	Non-Handed	<b>Arms</b>	Regular arm
<b>Templating</b>	Peel-n-Stick templates - 1-23/32" x 6-17/16" Mounting Hole Pattern	<b>Finishes/Colors/Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Aluminum (689)</li> <li>■ Statuary Bronze (690)</li> <li>■ Light Bronze (691)</li> <li>■ Black (693)</li> <li>■ Dark Bronze (695)</li> <li>■ Brass (696)</li> <li>■ Custom colors optional</li> </ul>
<b>Size</b>	Adjustable Spring Size 1-4		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
<b>Warranty</b>	30 years		

**Special Templates**

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



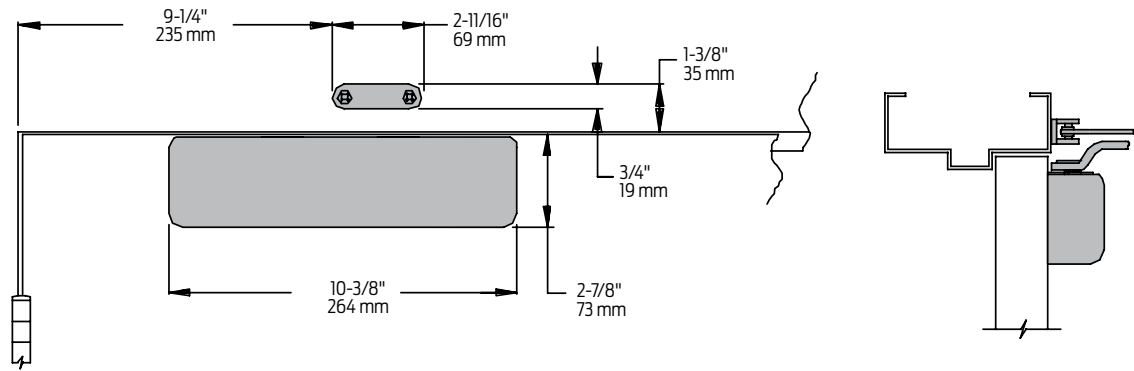
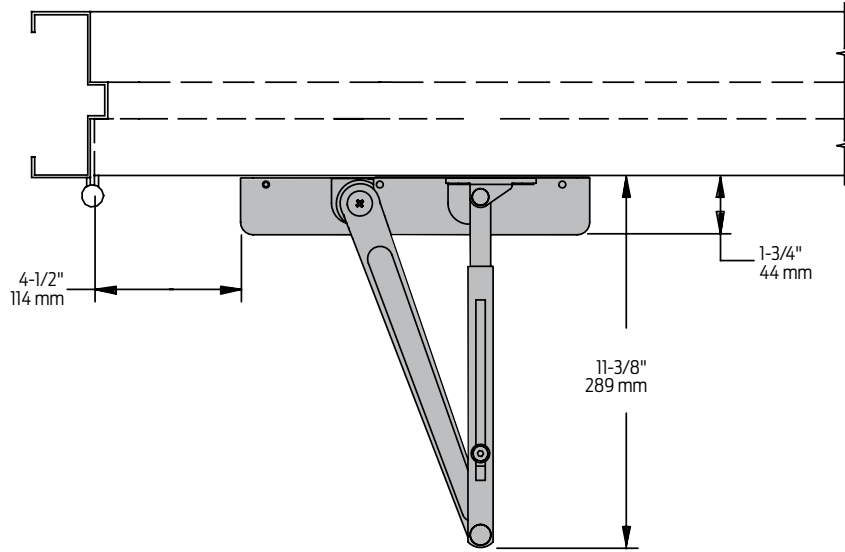
● AVAILABLE  
○ NOT AVAILABLE

♿ 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

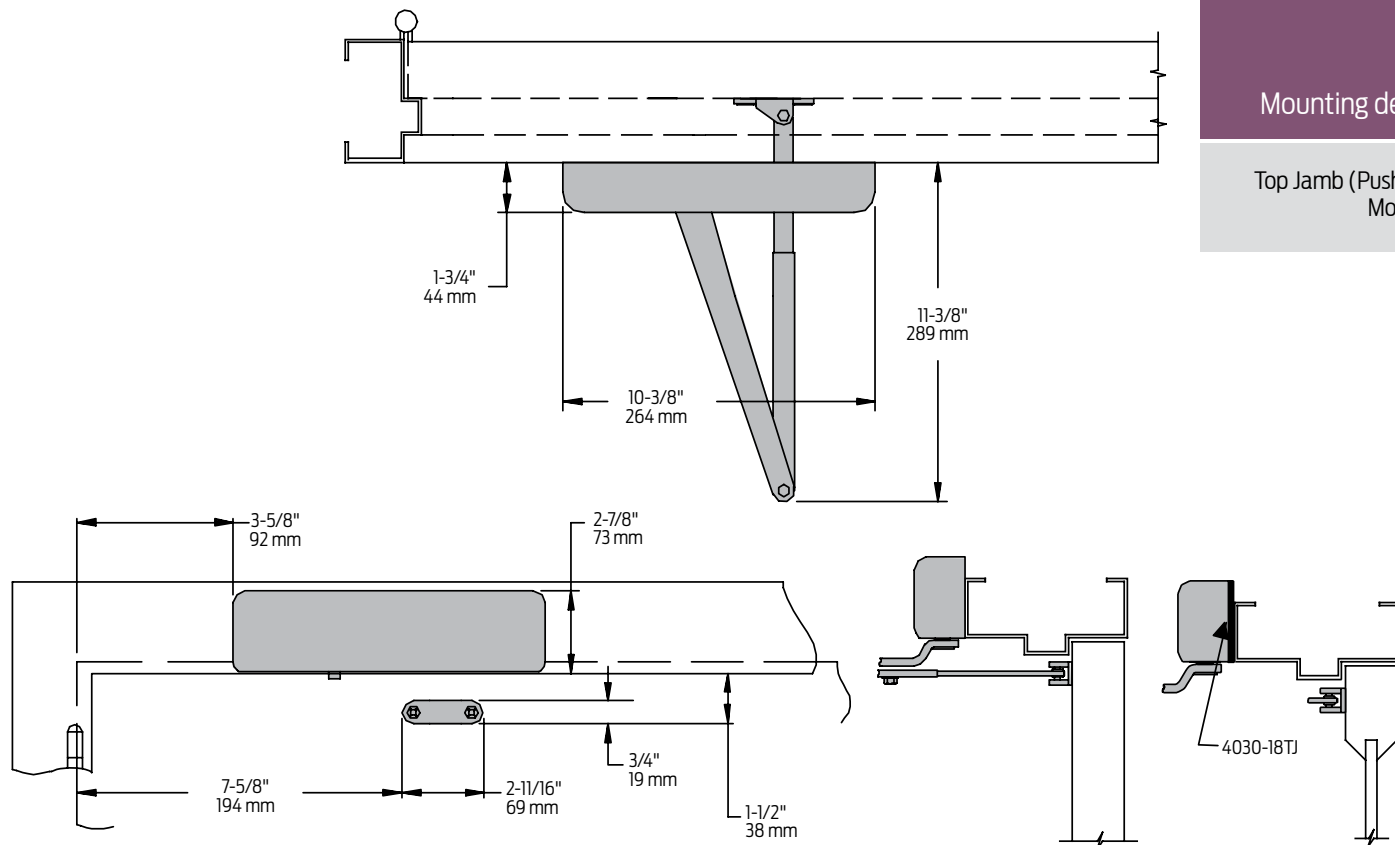
# 4030 Series

## Mounting details

### Hinge (Pull) Side Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point or where a door cannot swing 180°
<b>Reveal</b>	Should not exceed 3/16" (5 mm) for regular arm or 3/16" (5 mm) for hold-open arm
<b>Top Rail</b>	Requires 2-7/8" (73 mm) minimum
<b>Clearance</b>	1-3/4" (44 mm), behind door required for installation
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>■ Can be templated for 180°</li> <li>■ Hold-open points up to maximum opening with hold-open arm</li> </ul>



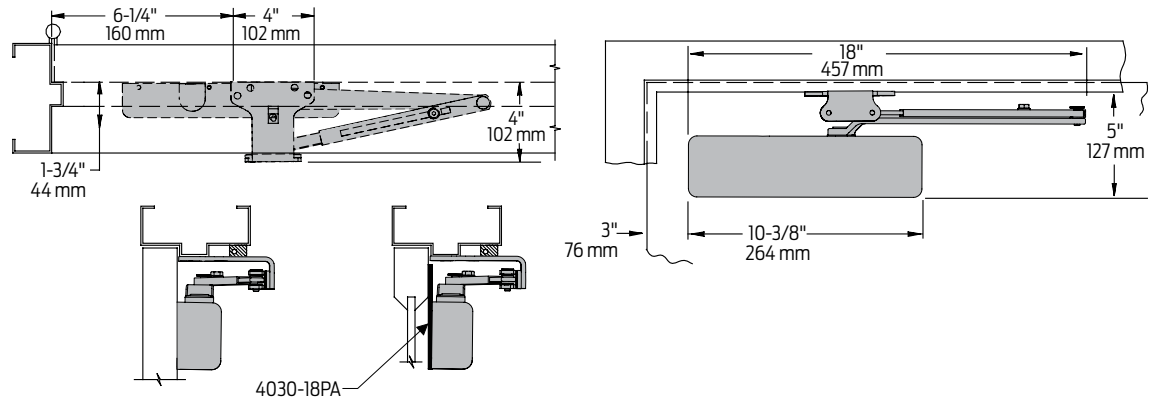
<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point or where the door cannot swing 180°
<b>Reveal</b>	<ul style="list-style-type: none"> <li>■ up to 3-1/2" (89 mm) allows 180° opening</li> <li>■ up to 7-1/2" (191 mm) with long arm allows for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

# 4030 Series

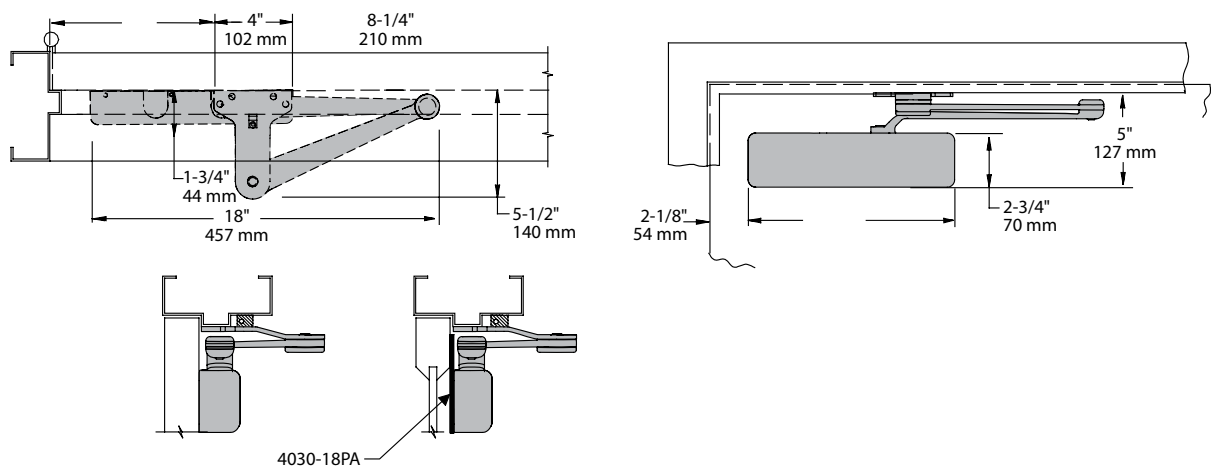
## Mounting details

Parallel arm (Push Side) and EDA mounting

### Parallel arm mount



### EDA mount

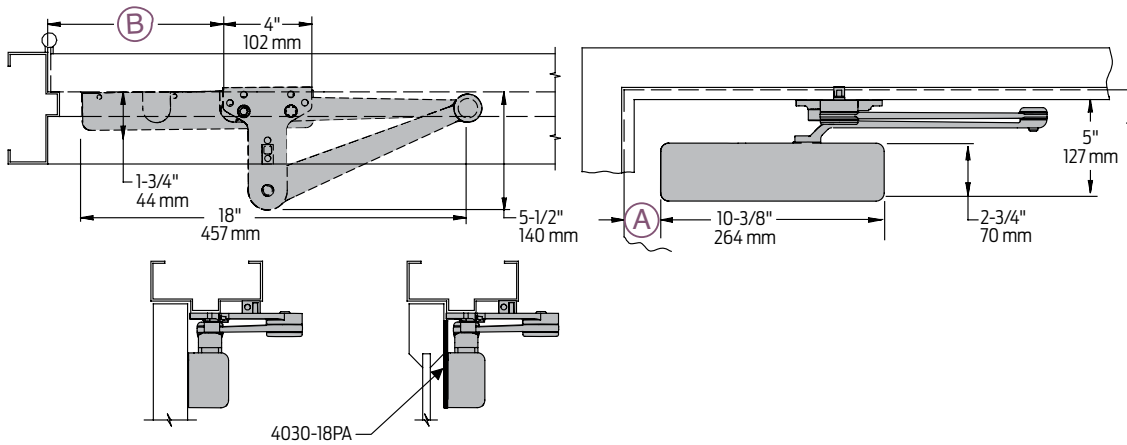


<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point or where a door cannot swing maximum opening
<b>Clearance</b>	<ul style="list-style-type: none"> <li>For 4030-62PA shoe is 4" (102 mm) from door face</li> <li>EDA arm is 5-1/2" (140 mm) from door face</li> </ul>
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Less than 5" (127 mm) measured from the stop requires PLATE, 4030-18PA</li> <li>Plate requires 1-3/4" (44 mm) minimum</li> </ul>
<b>Stop Width</b>	Minimum 1" (25 mm)
<b>Head Frame</b>	Flush or single rabbeted requires PA SHOE ADAPTER, 4030-419
<b>Blade Stop</b>	Clearance, requires 1/2" (13 mm) BLADE STOP SPACER, 4030-61
<b>Auxiliary Shoe</b>	<ul style="list-style-type: none"> <li>4030-62A allows installation of regular arm with overhead holder/stop</li> <li>Special templating required</li> </ul>
<b>EDA Arm</b>	Requires SHOE SUPPORT, 4030-30 for fifth screw anchorage where reveal is less than 3-1/16" (78 mm)
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>REGULAR or HOLD-OPEN arms can be templated for 180°</li> <li>EDA template allows 110° maximum opening</li> <li>Hold-open points up to maximum opening with hold-open arm</li> </ul>

**Notes:**

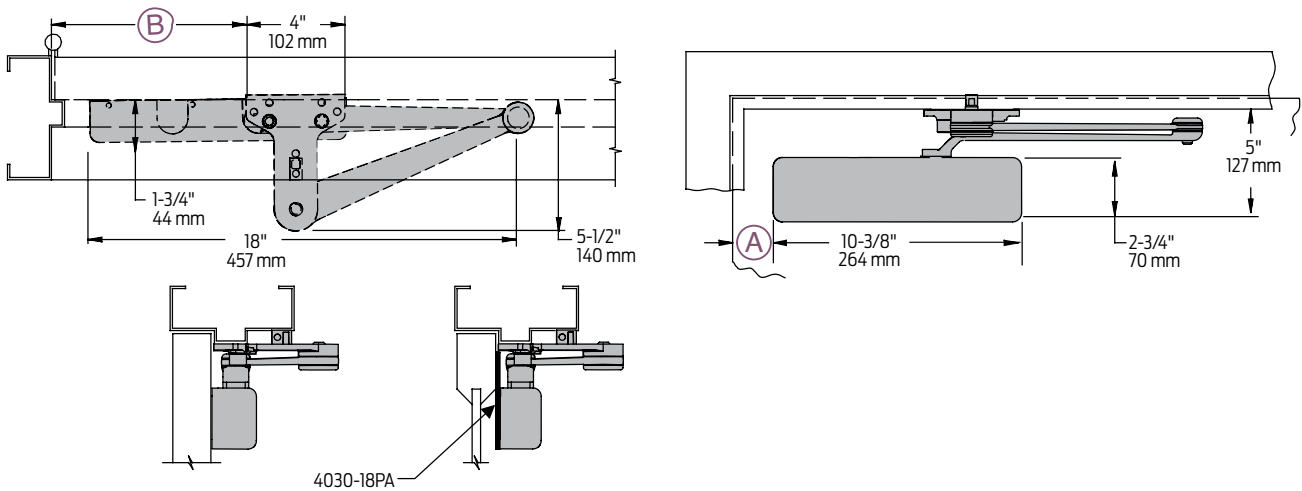
- 4030 closers ordered with EDA arms include 4030-201 FIFTH HOLE SPACER to support the shoe
- REGULAR or HOLD-OPEN arm mounting requires PA SHOE, 4030-62PA for regular or HOLD-OPEN arms. Add prefix "P" to closer description (eg. P4031.)
- P4031 closer includes 4030-201 FIFTH HOLE SPACER to support PA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

**CUSH mount**



**Spring CUSH mount**

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



<b>Clearance</b>	For CUSH or SPRING CUSH shoe is 5-1/2" (140 mm) from door face		
<b>Head Frame</b>	Flush or rabbeted requires CUSH FLUSH PANEL ADAPTER, 4030-419		
<b>CUSH or Spring CUSH ARM</b>	Requires SHOE SUPPORT, 4030-30 for fifth screw anchorage where reveal is less than 3-1/16" (78 mm)		
<b>Maximum opening</b>	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 rabbeted 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)

##### 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- \_\_\_\_\_

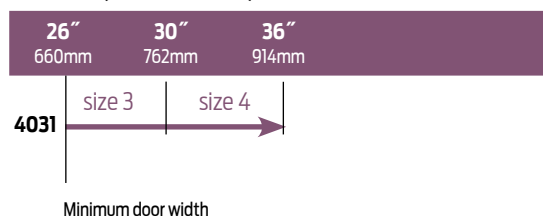
#### Closer will be shipped with:

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

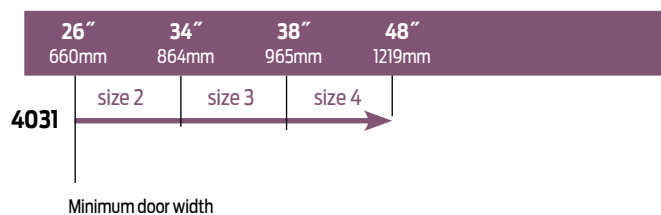
#### Table of sizes

- 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.

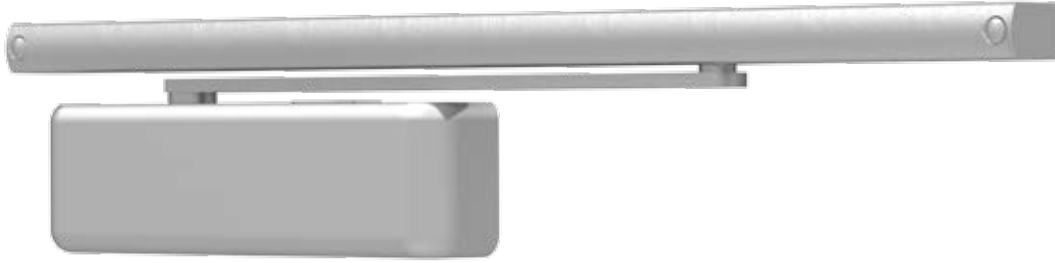
#### Reduced opening force 4030 Series closers

**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.

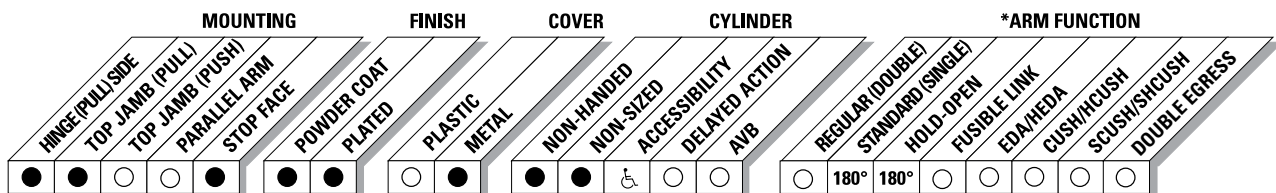


The 4030T is a single lever (track) arm, surface mounted closer designed for interior use on narrow head frames and top rails. The choice of three mountings and ease of installation offer a versatile solution to door control in moderate traffic applications. The 4030T compliments the heavy duty 4000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

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

**Special Templates**

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



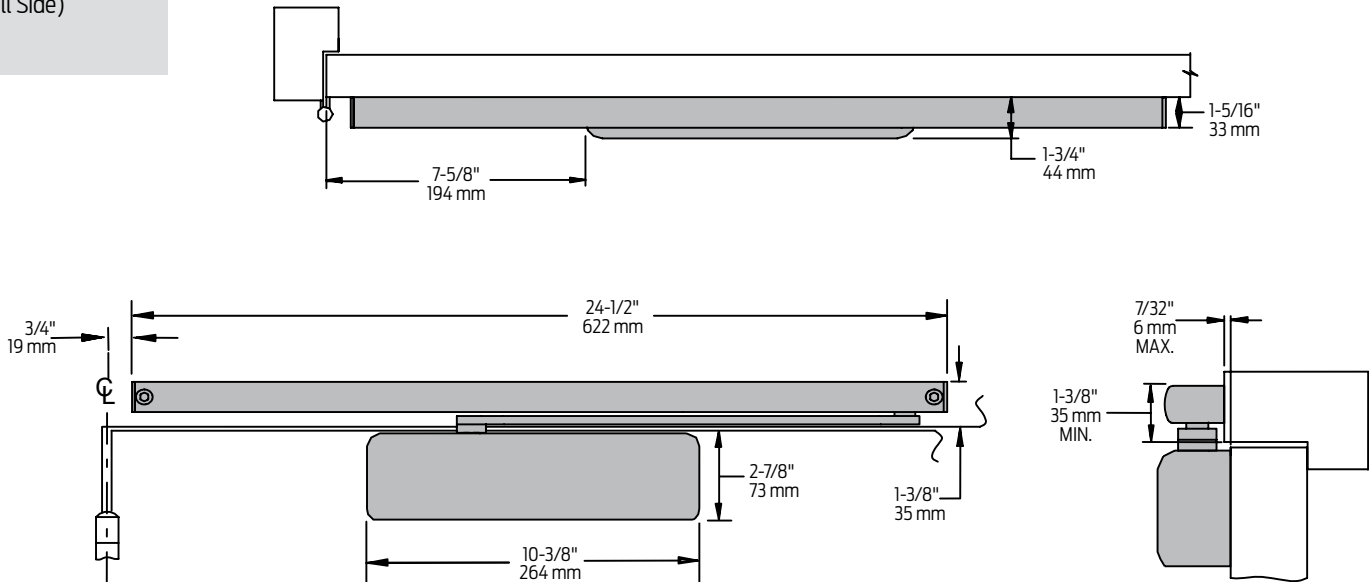
● AVAILABLE  
○ NOT AVAILABLE

♿ 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

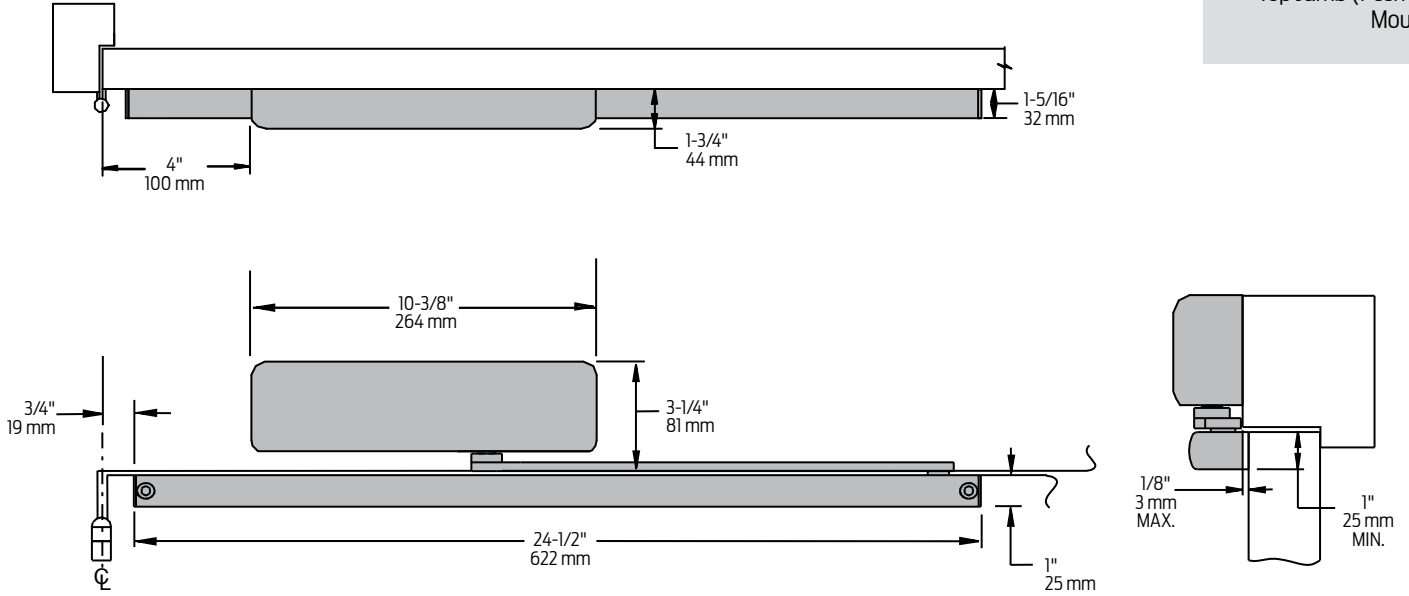
### Hinge (Pull Side) Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point or where a door cannot swing 180°
<b>Reveal</b>	Should not exceed 7/32" (6 mm)
<b>Top Rail</b>	Requires 2-7/8" (73 mm) minimum
<b>Clearance</b>	1-3/4" (44 mm), behind door required for installation
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>■ Can be templated for 180°</li> <li>■ Consult factory if door will be held open at 180°</li> <li>■ Hold-open points up to maximum opening point with hold-open option</li> </ul>

#### 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°.



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point or where the door cannot swing 180°
<b>Reveal</b>	Should not exceed 1/8" (3 mm)
<b>Top Rail</b>	Requires 1" (25 mm) minimum
<b>Head Frame</b>	Requires 2-7/8" (73 mm) minimum
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>■ Can be templated for 180°</li> <li>■ Consult factory if door will be held open at 180°</li> <li>■ Hold-open points up to Maximum opening point with hold-open option</li> </ul>

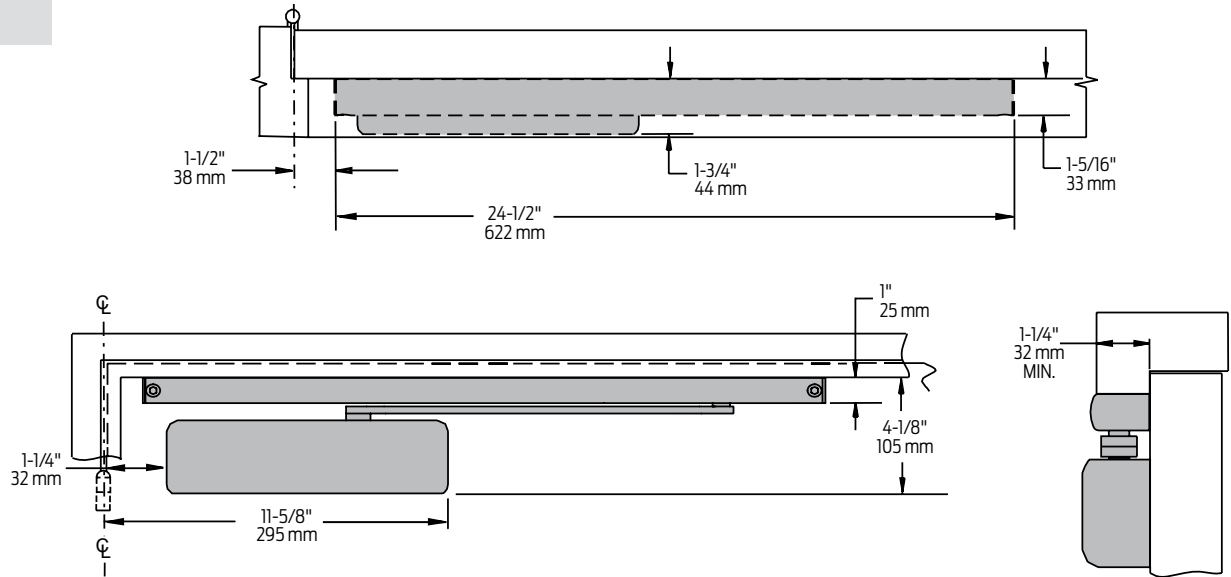
**Notes:**

- 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



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

**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:

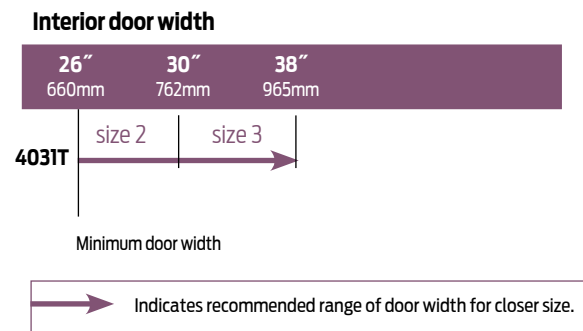
- Standard cylinder
- Standard metal cover
- Standard track
- Standard arm
- Track roller
- Wood and self-tapping machine screw pack unless options listed below are selected.

#### 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.



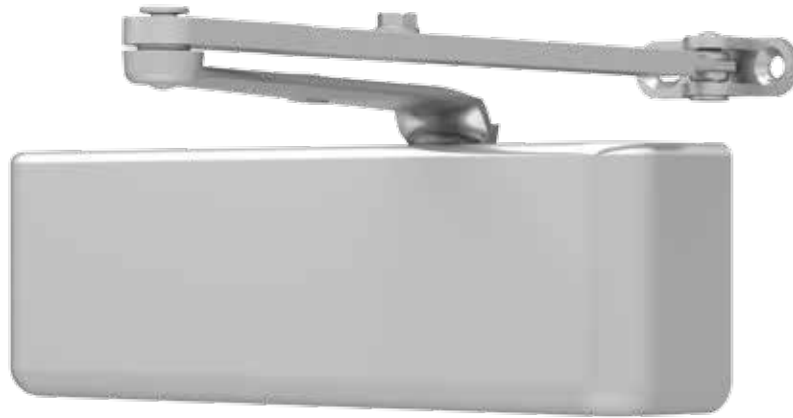
### Reduced opening force 4030T Series closers

**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.

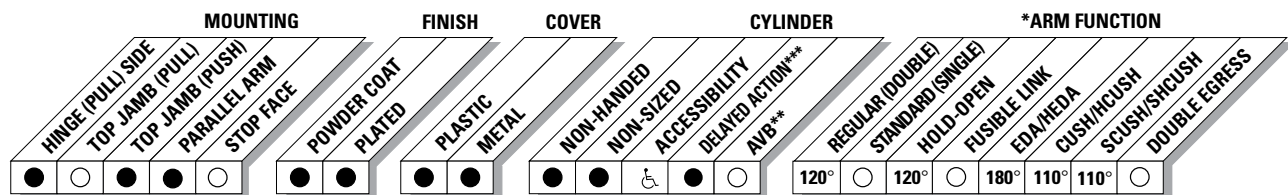


The 4040XP is LCN's most durable and flexible heavy duty closer designed for institutional and other demanding high traffic applications.

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Cover</b>	<ul style="list-style-type: none"> <li>■ Plastic, Standard</li> <li>■ Metal, Optional</li> </ul>
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearings</li> <li>■ 1-1/2" Diameter Piston</li> <li>■ 3/4" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Fasteners</b>	Self Reaming and Tapping Screws (SRT)
<b>Fluid</b>	All Weather Liquid X Fluid	<b>Mounting</b>	Hinge (Pull Side), Top Jamb (Push Side), Parallel Arm (Push Side)
<b>Handing</b>	Non-Handed	<b>Arms</b>	Regular Arm
<b>Templating</b>	Peel-n-Stick templates - 2-1/4" x 5" Mounting Hole Pattern	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Aluminum (689)</li> <li>■ Statuary Bronze (690)</li> <li>■ Light Bronze (691)</li> <li>■ Black (693)</li> <li>■ Dark Bronze (695)</li> <li>■ Brass (696)</li> <li>■ Custom colors optional</li> </ul>
<b>Size</b>	Adjustable Spring Size 1-6, includes Patented Green Dial		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
<b>Warranty</b>	30 years		

**Special Templates**

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



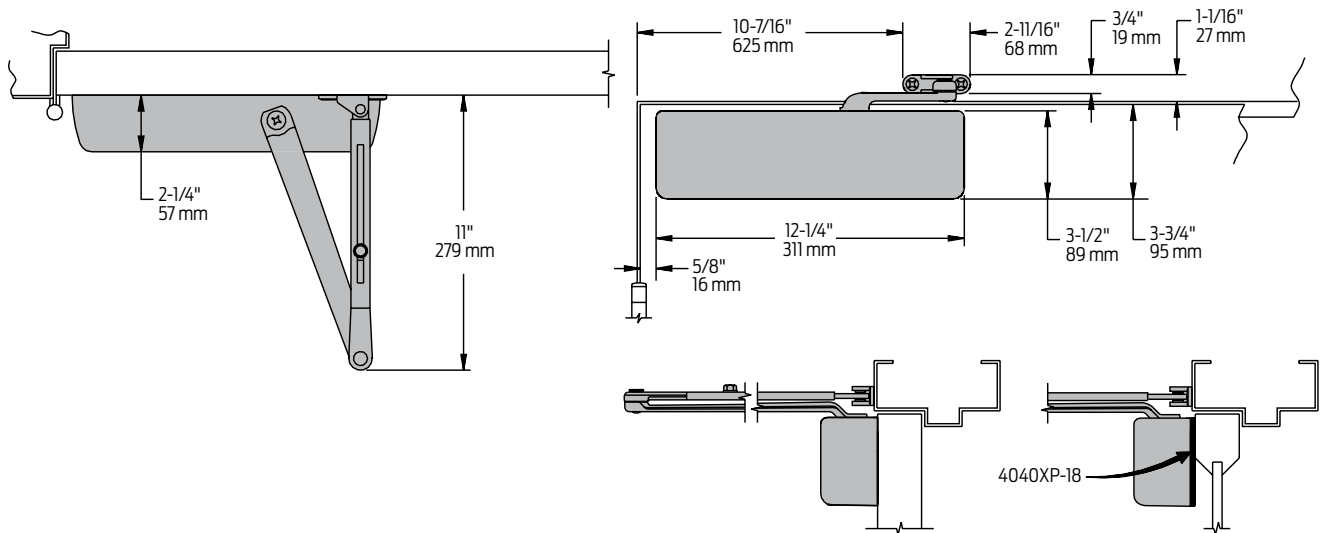
● AVAILABLE  
○ NOT AVAILABLE

♿ 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).

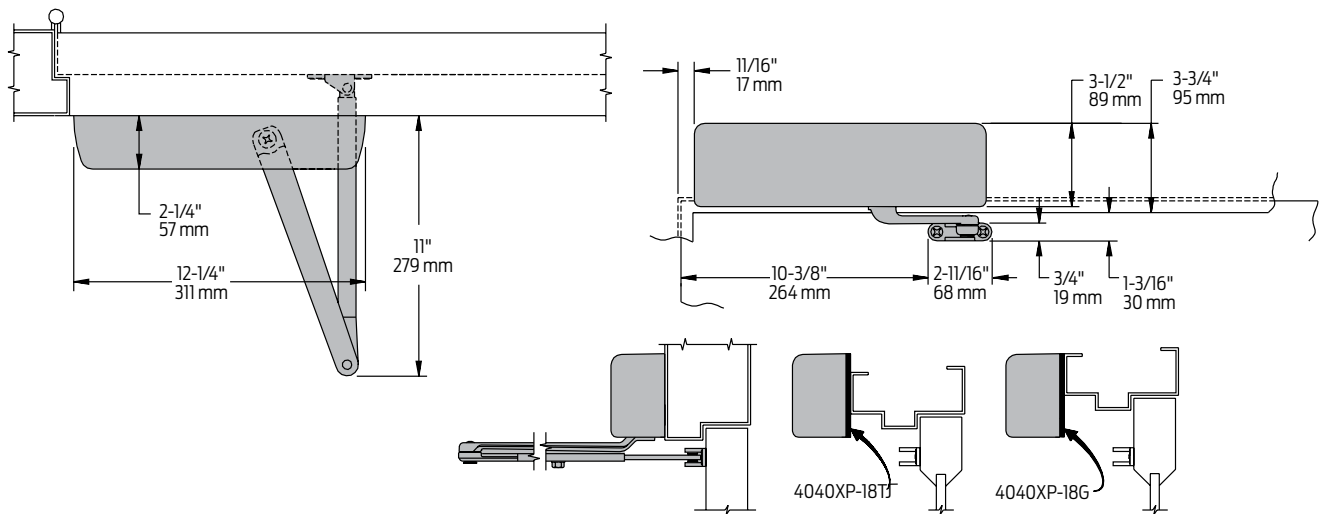
# 4040XP Series

## Mounting details

### Hinge (Pull Side) Mounting



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

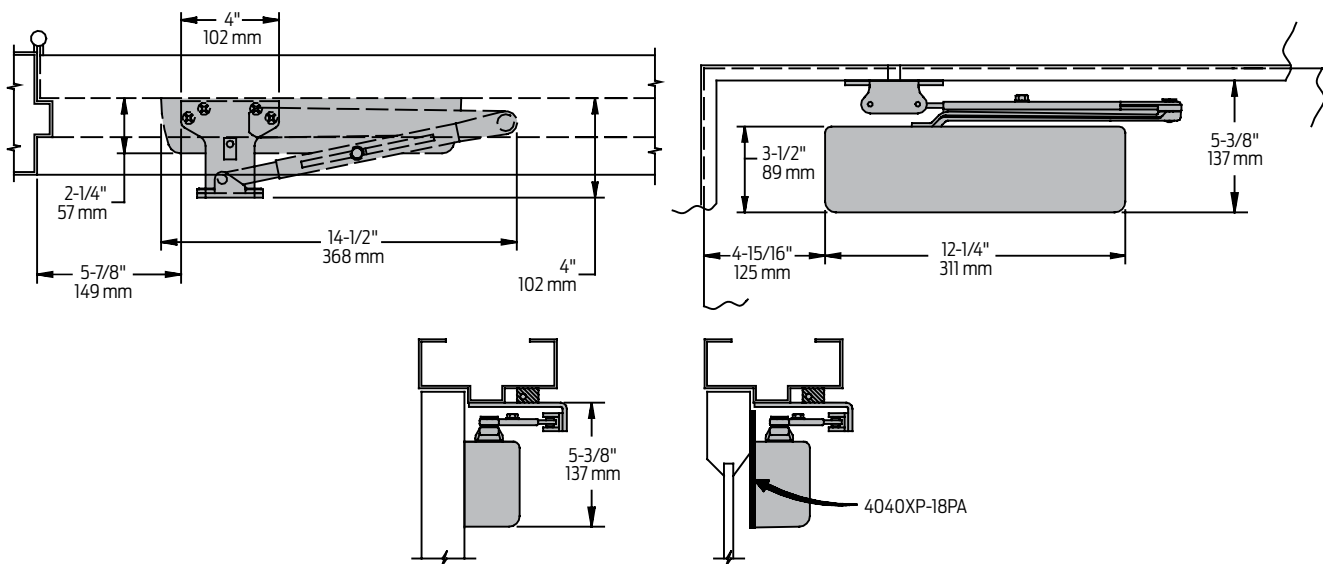


<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width		
<b>Auxiliary Stop</b>	Recommended at hold-open point or where a door cannot swing beyond 120°		
<b>Reveal</b>	Arm Type	Reveal	Max Opening
	Regular Arm	2-9/16"	Up to 120°
	Long	4-13/16"	Up to 120°
	Hold-Open	2-9/16"	Up to 120°
	Long Hold-Open Arm	8"	Up to 120°
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Requires 1-1/4" (32 mm) minimum</li> <li>2-1/4" (57 mm) minimum with closer on PLATE, 4040XP-18TJ</li> <li>3" (76 mm) minimum with closer on PLATE, 4040XP-18G</li> </ul>		
<b>Head Frame</b>	<ul style="list-style-type: none"> <li>Less than 3-1/2" (89 mm) requires PLATE, 4040XP-18TJ</li> <li>With flush ceiling, use PLATE, 4040XP-18G. Either plate requires 1-3/4" (44 mm) minimum</li> </ul>		
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>Templating allows up to 120°.</li> <li>Hold-open points 85° up to 120° with hold-open arm.</li> </ul>		
<b>Delayed Action</b>	<ul style="list-style-type: none"> <li>Incorporates standard 4041 cylinder, without XP cylinder</li> <li>Delays closing from 120° to 70°</li> <li>Delay time adjustable up to approximately 1 minute</li> </ul>		

# 4040XP Series

## Mounting details

### Parallel Arm (Push Side) Mounting

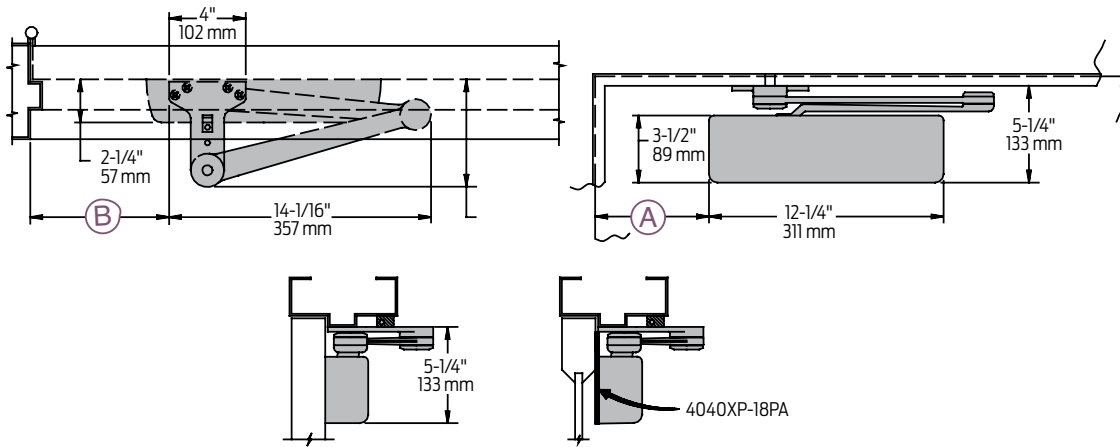


<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point, where the door cannot swing 180°, or where CUSH-N-STOP arm is not used
<b>Reveal</b>	Should not exceed 7/32" (6 mm)
<b>Top Rail</b>	Less than 5-3/8" (137 mm) measured from the stop requires PLATE, 4040XP-18PA. Plate requires 2" (51 mm) minimum from the stop
<b>Head Frame</b>	Flush or rabbeted requires PA SHOE ADAPTER, 4040XP-419
<b>Stop Width</b>	Minimum 1" (25 mm). CUSH arm requires minimum 1-1/2" (38 mm)
<b>Blade Stop</b>	Clearance requires 1/2" (13mm) BLADE STOP SPACER, 4040XP-61.
<b>Clearance</b>	<ul style="list-style-type: none"> <li>4040XP-62PA shoe is 4" (102 mm) from door face.</li> <li>EDA shoe projects 5-1/2" (140 mm) from door face.</li> <li>CUSH shoe projects 6" (152 mm) from door face</li> </ul>
<b>Delayed Action</b>	<ul style="list-style-type: none"> <li>Incorporates standard 4041 cylinder, without XP cylinder</li> <li>Delays closing from 120° to 70°.</li> <li>Delay time adjustable up to approximately 1 minute.</li> </ul>
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>180° opening/hold-open points with all except CUSH arms</li> <li>110° opening/hold-open with CUSH arms</li> </ul>

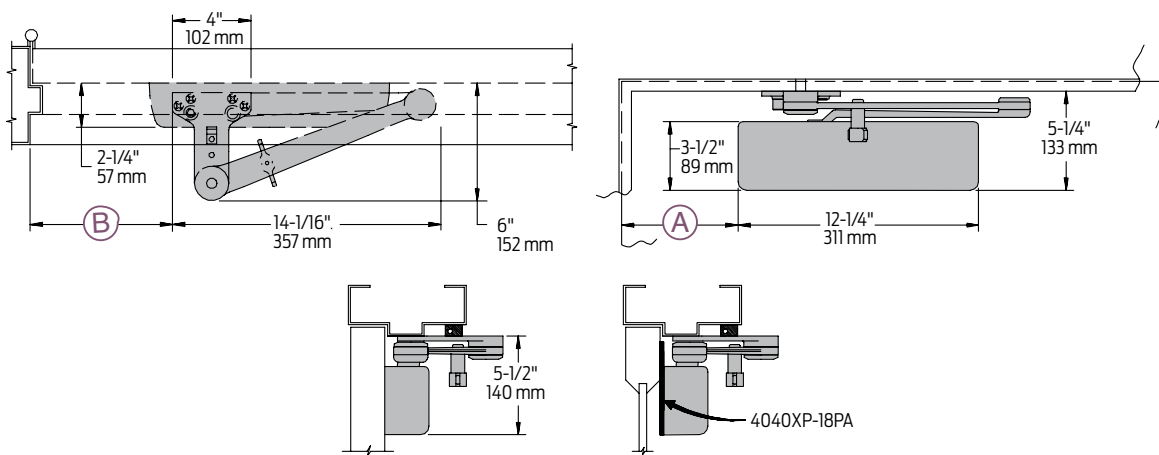
#### Notes:

- 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



<b>Clearance</b>	4040XP-62EDA is 5-1/2" (140 mm) from door face. 6" (152 mm) for CUSH	
<b>Head Frame</b>	Flush or rabbeted requires CUSH FLUSH PANEL ADAPTER, 4040XP-419	
<b>CUSH ARM</b>	Requires SHOE SUPPORT, 4040XP-30 for fifth screw anchorage where reveal is less than 3-1/16" (78 mm)	
<b>Delayed Action</b>	<ul style="list-style-type: none"> <li>■ Incorporates standard 4041 cylinder, without XP cylinder.</li> <li>■ 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.</li> </ul>	
<b>Maximum Opening</b>	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<sup>®</sup> 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- \_\_\_\_\_

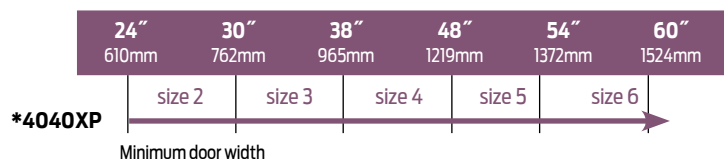
### Table of sizes

- 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%

#### 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 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

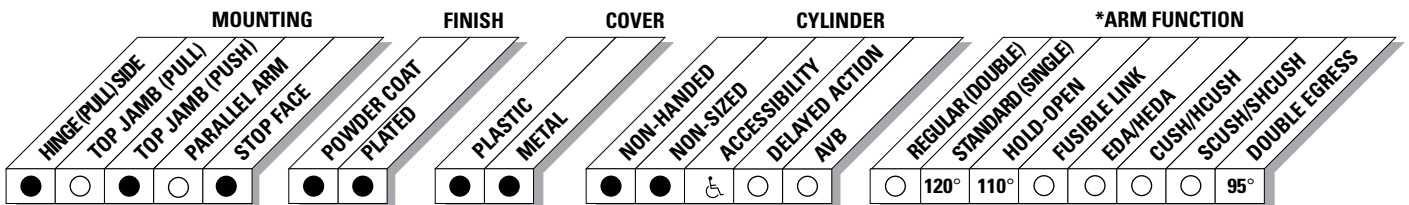
**Finishes/Colors/  
Powder Coat**

- 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.



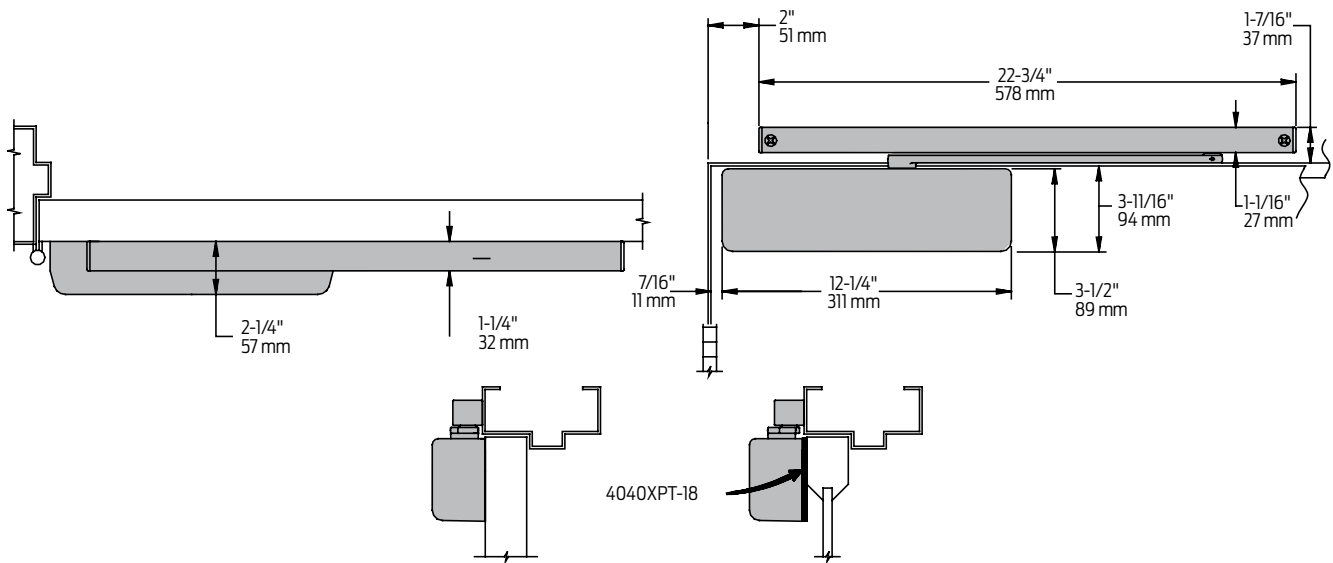
♿ Closer available with less than 5.0 lbs. opening force on 36" door.  
 \* Maximum opening/hold-open point with standard template.

● AVAILABLE  
 ○ NOT AVAILABLE

# 4040XPT Series

## Mounting details

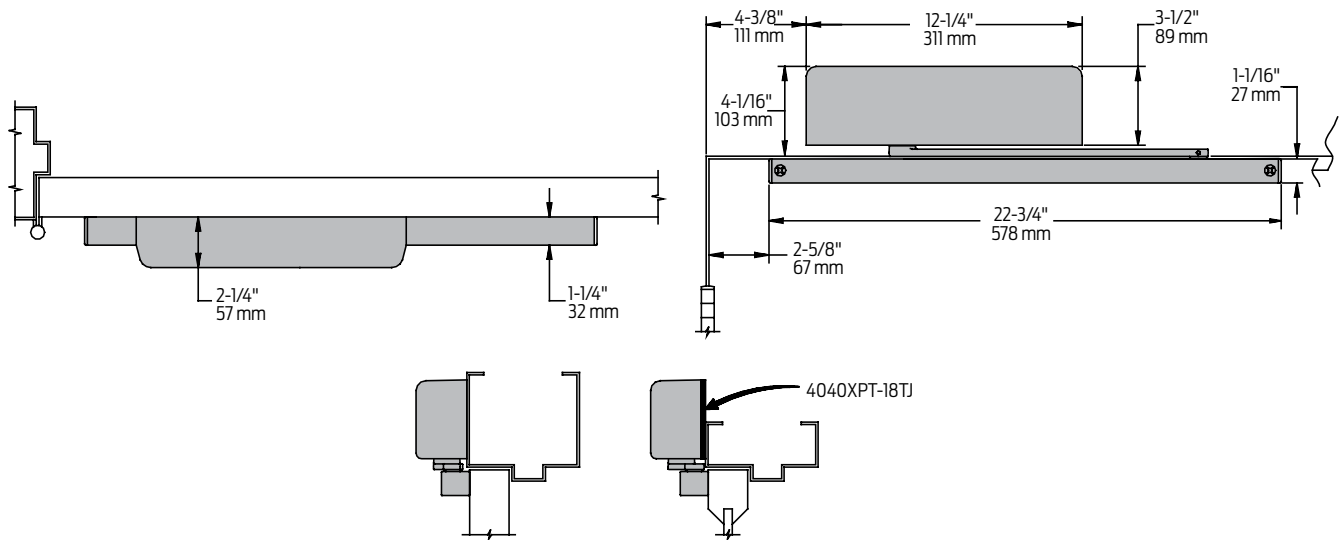
### Hinge (Pull Side) Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	<ul style="list-style-type: none"> <li>■ Recommended at hold-open point or where a door cannot swing 120°</li> <li>■ Optional track bumper assembly assists backcheck in cushioning the opening swing of the door</li> <li>■ It is not intended to replace an auxiliary stop</li> </ul>
<b>Reveal</b>	Should not exceed 1/8" (3 mm) for standard arm
<b>Top Rail</b>	Less than 3-3/4" (95 mm) requires PLATE, 4040XPT-18. Plate requires 1-13/16" (44 mm) minimum
<b>Head Frame</b>	Requires 1-1/4" (32 mm) minimum
<b>Clearance</b>	2-1/4" (57 mm) behind door required for 90° installation
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>■ Templating allows 120° with standard arm, limited to 110° when optional bumper is installed</li> <li>■ Variable hold-open angles with infinite options</li> </ul>

**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°



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	<ul style="list-style-type: none"> <li>■ Recommended at hold-open point or where a door cannot swing 180°</li> <li>■ Optional track bumper assembly assists backcheck in cushioning the opening swing of the door</li> <li>■ It is not intended to replace an auxiliary stop</li> </ul>
<b>Reveal</b>	Should not exceed 1/8" (3 mm)
<b>Head Frame</b>	Less than 3-7/8" (98 mm), requires PLATE, 4040XPT-18TJ. Plate requires 1-3/4" (44 mm) minimum
<b>Clearance</b>	1-1/4" (32 mm) behind door required for 180° installation
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>■ Templating allows 180° with standard track arm, limited to 110° with optional bumper installed</li> <li>■ Consult factory if door will be held open at 180°</li> <li>■ Hold-open points at 85°, 90°, 95°, 100°, 105° or 110° with hold-open tracks</li> </ul>

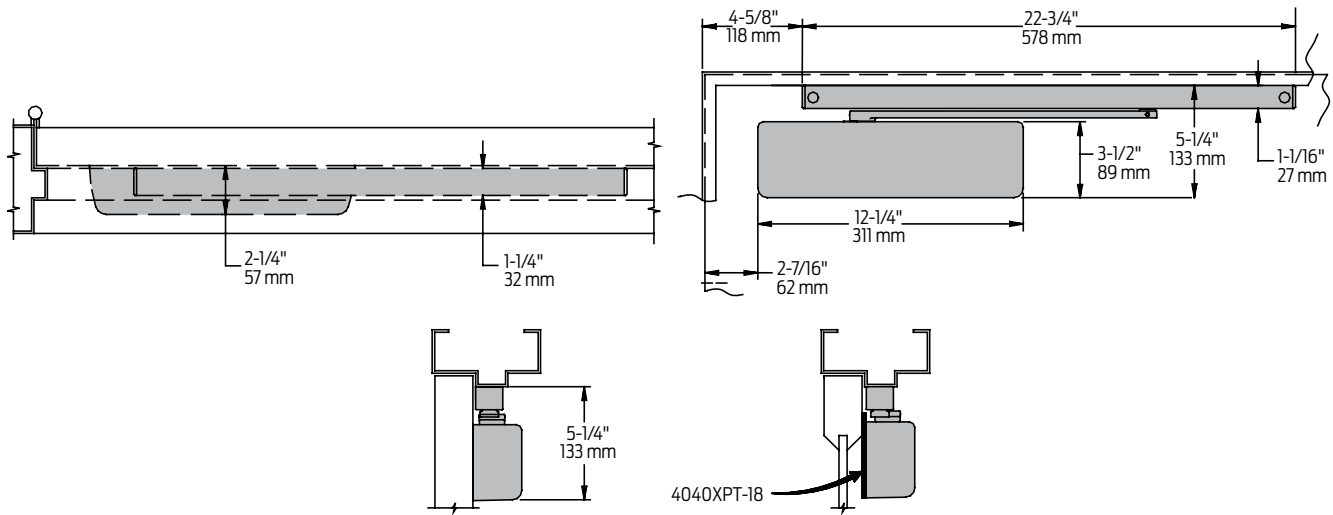
Notes:

- 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



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	<ul style="list-style-type: none"> <li>Recommended at hold-open point or where a door cannot swing 120°</li> <li>Optional track bumper assembly assists backcheck in cushioning the opening swing of the door</li> <li>It is not intended to replace an auxiliary stop</li> </ul>
<b>Clearance</b>	Projects 2-1/4" (57 mm) from face of door
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Less than 5-1/4" (133 mm) measured from the stop, requires PLATE, 4040XPT-18</li> <li>Plate requires 3-1/2" (89 mm) minimum</li> </ul>
<b>Stop Width</b>	Minimum 1-1/4" (32 mm)
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>Templating allows 120° with standard track arm, limited to 110° with optional bumper tracks</li> <li>Hold-open points at 85°, 90°, 95°, 100°, 105° or 110° with hold-open tracks</li> </ul>

**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**

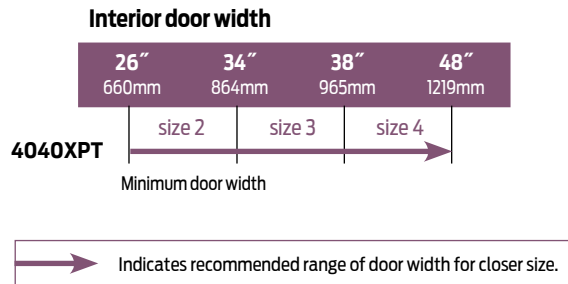
- Plate, 4040XPT-18
- Plate, 4040XPT-18TJ

**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.



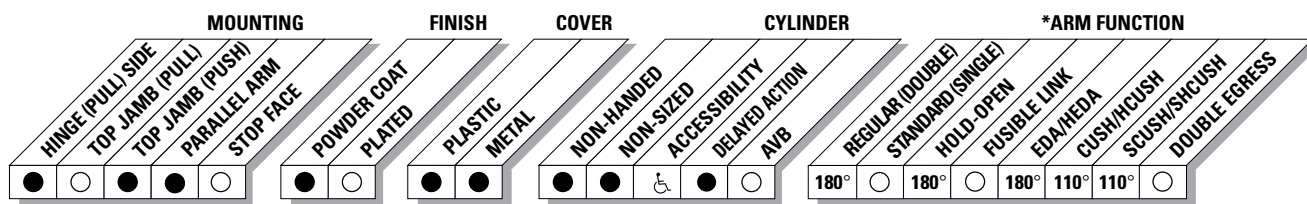


The 4050 Series cast aluminum closer is engineered for durability and built tough to excel in the harsh environments of high frequency, high abusive traffic areas. Ideal for commercial building applications and competitive specification situations that demand a combination of quality, reliability and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

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

**Special Templates**

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



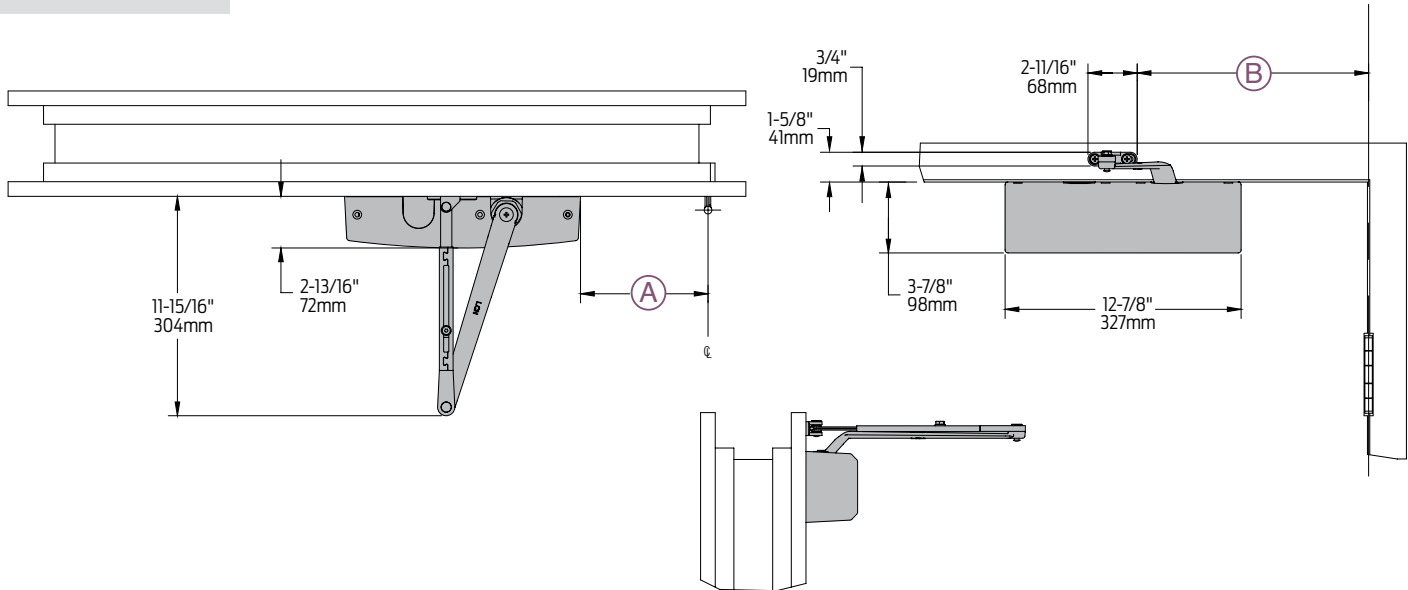
● AVAILABLE  
○ NOT AVAILABLE

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

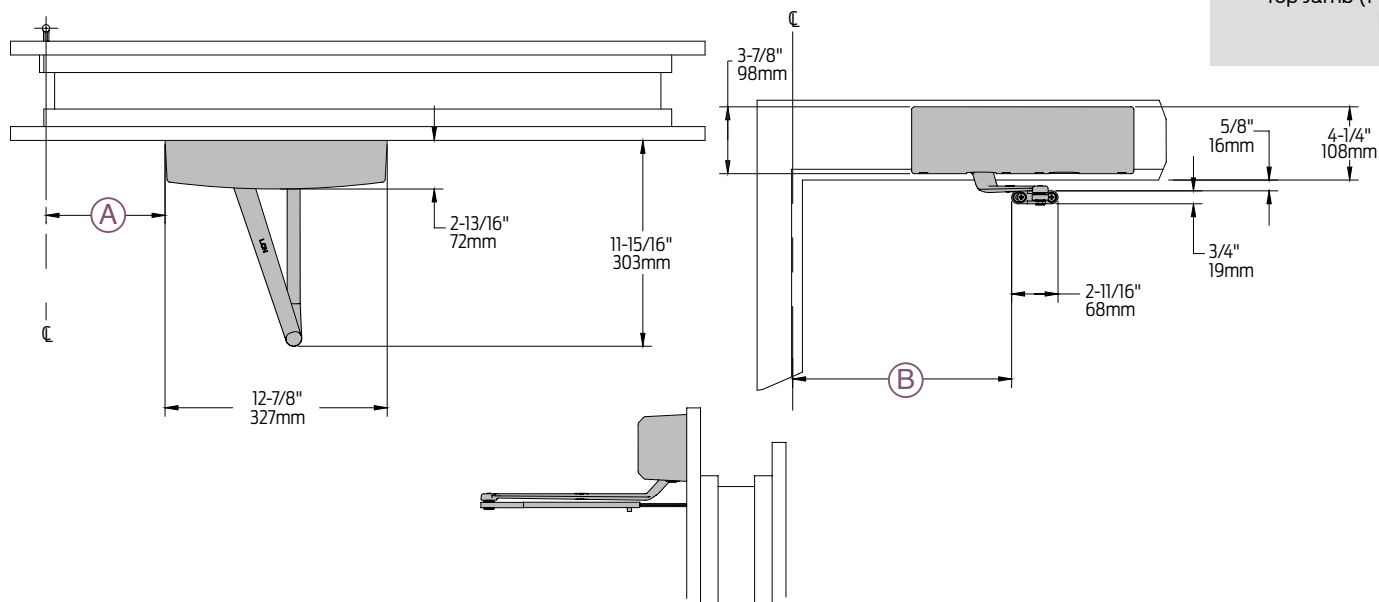
# 4050 Series

## Mounting details

### Hinge (Pull Side) Mounting

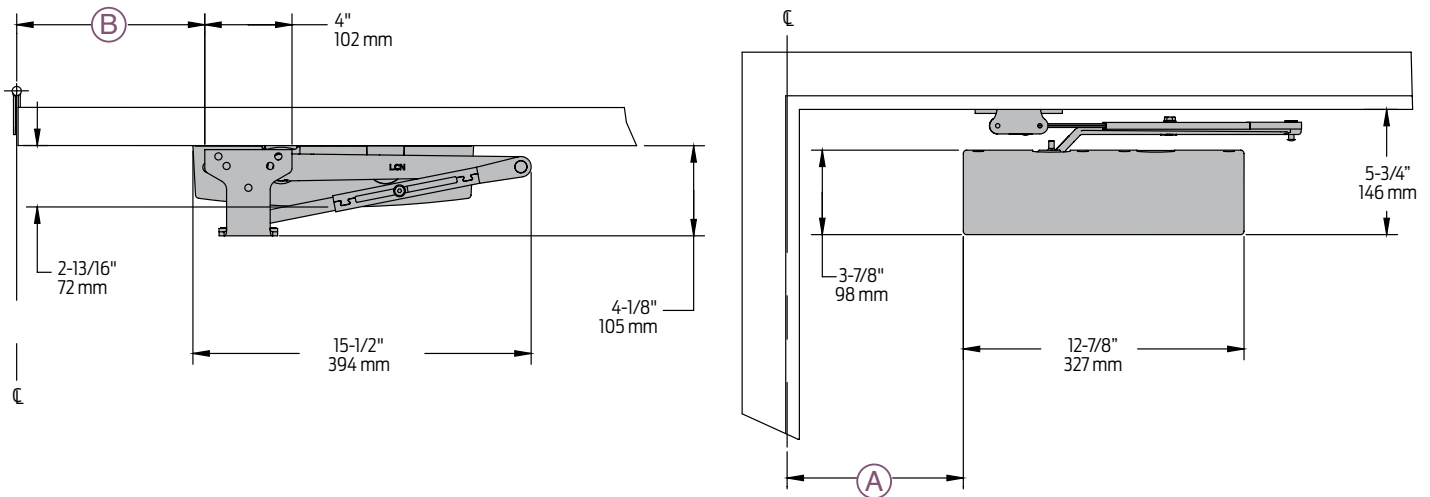


<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point or where a door cannot swing beyond templated maximum opening
<b>Reveal</b>	Should not exceed 3/4" (19 mm) for regular arm or hold-open arm
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Less than 3-7/8" (98 mm) requires PLATE, 4050-18.</li> <li>Plate requires 1-13/16" (44 mm) minimum</li> </ul>
<b>Clearance</b>	2-13/16" (72 mm) behind door required for 90° installation
<b>Delayed Action</b>	Delays closing from 180°-70°. Delay time adjustable up to approximately 1 minute
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>Templating allows up to 180°</li> <li>Hold-open points up to maximum opening with hold-open arm</li> </ul>
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.

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width		
<b>Auxiliary Stop</b>	Recommended at hold-open point or where a door cannot swing beyond templated maximum opening		
<b>Reveal</b>	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°
<b>Top Rail</b>	Requires 2" (51 mm) minimum.		
<b>Head Frame</b>	Less than 3-7/8" (98 mm) requires plate.		
<b>Delayed Action</b>	Delay closing from 180° to 70°. Delay time adjustable up to approximately 1 minute.		
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>■ Templating allows up to 180°</li> <li>■ Hold-open points up to maximum opening with hold-open arm</li> </ul>		
	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)	



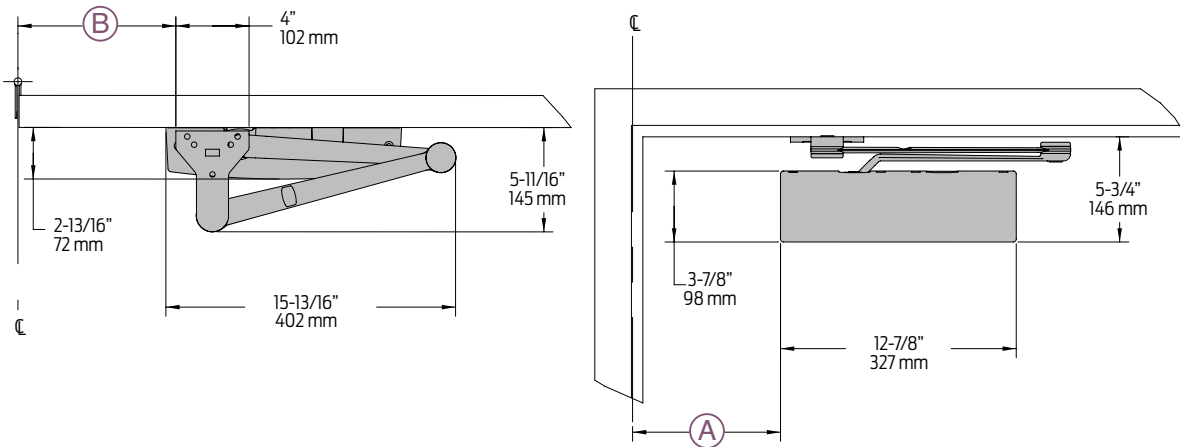
The 'A' dimension refers to the edge of the closer body to the center line of pivot or hinge.  
 The 'B' dimension refers to the edge of the closer shoe bracket to the center line of pivot or hinge.

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point, where the door cannot swing beyond templated maximum opening, or where CUSH-N-STOP arm is not used
<b>Top Rail</b>	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
<b>Clearance</b>	For 4050-62PA shoe is 4-1/8" (105 mm) from door face
<b>Head Frame</b>	Flush or rabbeted requires PA SHOE ADAPTER, 4050-419
<b>Stop Width</b>	Minimum 1-3/16" (30 mm)
<b>Blade Stop</b>	Clearance requires 1/2" (13mm) BLADE STOP SPACER, 4050-61
<b>Delayed Action</b>	Delays closing from 180°-70°. Delay time adjustable up to approximately 1 minute
<b>Auxiliary Shoe</b>	4050-62A allows installation of regular arm with overhead holder/stop
<b>Maximum Opening</b>	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

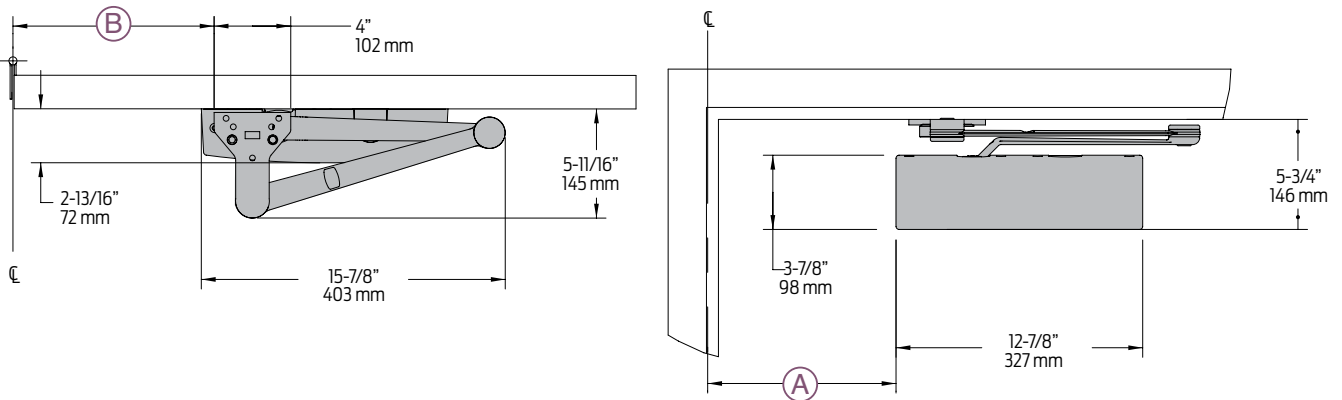
Note:

• 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.

<b>Clearance</b>	4050-62EDA is 5-11/16" (145mm) from door face. 5-11/16" (145mm) for CUSH	
<b>Head Frame</b>	Flush or rabbeted requires FLUSH PANEL ADAPTER, 4050-419	
<b>CUSH ARM</b>	Requires CUSH SHOE SUPPORT, 4050-30 for fifth screw anchorage where reveal is less than 3-1/16" (78 mm)	
<b>Delayed Action</b>	Delays closing from 180° to approximately 70°. Delay time adjustable up to approximately 1 minute.	
<b>Maximum Opening</b>	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

### Alternate Cover



**4050-72ALT**  
Alternate Cover

- Non-handed
- Optional, sold separately (not packed with closer)

### 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)
- Alternate Cover (ALT)  
(sold separately from product)

**Finish**

- Custom Powder Coat (RAL) \_\_\_\_\_  
(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- \_\_\_\_\_

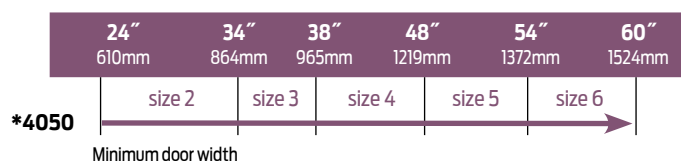
**Table of sizes**

- 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**

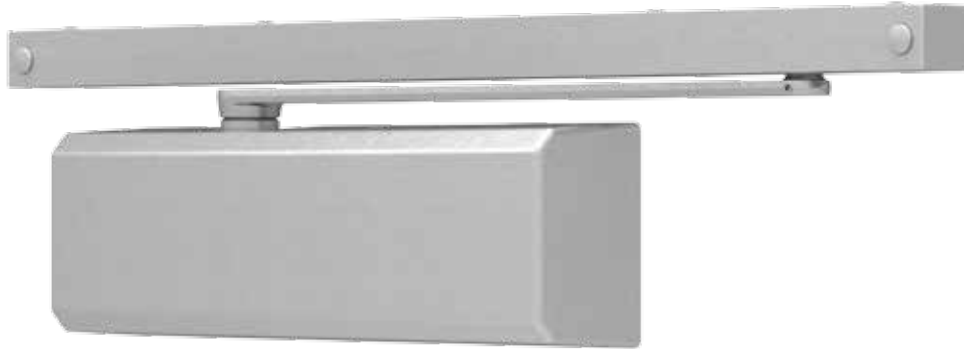
**CAUTION!** Any manual door closer, including those certified by BHMA to conform to ANSI Standard A156.4, that is selected, installed and adjusted based on ADA or other reduced opening force requirements may not provide sufficient power to reliably close and latch a door.

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.



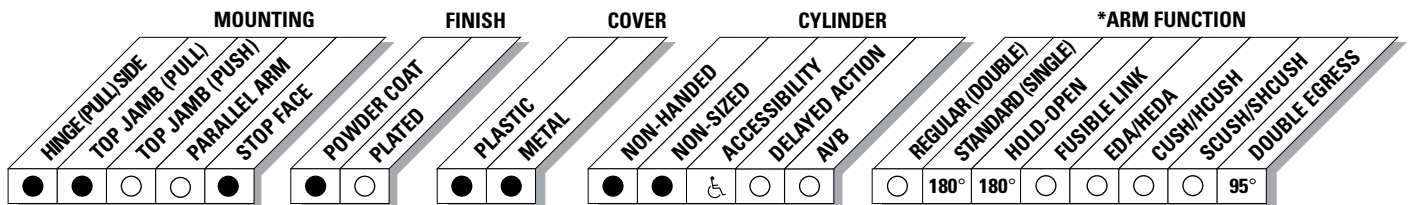


The 4050T cast aluminum heavy duty track closer is designed for rugged high frequency traffic areas. Ideal for commercial building applications and competitive specification situations that demand a combination of quality, reliability and value.

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

**Special Templates**

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



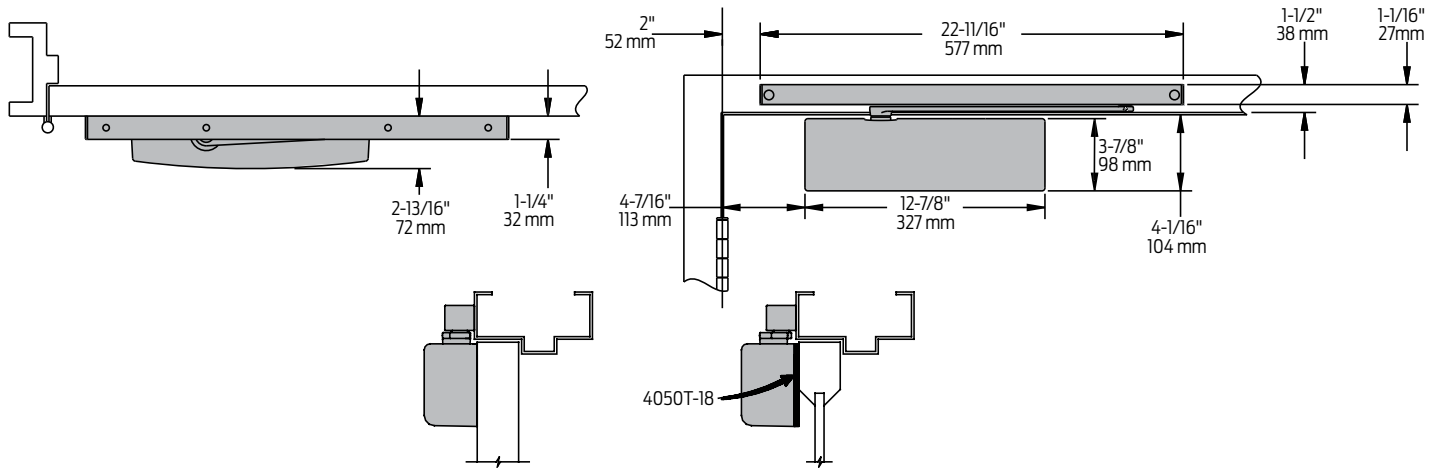
● AVAILABLE  
○ NOT AVAILABLE

♿ 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

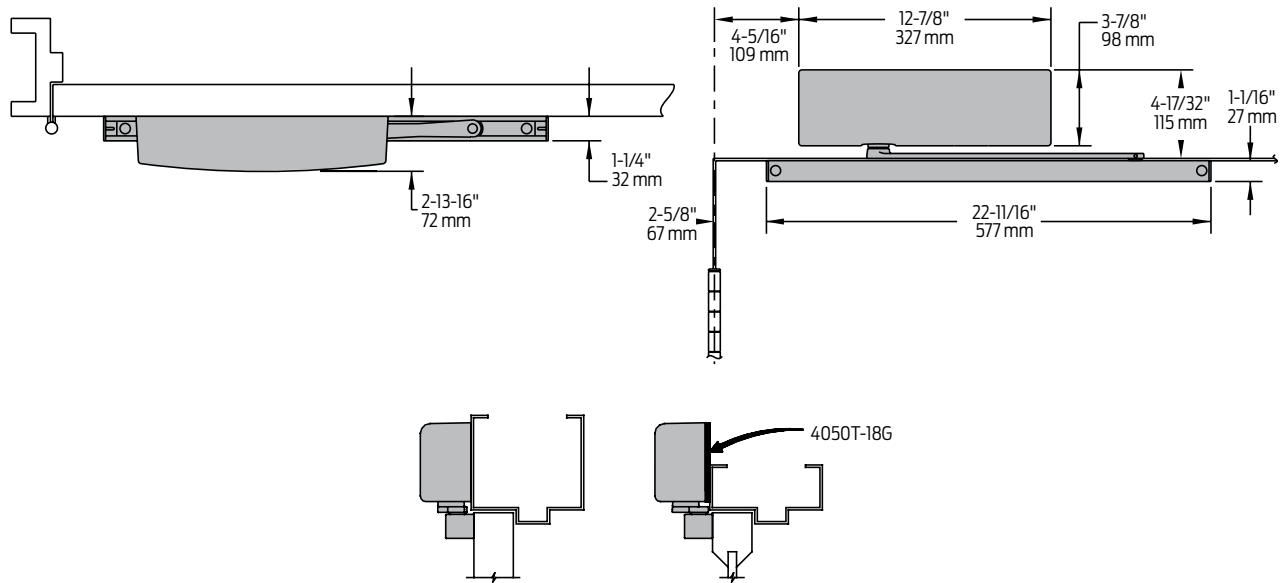
### Hinge (Pull Side) Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	<ul style="list-style-type: none"> <li>■ Recommended at hold-open point or where a door cannot swing 180°</li> <li>■ Optional track bumper assembly assists backcheck in cushioning the opening swing of the door</li> <li>■ It is not intended to replace an auxiliary stop</li> </ul>
<b>Reveal</b>	Should not exceed 1/8" (3 mm) for standard arm
<b>Top Rail</b>	Less than 4-1/8" (104 mm) requires PLATE, 4050T-18. Plate requires 2-1/16" (52mm) minimum
<b>Head Frame</b>	Requires 1-1/4" (32 mm) minimum
<b>Clearance</b>	2-13/16" (52 mm) behind door required for 90° installation
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>■ Templating allows 180°</li> </ul>

**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°



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	<ul style="list-style-type: none"> <li>■ Recommended at hold-open point or where a door cannot swing 180°</li> <li>■ Optional track bumper assembly assists backcheck in cushioning the opening swing of the door</li> <li>■ It is not intended to replace an auxiliary stop</li> </ul>
<b>Reveal</b>	Should not exceed 1/8" (3 mm)
<b>Head Frame</b>	Less than 4-1/2" (114 mm), requires PLATE, 4050T-18G. Plate requires 2-1/16" (52 mm) minimum
<b>Clearance</b>	1-1/4" (32 mm) behind door required for 180° installation
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>■ Templating allows 180°</li> </ul>

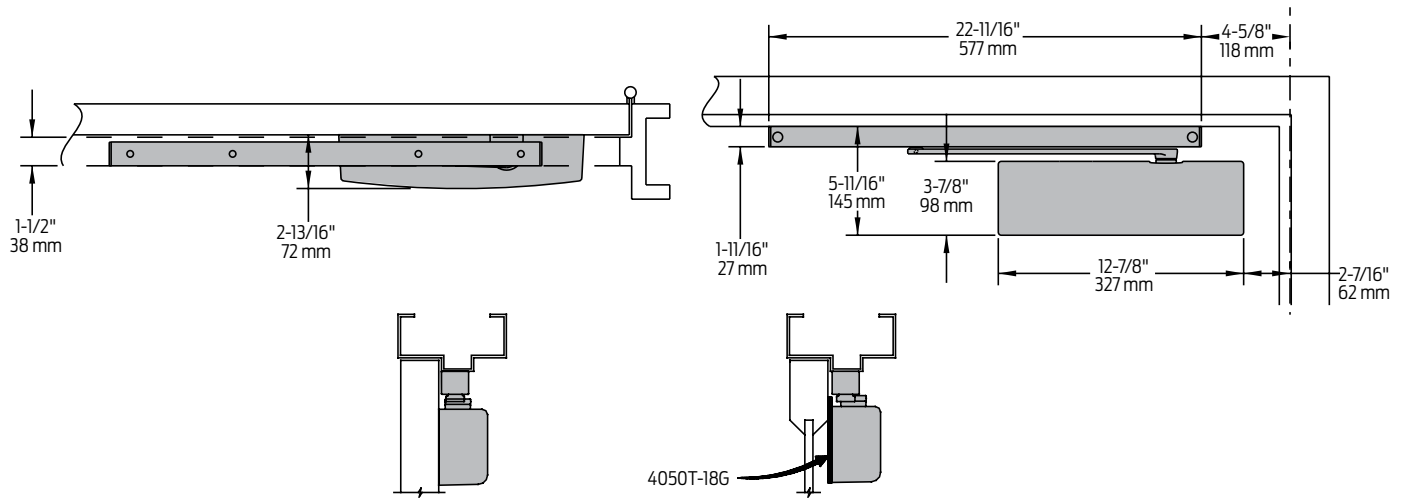
**Notes:**

- 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



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	<ul style="list-style-type: none"> <li>■ Recommended at hold-open point or where a door cannot swing 120°</li> <li>■ Optional track bumper assembly assists backcheck in cushioning the opening swing of the door</li> <li>■ It is not intended to replace an auxiliary stop</li> </ul>
<b>Clearance</b>	Projects 2-9/16" (65 mm) from face of door
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>■ Less than 5-11/16" (144 mm) measured from the stop, requires PLATE, 4050T-18G</li> <li>■ Plate requires 3-5/16" (84 mm) minimum</li> </ul>
<b>Stop Width</b>	Minimum 1-1/4" (32 mm)
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>■ Templating allows 120°</li> </ul>

#### 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)
- 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**

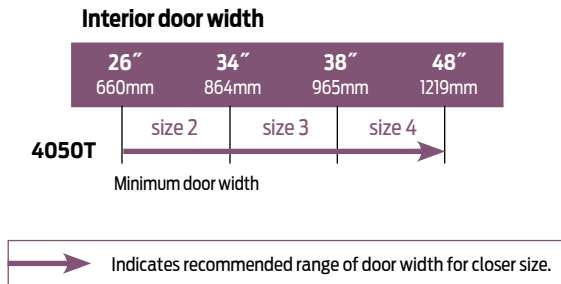
- Plate, 4050T-18
- Plate, 4050T-18G

**Special Template**

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

**Table of sizes**


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



**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.



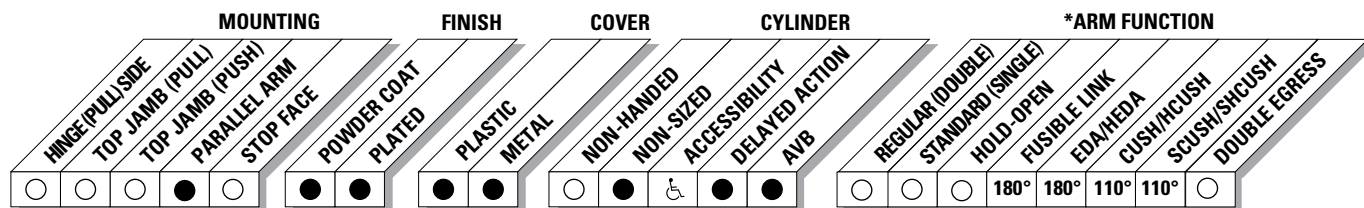


The 4110 is LCN's best performing heavy duty closer designed specifically for institutional and other rugged high traffic applications.

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

**Special Templates**

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



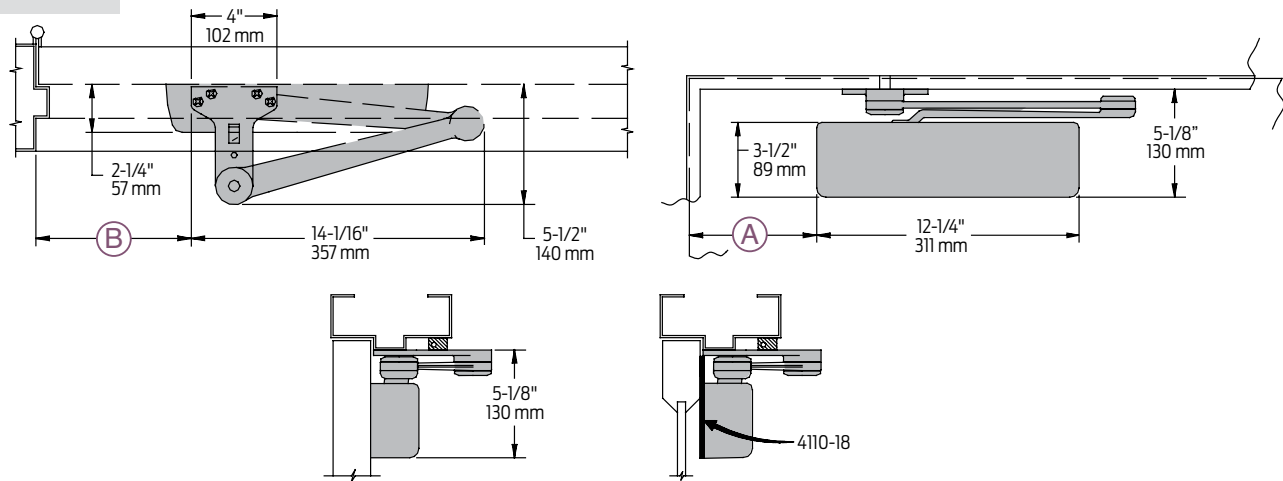
● AVAILABLE  
○ NOT AVAILABLE

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

# 4110 Series

## Mounting details

### Parallel Arm (Push Side) Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width	
<b>Auxiliary Stop</b>	Recommended at hold-open point, where a door cannot swing 180°, or where CUSH-N-STOP arm is not used	
<b>Clearance</b>	EDA, or CUSH shoe is 5-1/2" (140 mm) from door face	
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Less than 5-1/8" (130 mm) measured from stop requires PLATE, 4110-18</li> <li>Plate requires 2" (51 mm) minimum measured from the stop</li> </ul>	
<b>Stop Width</b>	Minimum 1" (25 mm)	
<b>Head Frame</b>	Flush or rabbeted requires CUSH FLUSH PANEL ADAPTER, 4110-419	
<b>Reveal</b>	Less than 2-3/4" (70 mm), use CUSH SHOE SUPPORT, 4110-30 with CUSH arms	
<b>Blade Stop Spacer</b>	4110-61 required to clear 1/2" (13 mm) blade stop	
<b>Cush Arm</b>	Requires CUSH SHOE SUPPORT, 4110-30 for fifth screw anchorage where reveal is less than 3-1/16" (78 mm)	
<b>Delayed Action</b>	<ul style="list-style-type: none"> <li>Add suffix "DEL" to selected cylinder (eg. 4111 DEL)</li> <li>Not available with 4116 cylinder. Delays closing from maximum opening to approximately 70°</li> <li>Delay time adjustable up to approximately 1 minute</li> </ul>	
<b>Advanced Variable Backcheck</b>	<ul style="list-style-type: none"> <li>Cylinder starts backcheck at approximately 45° instead of the normal 75°</li> <li>Add suffix "AVB" to selected cylinder</li> </ul>	
<b>Maximum opening</b>	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"> <li>Hold-open points up to maximum opening with HEDA or Fusible Link arm</li> </ul>	<ul style="list-style-type: none"> <li>Hold-open point at maximum opening with HCUSH arm</li> <li>Spring Cush hold-open points are approximately 5° less than templated stop point</li> </ul>

### 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- \_\_\_\_\_

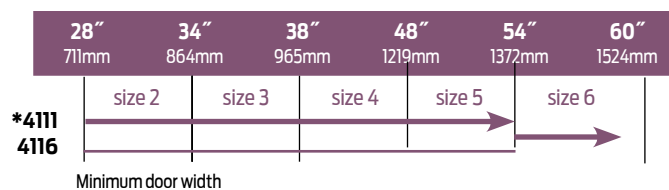
## Table of sizes

- 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.

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---



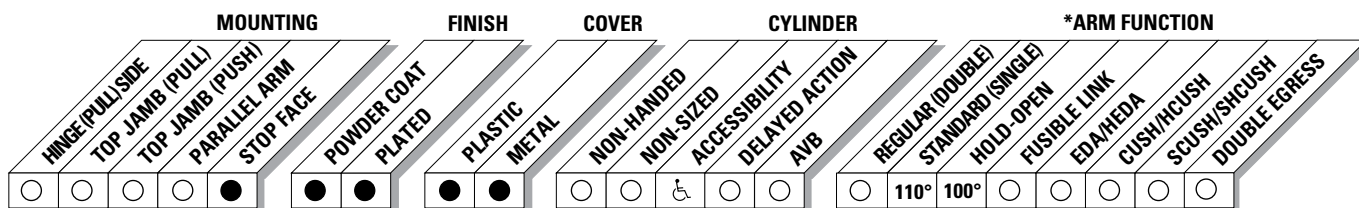
The 4110T is LCN's best performing heavy duty track closer designed specifically for interior doors in institutional and other high traffic applications.

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-1/2" Diameter Piston</li> <li>■ 11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>
<b>Fluid</b>	All Weather Fluid
<b>Handing</b>	Handed
<b>Size</b>	Adjustable Spring Size 1-5, or Sized 6. Includes Patented Green Dial
<b>Warranty</b>	30 years

<b>Cover</b>	<ul style="list-style-type: none"> <li>■ Plastic, Standard</li> <li>■ Metal, Optional</li> </ul>
<b>Fasteners</b>	Self Reaming and Tapping Screws (SRT)
<b>Mounting</b>	Stop Face (Push Side)
<b>Arms</b>	Standard Arm and Track with Roller
<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Aluminum (689)</li> <li>■ Statuary Bronze (690)</li> <li>■ Light Bronze (691)</li> <li>■ Black (693)</li> <li>■ Dark Bronze (695)</li> <li>■ Brass (696)</li> <li>■ Custom colors optional</li> </ul>
	<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>

**Special Templates**

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



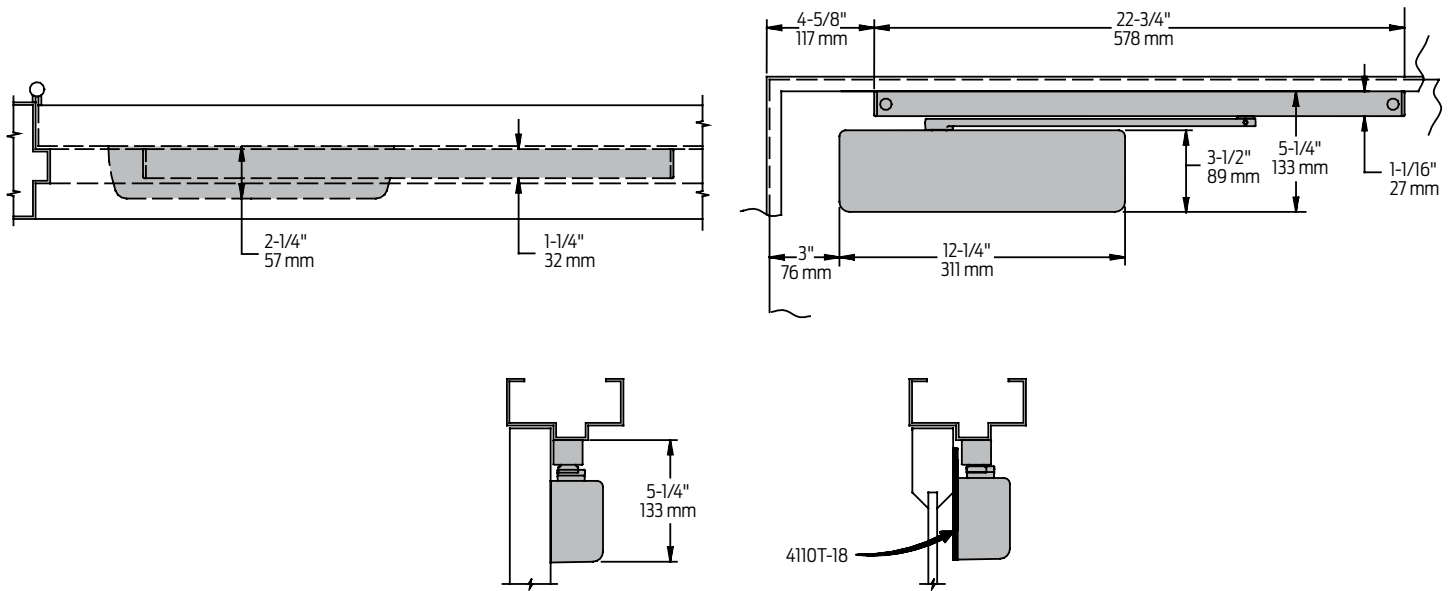
● AVAILABLE  
○ NOT AVAILABLE

♿ 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



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	<ul style="list-style-type: none"> <li>■ Recommended at hold-open point or where a door cannot swing 110°.</li> <li>■ Optional track bumper assembly assists backcheck in cushioning the opening swing of the door</li> <li>■ It is not intended to replace an auxiliary stop</li> </ul>
<b>Clearance</b>	Projects 2-1/4" (57 mm) from face of door
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>■ Less than 5-1/4" (133 mm) measured from the stop, requires PLATE, 4110T-18</li> <li>■ Plate requires 2-1/4" (57 mm) minimum</li> </ul>
<b>Stop Width</b>	Minimum 1-1/4" (32 mm)
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>■ Templating allows 110° with standard track arm, limited to 100° with optional bumper tracks</li> <li>■ Variable hold-open angles with infinite options</li> </ul>

**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

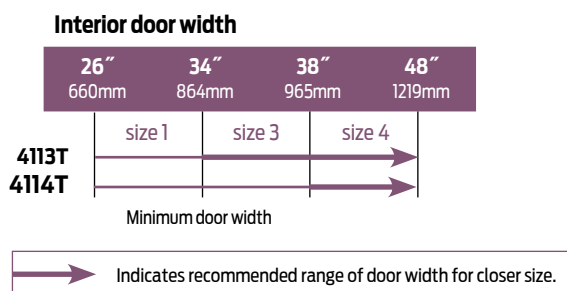
- Plate, 4110T-18

#### 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

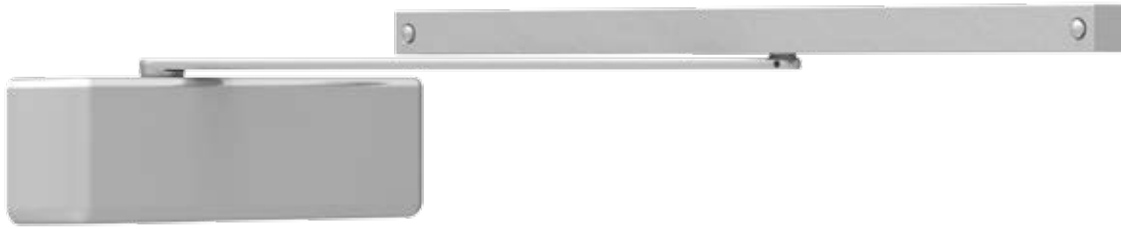
**CAUTION!** Any manual door closer, including those certified by BHMA to conform to ANSI Standard A156.4, that is selected, installed and adjusted based on ADA or other reduced opening force requirements may not provide sufficient power to reliably close and latch a door.

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.



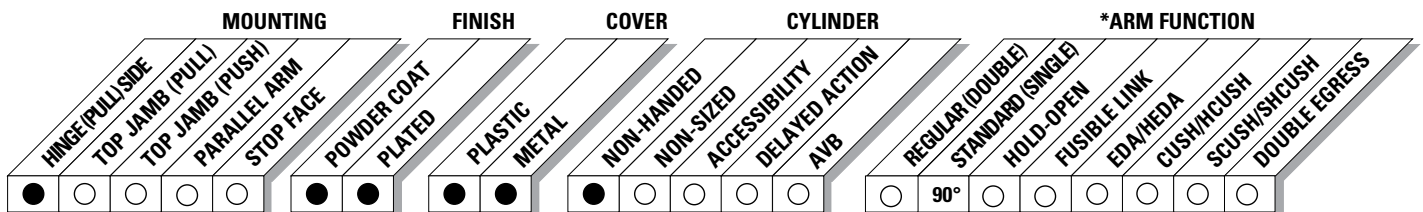


The 400T is a heavy duty closer to reliably control fire and smoke barrier doors with maximum swing of 90°. Designed for use with an SEM 7850 wall magnet.

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Cover</b>	<ul style="list-style-type: none"> <li>Plastic, Standard</li> <li>Metal, Optional</li> </ul>
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>Cast Iron Body</li> <li>Full Complement Bearing</li> <li>1-1/2" Diameter Piston</li> <li>3/4" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Fasteners</b>	Wood and machine screw pack
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	In a wall pocket, hinge side
<b>Handing</b>	Non-Handed	<b>Arms</b>	Standard Arm and Track with Roller
<b>Size</b>	Sized 3 or 4	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>Aluminum (689)</li> <li>Statuary Bronze (690)</li> <li>Light Bronze (691)</li> <li>Black (693)</li> <li>Dark Bronze (695)</li> <li>Brass (696)</li> <li>Custom colors optional</li> </ul>
<b>Warranty</b>	30 years		<ul style="list-style-type: none"> <li>Optional SRI primer - powder coat only</li> <li>Optional plated finishes</li> </ul>

**Special Templates**

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



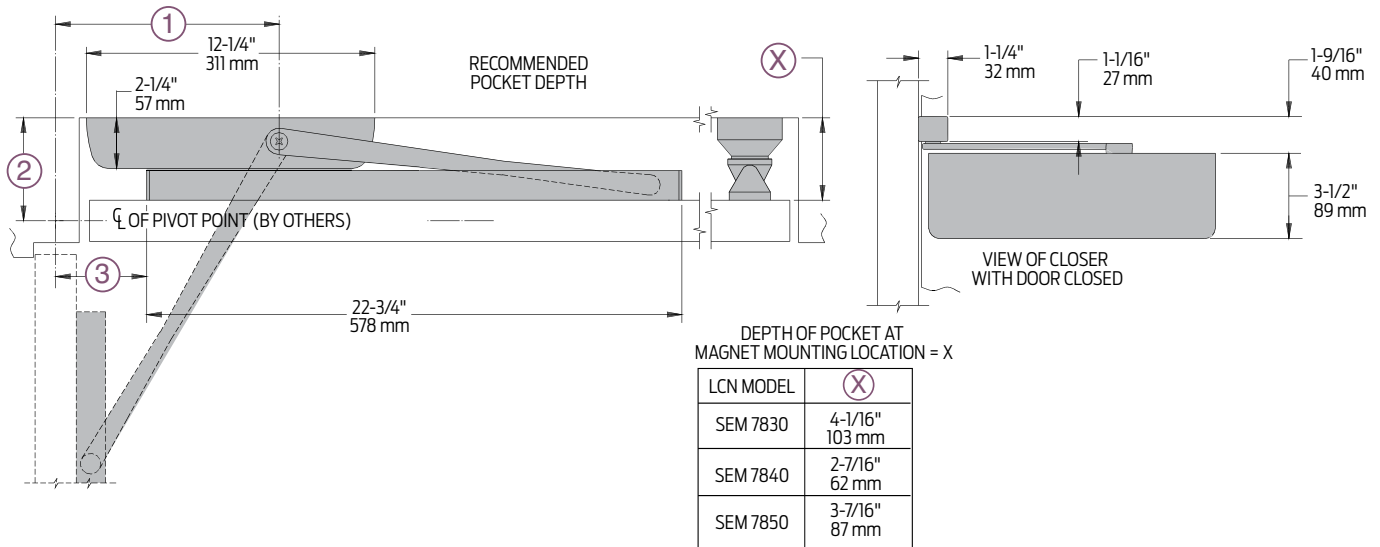
● AVAILABLE  
○ NOT AVAILABLE

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

# 4000T Series

## Mounting details

### Wall pocket mounting



<b>Butt Hinges</b>	<ul style="list-style-type: none"> <li>■ Pocket Pivot, Total Door Hinge or Center Pivot are door mounting options</li> <li>■ Should not exceed 5" (127 mm)</li> </ul>
<b>Pocket Depth</b>	<ul style="list-style-type: none"> <li>■ See above table for distance required between door and closer mounting location</li> <li>■ This dimension is measured from the cylinder mounting surface to the pull side face of the door at 90°</li> </ul>
<b>Wall Magnet</b>	<ul style="list-style-type: none"> <li>■ SEM 7850 is recommended. Use of other magnets may require special construction to alter the depth of the pocket at the magnet location</li> <li>■ See Fire Life Safety Section</li> </ul>
<b>Dimension 1</b>	<ul style="list-style-type: none"> <li>■ The distance from the centerline of the closer shaft to the centerline of the hinge or pivot</li> <li>■ For pocket pivot or total door hinge, 9-1/2" (241 mm)</li> <li>■ For butt hinge 8" (203 mm)</li> <li>■ For center pivot 10" (254 mm)</li> </ul>
<b>Dimension 2</b>	<ul style="list-style-type: none"> <li>■ The distance from the centerline of the pivot or hinge to the cylinder mounting surface</li> <li>■ For pocket pivot 4-1/2" (114 mm)</li> <li>■ For total door hinge 3-7/8" (98 mm)</li> <li>■ For butt hinge 2-7/8" (73 mm)</li> <li>■ For center pivot 4-1/2" (114 mm)</li> </ul>
<b>Dimension 3</b>	<ul style="list-style-type: none"> <li>■ The distance from the centerline of the pivot or hinge to end of the track</li> <li>■ For pocket pivot or total door hinge, 3-7/8" (98 mm)</li> <li>■ For butt hinge 2-3/8" (60 mm)</li> <li>■ For center pivot 4-5/8" (117 mm)</li> </ul>
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>■ Templating allows 90° only</li> <li>■ Hold-open point 90° with magnet</li> </ul>

**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)

# 4000T Series

## Ordering Information

### 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

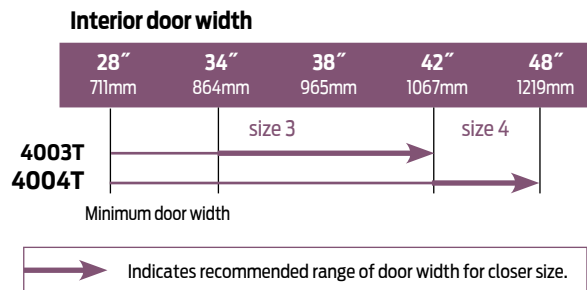
- TB\*, Wood & Machine Screw (TBWMS)
- TORX Machine Screw (TORX)
- TB\* & TORX Machine Screw (TBTRX)  
\* Specify door thickness if other than 1-3/4".

#### Special Template

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

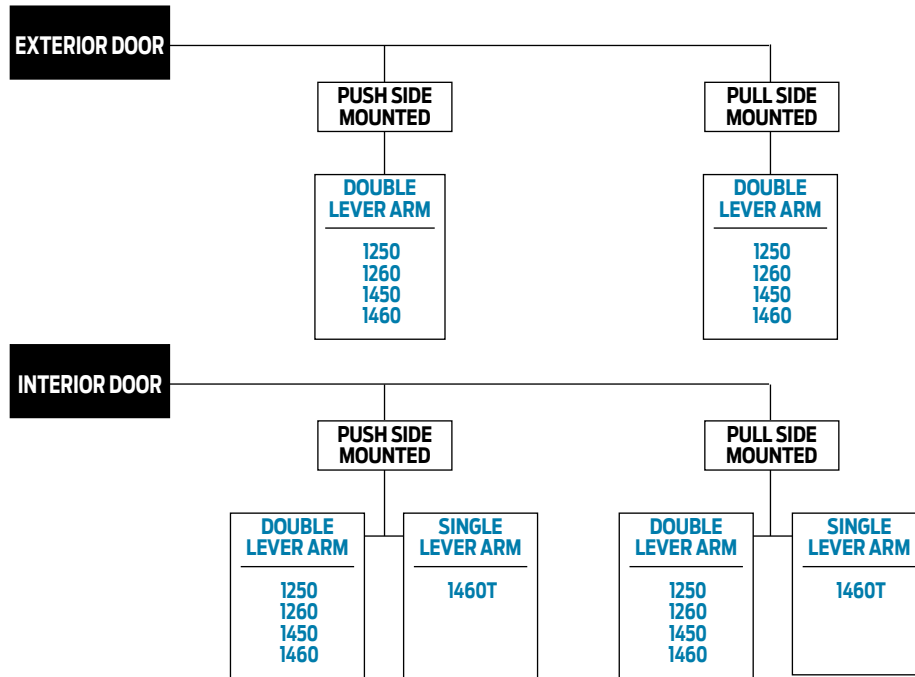
### Table of sizes

- 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/HCUSH	SCUSH/SHCUSH	
1250	●	○	●	●	○	●	●	○	●	○	○	●	●	♿	○	180°	○	○	180°	180°	110°	110°	
1260	●	○	●	●	○	○	●	○	●	○	○	●	●	♿	○	180°	○	○	180°	120°	110°	110°	
1450	●	○	●	●	○	●	●	○	●	○	○	●	●	♿	○	180°	○	○	180°	180°	110°	110°	
1460	●	○	●	●	○	○	●	●	●	○	○	●	●	♿	●	180°	○	180°	110°	100°	100°		
1460T	●	●	○	○	●	○	●	●	●	○	○	●	●	♿	○	○	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

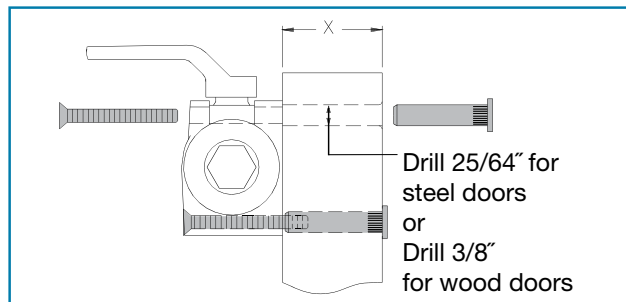
UL listed for self-closing doors without hold-open under "SWINGING DOOR CLOSERS" (GVEV) file R 1943. Tested and certified under ANSI Standard A156.4 grade one. Consult factory for details. Consult factory for other listings such as; cUL, California State Fire Marshal, Bureau of Standards and Appeals.

## 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.



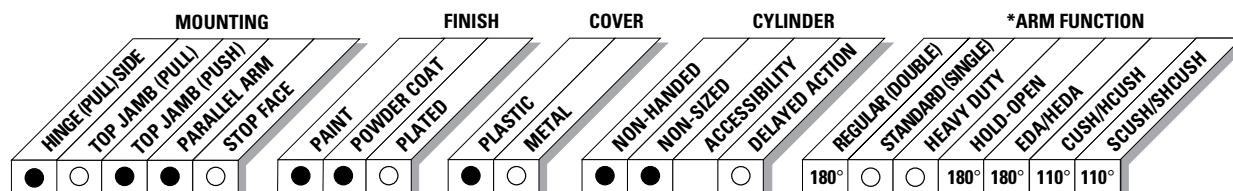
The 1250 Series cast aluminum closer is designed for low-frequency and low abusive traffic areas. This cast aluminum closer is ideal for aluminum storefronts, interior offices and many other applications. Combining dependable operation, low maintenance and a patented stylish look - with or without the 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.

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>Cast Aluminum Body</li> <li>Full Complement Bearing</li> <li>1-3/8" Diameter Piston</li> <li>5/8" Diameter Single Heat Treated Pinion Journal</li> </ul>
<b>Fluid</b>	All Weather Fluid
<b>Handing</b>	Non-Handed
<b>Templating</b>	Peel-n-Stick templates - 3/4" x 9-1/16" Mounting Hole Pattern
<b>Size</b>	Adjustable Spring Size 1-5
<b>Warranty</b>	15 years

<b>Cover</b>	<ul style="list-style-type: none"> <li>Slim Line Cover, Optional</li> </ul>
<b>Fasteners</b>	Universal Screw Pack (UNIV)
<b>Mounting</b>	Hinge (Pull Side), Top Jamb (Push Side), Parallel Arm (Push Side)
<b>Arms</b>	Tripack includes Regular, Top Jamb, and Parallel Arm (Rw/PA)
<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>Aluminum (689)</li> <li>Statuary Bronze (690)</li> <li>Light Bronze (691)</li> <li>Black (693)</li> <li>Dark Bronze (695)</li> <li>Brass (696)</li> <li>Custom colors optional</li> </ul>
	<ul style="list-style-type: none"> <li>Optional SRI primer - powder coat only</li> </ul>

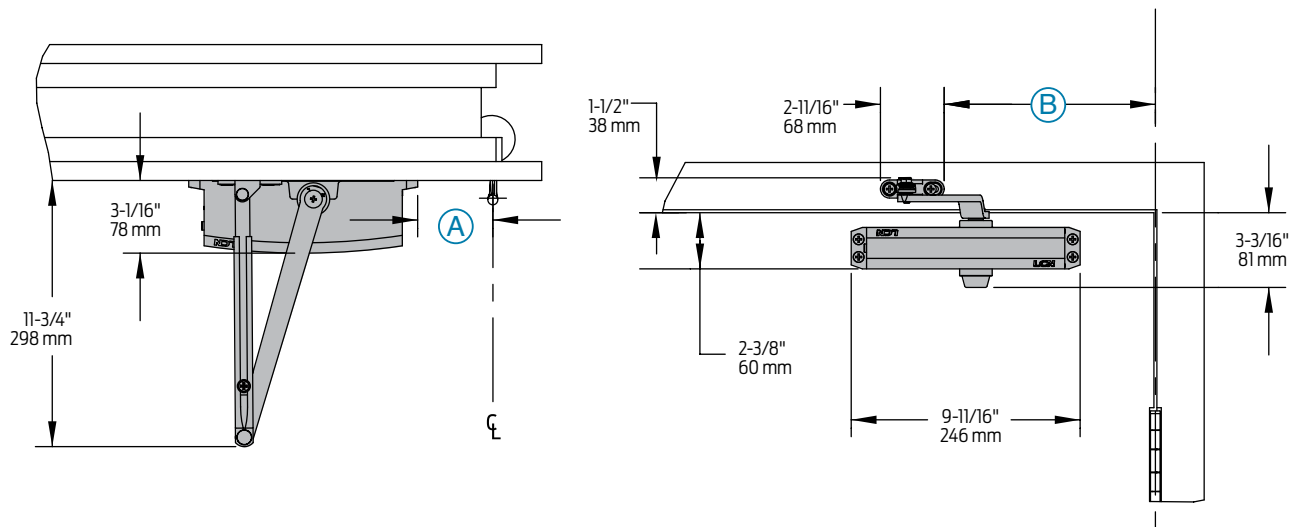
### Special Templates

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

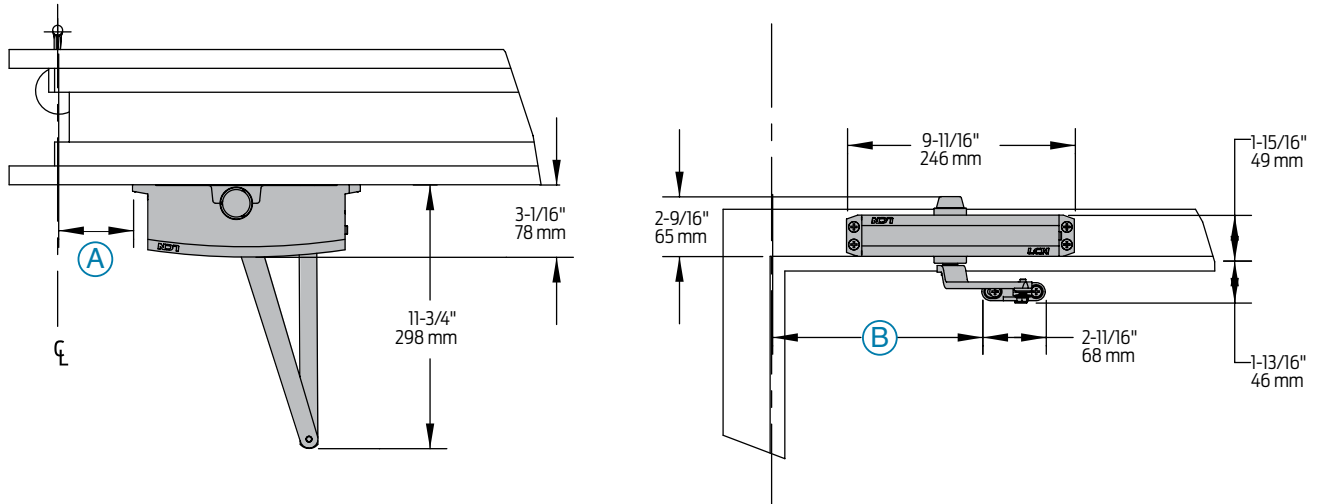


● AVAILABLE  
○ NOT AVAILABLE

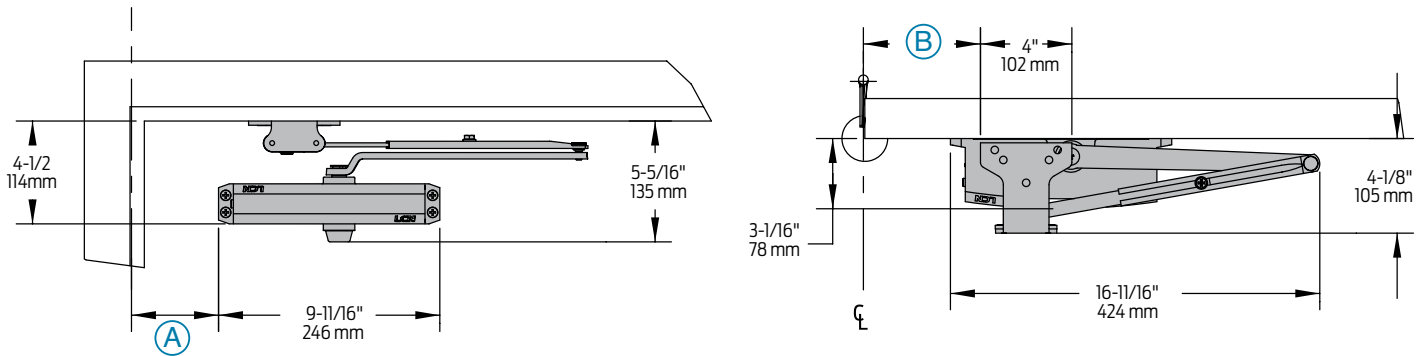
♿ Closer available with less than 5.0 lbs. opening force on 36" door.  
\* Maximum opening/hold-open point with standard template.



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point or where a door cannot swing 180°
<b>Reveal</b>	Should not exceed 3/4" (19 mm) for regular arm or 1/2" (13 mm) for hold-open arm
<b>Top Rail</b>	Less than 2-3/8" (60 mm) requires PLATE, 1250-18
<b>Clearance</b>	3-1/16" (78mm) behind door required for installation.
<b>Maximum opening</b>	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.	



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width		
<b>Auxiliary Stop</b>	Recommended at hold-open point or where a door cannot swing 180°		
<b>Reveal</b>	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°
<b>Top Rail</b>	Requires 1-3/4" (44 mm) minimum. 2-1/2" (64 mm) minimum with closer on PLATE, 1250-18		
<b>Head Frame</b>	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.)		
<b>Maximum opening</b>	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.

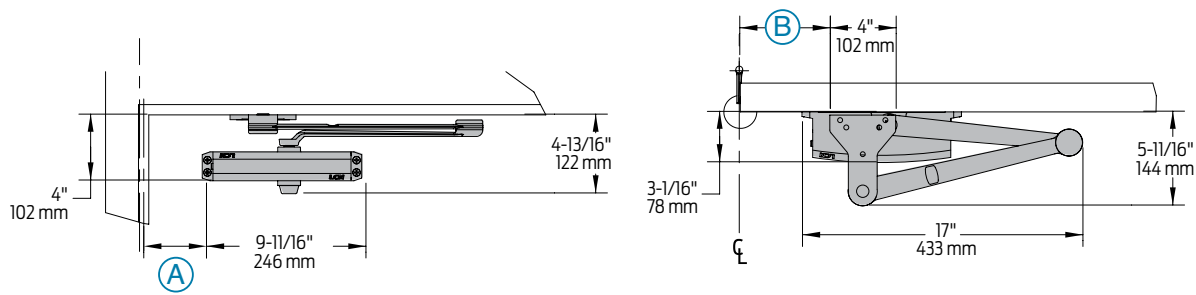
The 'B' dimension refers to the edge of the closer shoe bracket to the center line of pivot or hinge.

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point, where a door cannot swing 180°, or where CUSH-N-STOP arm is not used
<b>Top Rail</b>	Less than 4-1/2" (114 mm) measured from the stop requires PLATE, 1250-18PA
<b>Clearance</b>	1250-62PA shoe projects 4-1/8" (105 mm) from door face
<b>Stop Width</b>	Minimum 1" (25 mm)
<b>Blade Stop</b>	Clearance, requires 1/2" (13 mm) BLADE STOP SPACER, 1250-61
<b>Auxiliary Shoe</b>	1250-62A allows installation of regular arm with overhead holder/stop
<b>Maximum opening</b>	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

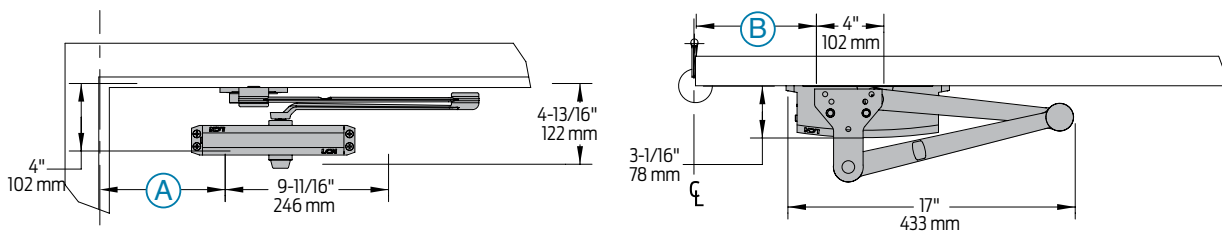


1250  
Series

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.

<b>Clearance</b>	1250-62EDA or CUSH shoe projects 5-11/16" (144mm) from door face	
<b>Head Frame</b>	Flush or rabbeted requires CUSH FLUSH PANEL ADAPTER, 1250-419	
<b>EDA or CUSH ARM</b>	Requires soffit SHOE SUPPORT, 1250-30 for fifth screw anchorage where reveal is less than 2-3/4" (70mm)	
<b>Spring CUSH</b>	Dead stop points are approximately 5° more than templated stop point.	
<b>Maximum opening</b>	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

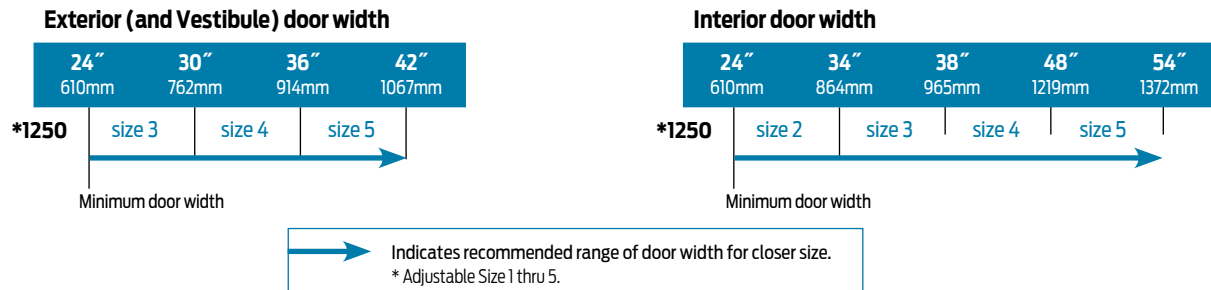
- ST- \_\_\_\_\_

#### 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

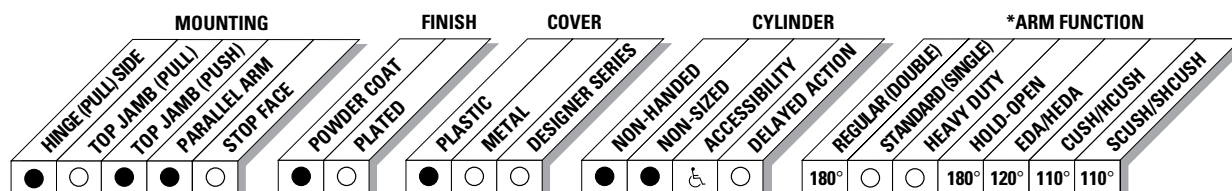


The 1260 is a light to medium duty cast iron closer designed to fit into the most common commercial foot print. The 1260 is adjustable for spring sizes 1-5. The 1260 also features a complete line of regular and extra duty arms, LCN's peel-n-stick installation templates, a convenient spring adjust pointer, and an optional Quick Fix™ bracket kit.

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Cover</b>	<ul style="list-style-type: none"> <li>■ Slim Line Cover, Optional</li> </ul>
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-3/8" Diameter Piston</li> <li>■ 5/8" Diameter Single Heat Treated Pinion Journal</li> </ul>	<b>Fasteners</b>	Self Reaming and Tapping Screws (SRT)
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Hinge (Pull Side), Top Jamb (Push Side), Parallel Arm (Push Side)
<b>Handing</b>	Non-Handed	<b>Arms</b>	Regular Arm
<b>Templating</b>	Peel-n-Stick templates - 3/4" x 9-1/16" Mounting Hole Pattern	<b>Finishes/Colors/Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Aluminum (689)</li> <li>■ Statuary Bronze (690)</li> <li>■ Light Bronze (691)</li> <li>■ Black (693)</li> <li>■ Dark Bronze (695)</li> <li>■ Brass (696)</li> <li>■ Custom colors optional</li> </ul>
<b>Size</b>	Adjustable Spring Size 1-5		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> </ul>
<b>Warranty</b>	20 years		

### Special Templates

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



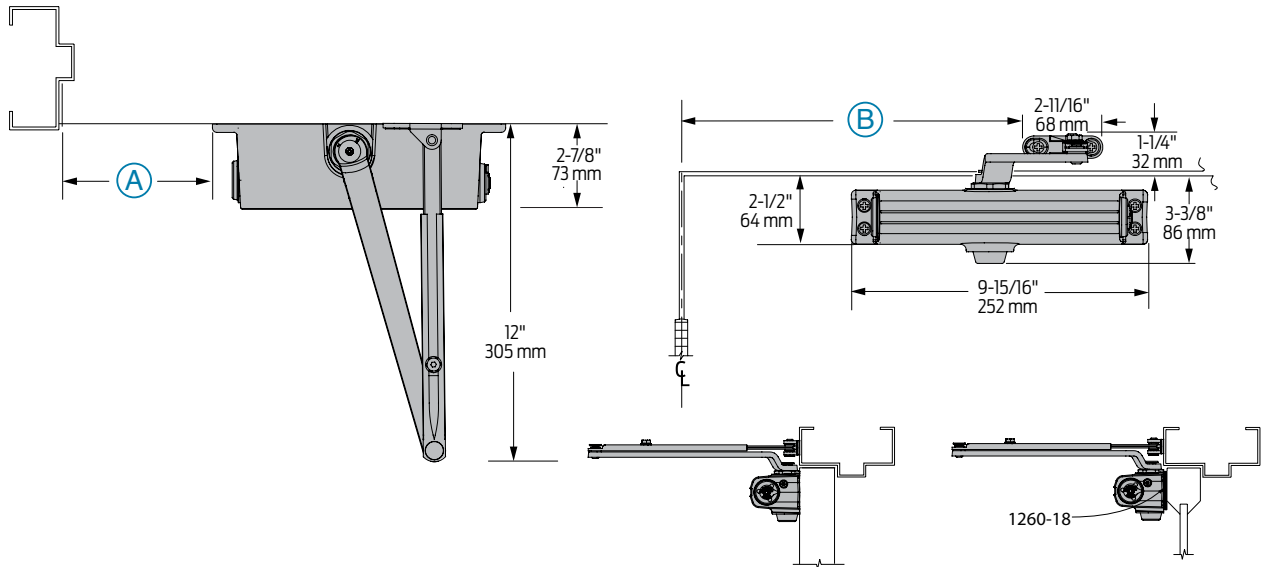
● AVAILABLE  
○ NOT AVAILABLE

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

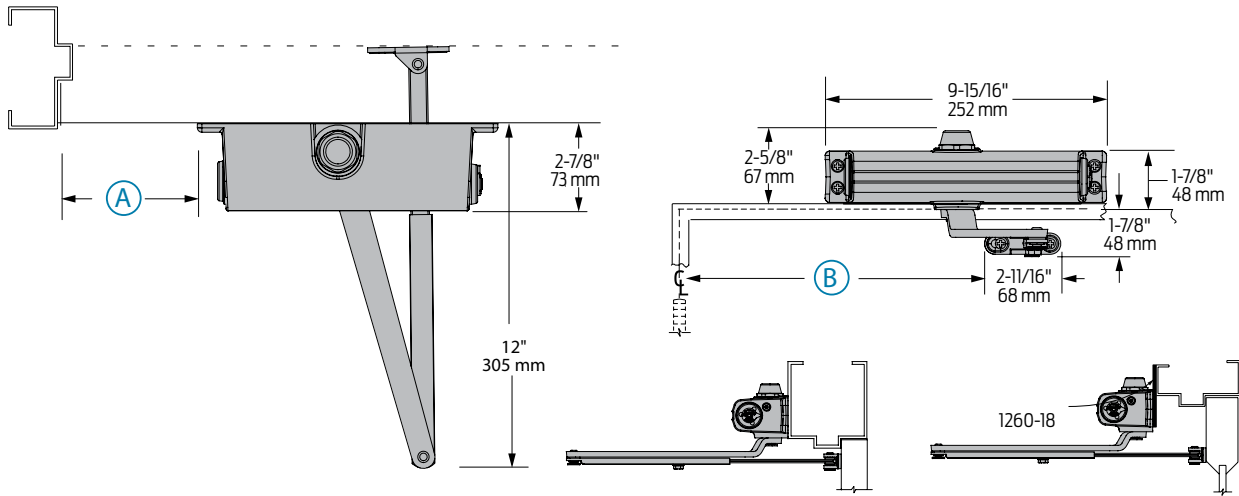
# 1260 Series

## Mounting details

### Hinge (Pull) Side Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point or where a door cannot swing 180°
<b>Reveal</b>	Should not exceed 3/4" (19 mm) for regular arm or 1/2" (13 mm) for hold-open arm
<b>Top Rail</b>	Less than 2-1/2" (64 mm) requires PLATE, 1260-18
<b>Clearance</b>	2-7/8" (73 mm) behind door required for installation
<b>Maximum opening</b>	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.	

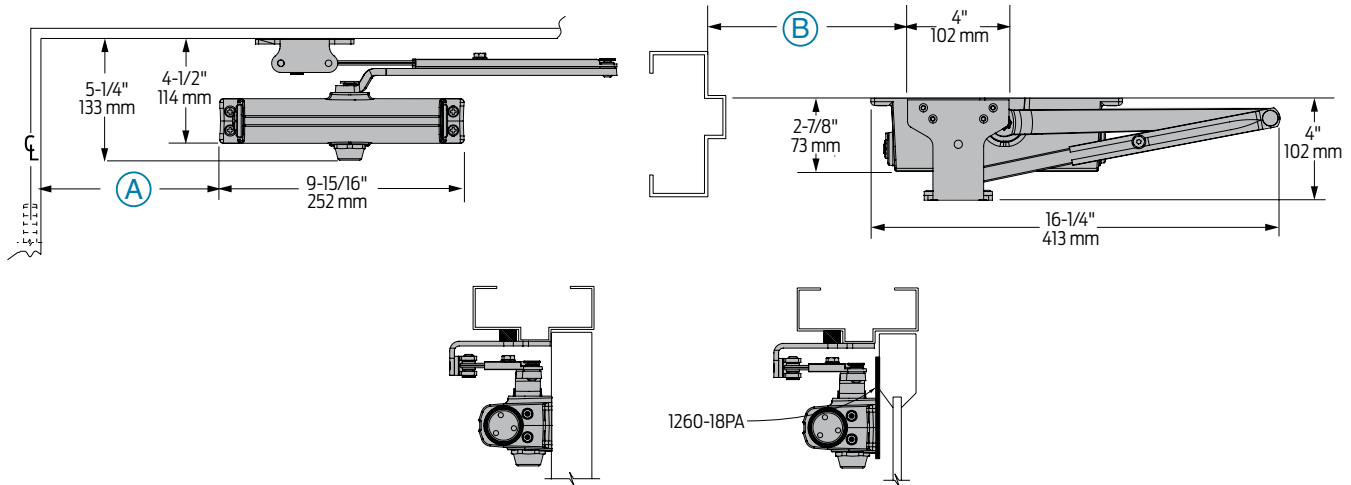


<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width		
<b>Auxiliary Stop</b>	Recommended at hold-open point or where a door cannot swing 180°		
<b>Reveal</b>	Arm Type	Maximum Reveal	Opening
	Regular Arm	3-1/2"	Up to 120°
	Regular Arm	2-1/4"	121° to 180°
	Long Arm	7-1/2"	Up to 120°
	Long Arm	3-1/2"	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°
<b>Top Rail</b>	1-3/4" (44 mm) minimum. 2-1/2" (64 mm) minimum with closer on PLATE, 1260-18		
<b>Head Frame</b>	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.)		
<b>Maximum opening</b>	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.		

# 1260 Series

## Mounting details

### Parallel Arm (Push Side) Mounting

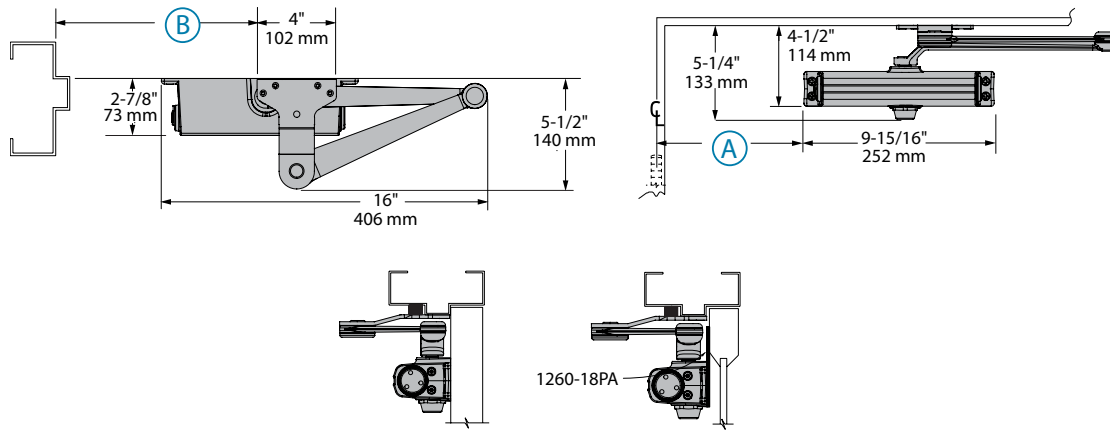


<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point, where a door cannot swing 180°, or where CUSH-N-STOP arm is not used
<b>Top Rail</b>	Less than 4-3/8" (111 mm) measured from the stop requires PLATE, 1260-18PA
<b>Clearance</b>	1260-62PA shoe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

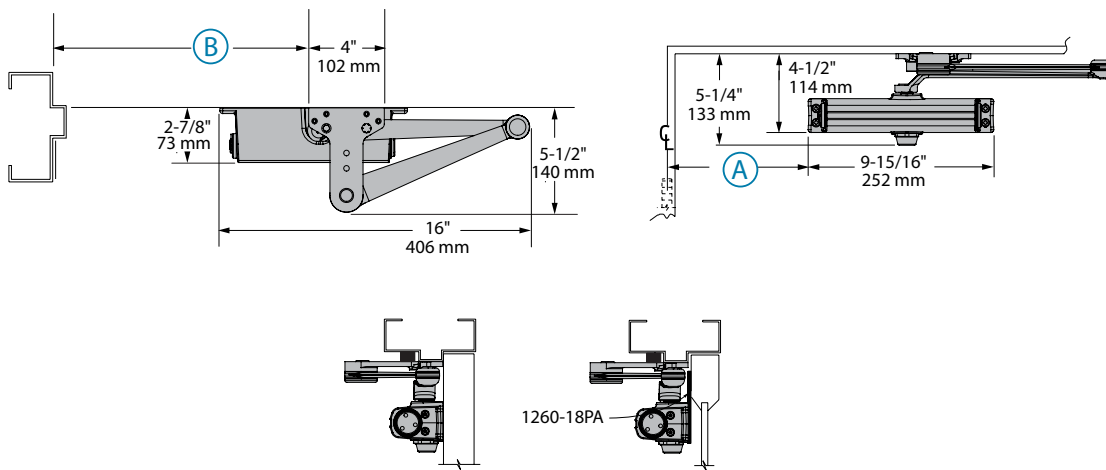
**Notes:**

- 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



<b>Clearance</b>	1260-62EDA or CUSH shoe projects 5-1/2" (140 mm) from door face	
<b>Head Frame</b>	Flush or rabbeted requires CUSH FLUSH PANEL ADAPTER, 1260-419	
<b>EDA or CUSH ARM</b>	Requires SHOE SUPPORT, 1260-30 for fifth screw anchorage where reveal is less than 3-1/16" (78 mm)	
<b>Maximum opening</b>	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

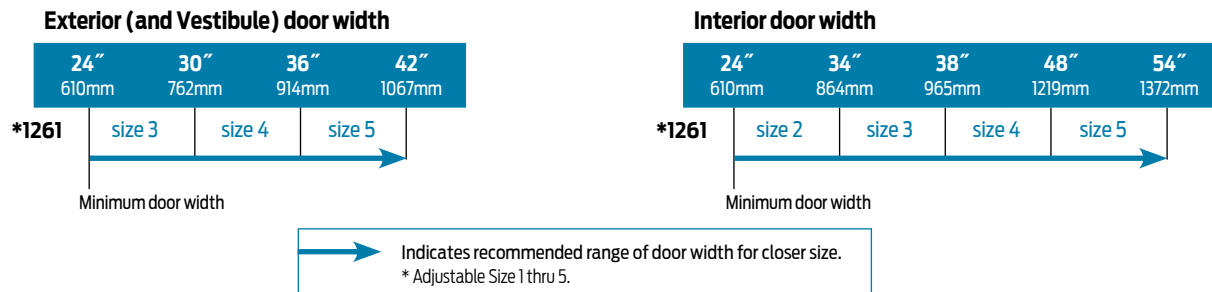
- Plate, 1260-18
- Plate, 1260-18PA
- CUSH Shoe Support, 1260-30
- Blade Stop Spacer, 1260-61
- Auxiliary Shoe, 1260-62A
- PA Flush Panel Adapter, 1260-419
- Quick Fix™ Bracket Kit, 1260-18QF

#### 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.




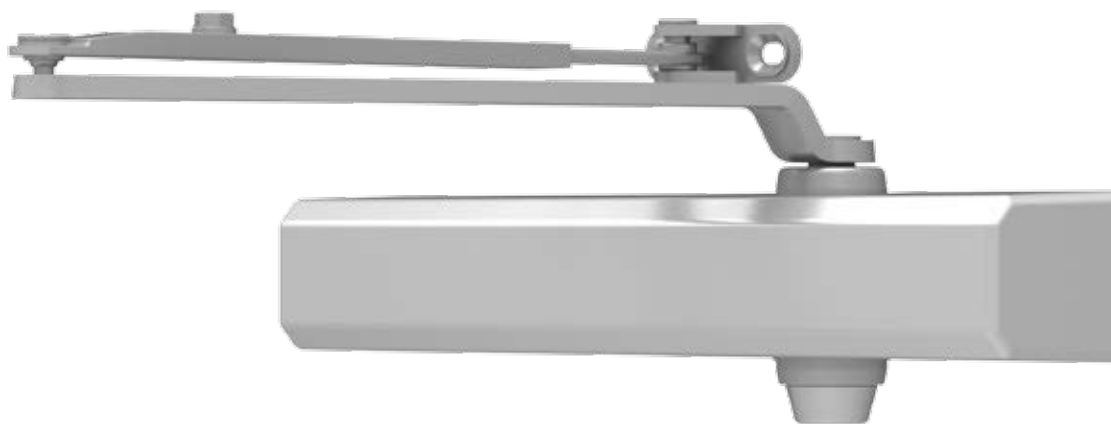
## Reduced opening force 1260 Series closers

**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.

	<b>DOOR WIDTH</b>	<b>36"</b>	<b>42"</b>	<b>48"</b>
	8.5* lbs.	1261	1261	1261
	5.0* lbs.	1261	1261	1261

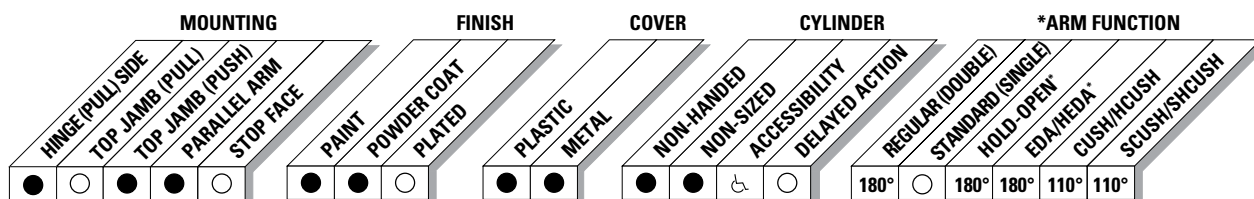


The 1450 Series cast aluminum closer was specially designed to deliver consistent, dependable, long-term performance in frequently-used, low-abusive traffic areas. The patented design, featuring the industry's most common hole pattern, is an excellent choice for a range of applications - from aftermarket replacement to aluminum store fronts, to new construction projects - anywhere quality, reliability and value are important.

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Cover</b>	<ul style="list-style-type: none"> <li>■ Slim Line Plastic, Standard</li> <li>■ Full Plastic and Metal, Optional</li> </ul>
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Aluminum Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-1/4" Diameter Piston</li> <li>■ 5/8" Diameter Single Heat Treated Pinion Journal</li> </ul>	<b>Fasteners</b>	Universal Screw Pack (UNIV)
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Hinge (Pull Side), Top Jamb (Push Side), Parallel Arm (Push Side)
<b>Handing</b>	Non-Handed	<b>Arms</b>	Standard regular pull side, and top jamb
<b>Templating</b>	Peel-n-Stick templates - 3/4" x 12" Mounting Hole Pattern	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Aluminum (689)</li> <li>■ Statuary Bronze (690)</li> <li>■ Light Bronze (691)</li> <li>■ Black (693)</li> <li>■ Dark Bronze (695)</li> <li>■ Brass (696)</li> <li>■ Custom colors optional</li> <li>■ Optional SRI primer - powder coat only</li> </ul>
<b>Size</b>	Adjustable Spring Size 1-6		
<b>Warranty</b>	25 years		

**Special Templates**

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



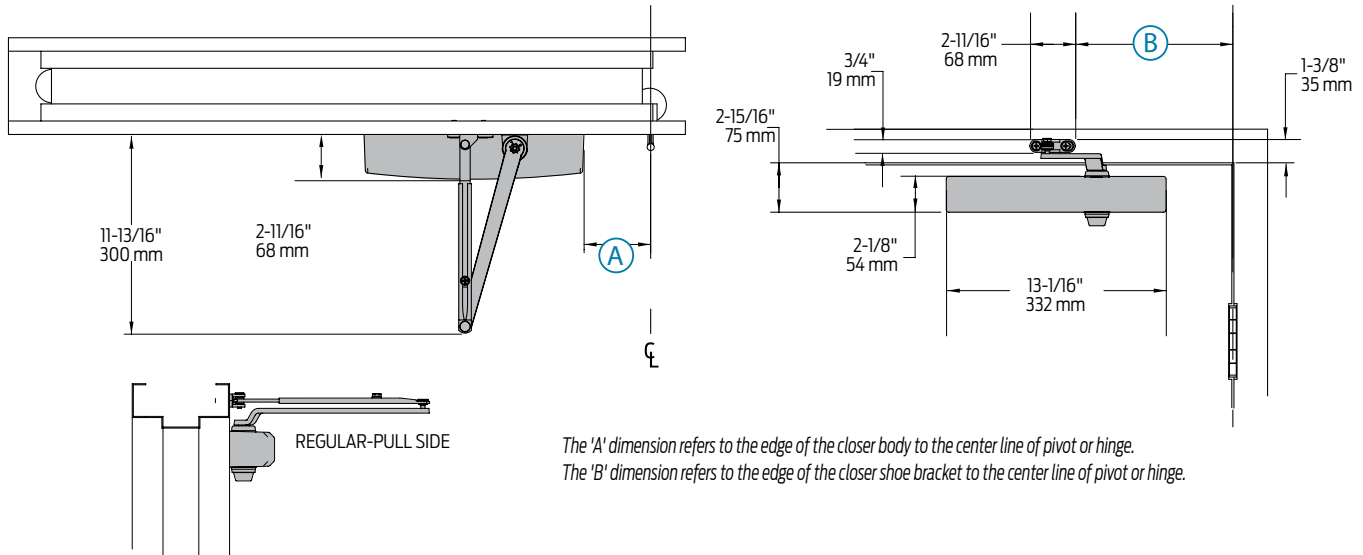
● AVAILABLE  
○ NOT AVAILABLE

♿ 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.

# 1450 Series

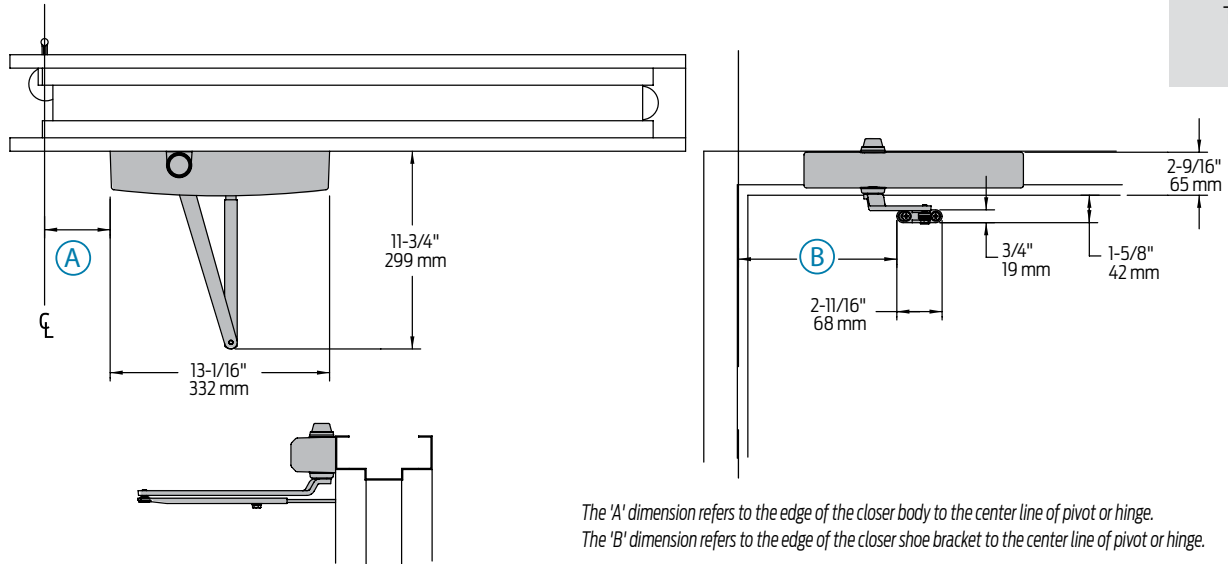
## Mounting details

### Hinge (Pull) Side Mounting



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

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point or where a door cannot swing 180°
<b>Reveal</b>	Should not exceed 3/4" (19 mm) for regular arm or 1/2" (13 mm) for hold-open arm
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Less than 2-1/2" (64 mm) requires PLATE, 1450-18</li> <li>With Full cover, use PLATE, 1450-18FC. Plate requires 1-1/2" (38 mm) minimum</li> </ul>
<b>Clearance</b>	2-3/8" (60 mm) behind door required for installation
<b>Maximum opening</b>	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" (140 mm) B = 9-3/8" (238 mm)
	Hold-open points up to maximum opening with hold-open arm *Frame and trim permitting.

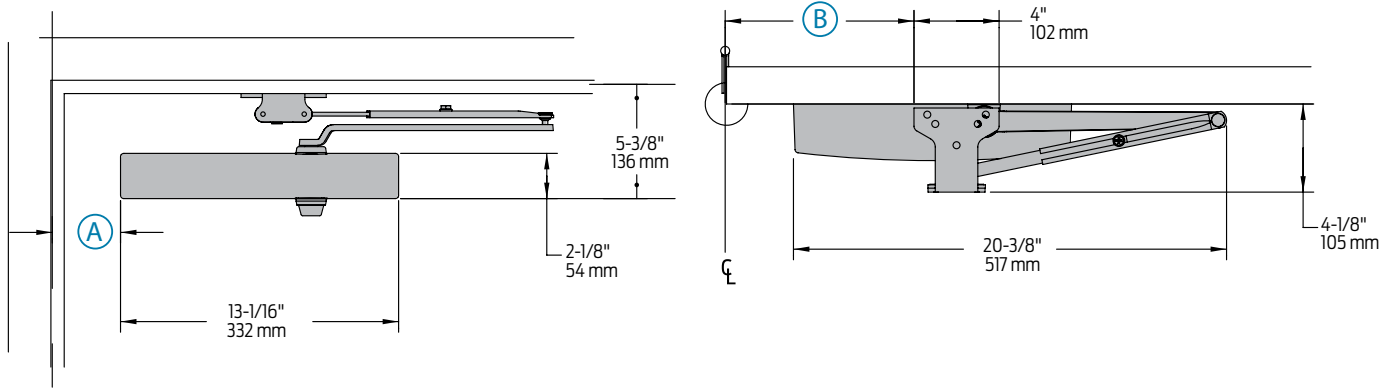


<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width		
<b>Auxiliary Stop</b>	Recommended at hold-open point or where a door cannot swing 180°		
<b>Reveal</b>	Arm Type	Reveal	Max Opening
	Regular Arm	5"	Up to 170°
	Regular Arm	3-3/4"	Up to 180°
	Long Arm	8"	Up to 155°
	Hold-Open Arm	2-3/4"	Up to 180°
	Long Hold-Open Arm	4-7/8"	Up to 140°
<b>Top Rail</b>	Requires 2-1/8" (54 mm) minimum. 3-3/8" (86 mm) minimum with closer on PLATE, 1450-18.		
<b>Head Frame</b>	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		
<b>Maximum opening</b>	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.		

# 1450 Series

## Mounting details

### Parallel Arm (Push Side) Mounting

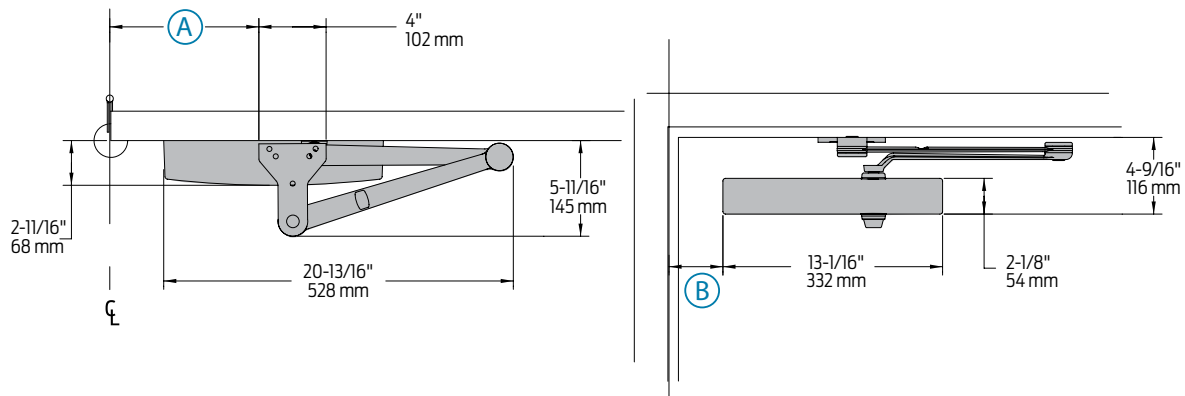


<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width		
<b>Auxiliary Stop</b>	Recommended at hold-open point, where a door cannot swing 180°, or where CUSH-N-STOP arm is not used		
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Less than 5-1/4" (133 mm) measured from the soffit requires</li> <li>Plate requires 1-1/4" (32 mm) minimum.</li> </ul>		
	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
<b>Clearance</b>	1450-62PA shoe projects 4-1/8" (105 mm) from door face		
<b>Head Frame</b>	Flush or single rabbeted requires PA SHOE ADAPTER, 1450-418		
<b>Stop Width</b>	Minimum 1" (25 mm)		
<b>Blade Stop</b>	Clearance, requires 1/2" (13 mm) BLADE STOP SPACER, 1450-61		
<b>Auxiliary Shoe</b>	1450-62A allows installation of regular arm with overhead holder/stop		
<b>Maximum opening</b>	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.		

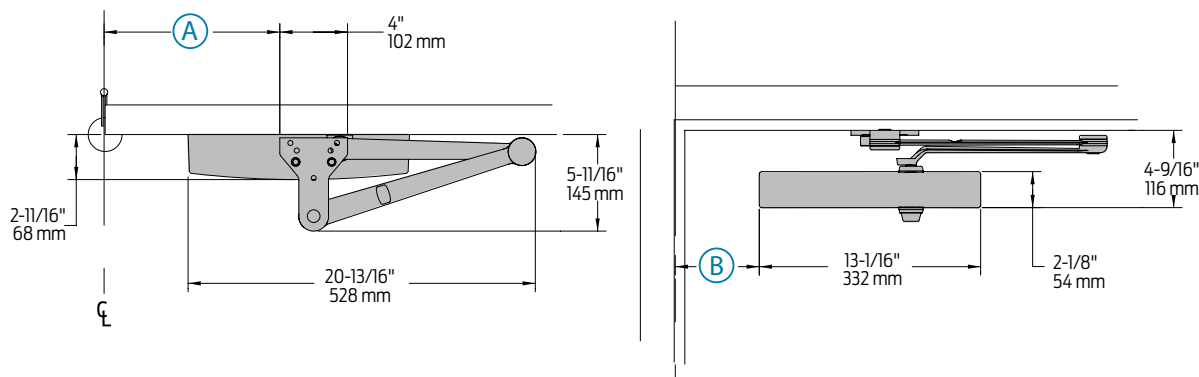
**Notes:**

- 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.

<b>Clearance</b>	1450-62EDA or CUSH shoe projects 5-11/16" (144mm) from door face	
<b>Head Frame</b>	Flush or rabbeted requires CUSH FLUSH PANEL ADAPTER, 1450-419	
<b>EDA or CUSH ARM</b>	Requires soffit SHOE SUPPORT, 1450-30 for fifth screw anchorage where reveal is less than 3-1/16" (78 mm)	
<b>Spring CUSH</b>	Dead stop points are approximately 5° more than templated stop points	
<b>Maximum opening</b>	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

### Covers



- 1450-72**  
Slim Line Plastic Cover
- Non-handed
  - Standard



- 1450-72MC**  
Metal Cover
- Handed
  - Optional



- 1450-72FC**  
Full Plastic Cover
- Non-handed
  - Optional

### Alternate Cover



- 1450-72ALT**  
Alternate Cover
- Non-handed
  - Optional, sold separately (not packed with closer)

### 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<sup>®</sup> 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

#### Cover

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

#### Finish

- Custom Powder Coat (RAL)  
(Metal cover required)
- SRI primer

#### Arm

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

#### Optional screw packs

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

#### Installation accessories

- Plate, 1450-18
- Plate, 1450-18FC
- Plate, 1450-18PA
- Plate, 1450-18PAFC
- CUSH Shoe Support, 1450-30
- Blade Stop Spacer, 1450-61
- Auxiliary Shoe, 1450-62A
- PA Flush Panel Adapter, 1450-419

#### Special template

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

#### Meets Buy American Act

- BAA

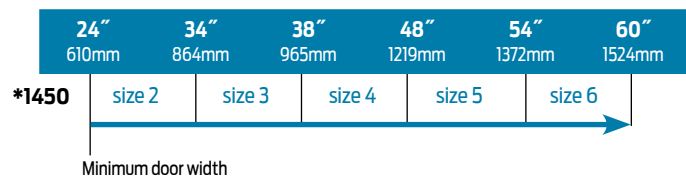
### Table of sizes

- 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.

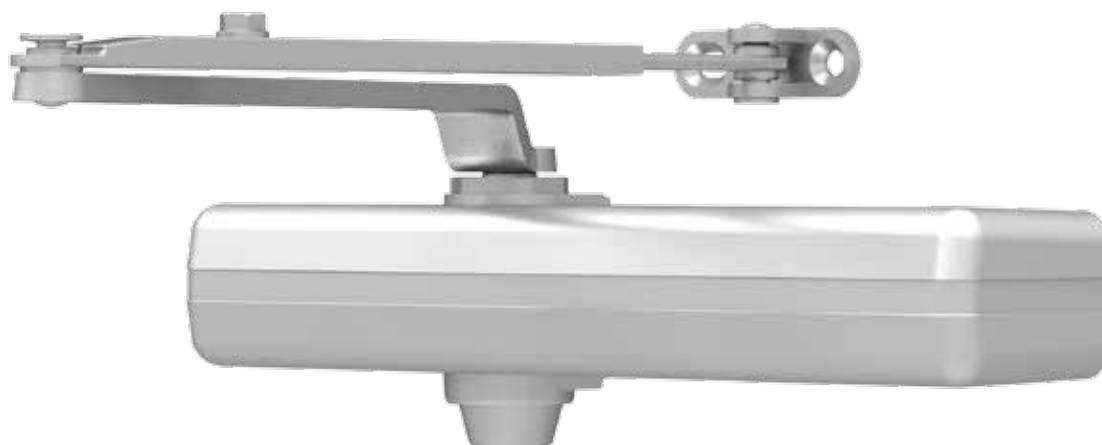
### Reduced opening force 1450 Series closers

**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

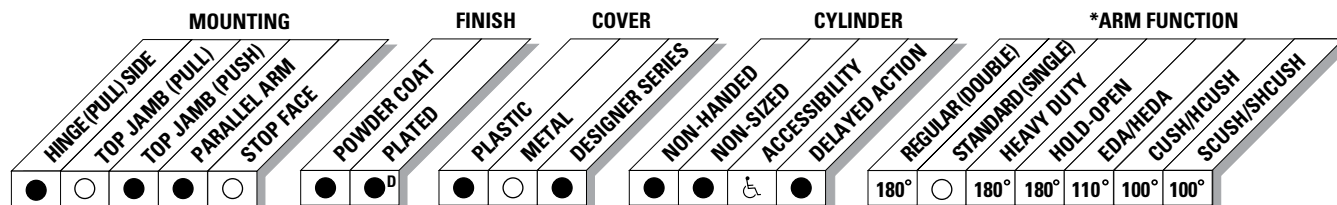


Designed for maximum versatility, the 1460, available with multiple cover options, can be used for both commercial and institutional applications. This fully universal closer offers a wide variety of options and fast and accurate installation.

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

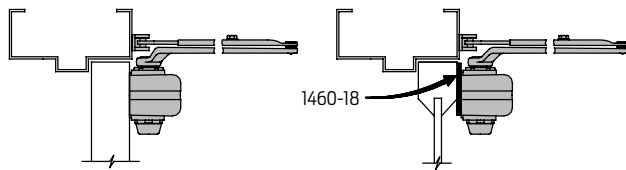
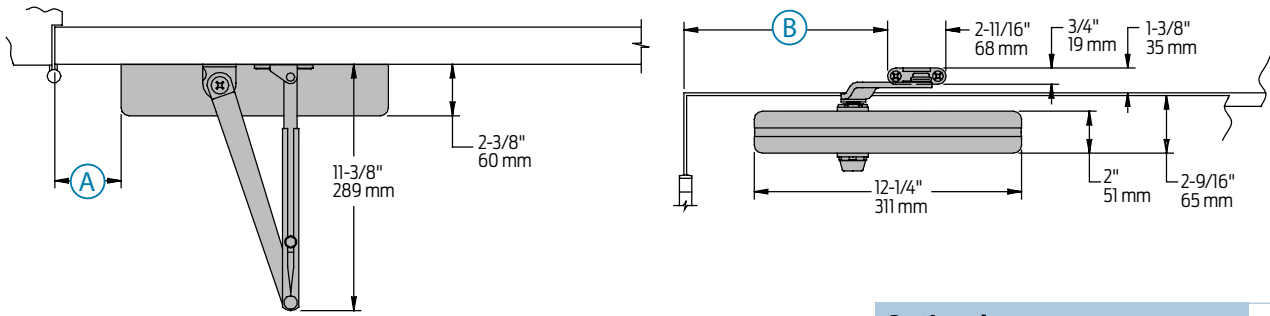
**Special Templates**

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



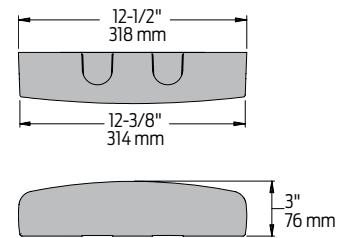
● AVAILABLE  
○ NOT AVAILABLE

♿ 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.

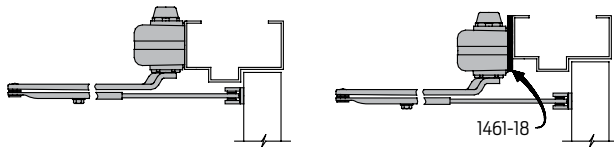
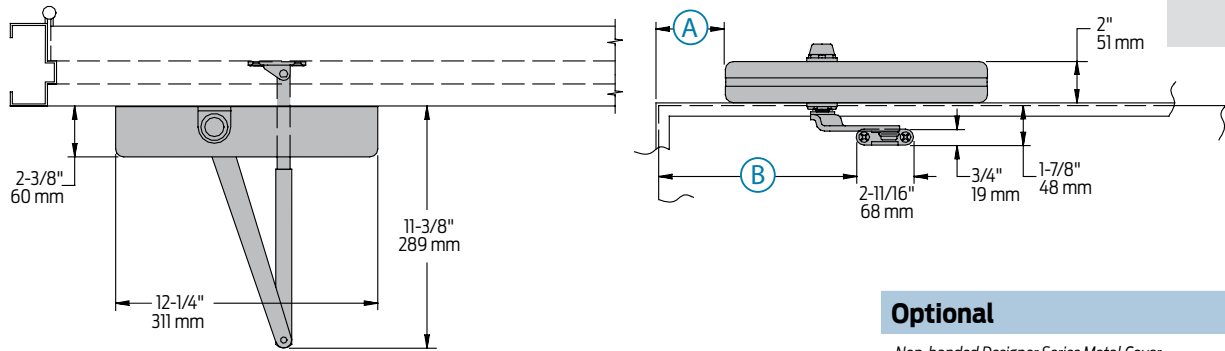


### Optional

Non-handed Designer Series Metal Cover

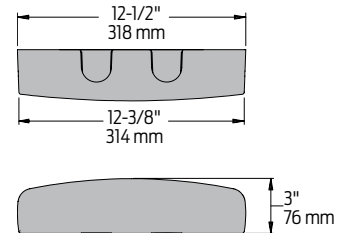


<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point or where a door cannot swing 180°
<b>Reveal</b>	Should not exceed 3/4" (19 mm) for regular arm or 1/2" (13 mm) for hold-open arm
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Less than 2-1/2" (64 mm) requires PLATE, 1460-18</li> <li>With Full cover, use PLATE, 1460-18FC. Plate requires 1-1/2" (38 mm) minimum</li> <li>With Designer Series metal cover, use PLATE, 1460-18DSI</li> </ul>
<b>Clearance</b>	2-3/8" (60 mm) behind door required for installation
<b>Delayed Action</b>	<ul style="list-style-type: none"> <li>Add suffix "DEL" to selected cylinder (eg. 1461 DEL)</li> <li>Delays closing from:                             <ul style="list-style-type: none"> <li>110° to 65° (using 110° template)</li> <li>160° to 75° (using 180° template)</li> </ul> </li> <li>Delay time adjustable up to approximately 1 minute</li> </ul>
<b>Maximum opening</b>	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.

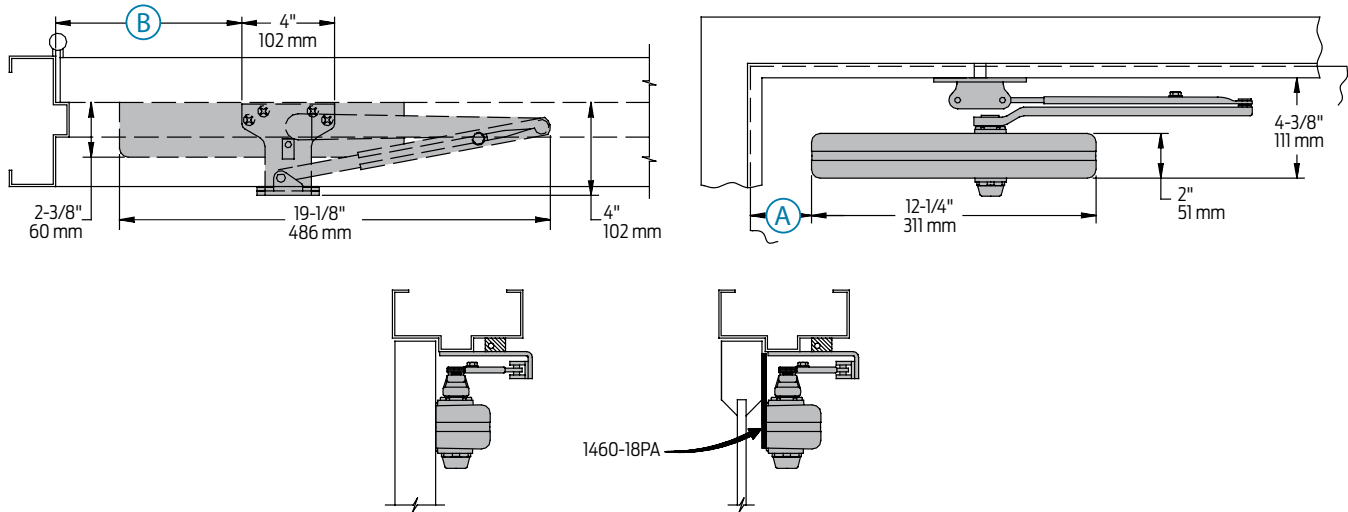


**Optional**

*Non-handed Designer Series Metal Cover*



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width		
<b>Auxiliary Stop</b>	Recommended at hold-open point or where a door cannot swing 180°		
<b>Reveal</b>	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°
<b>Top Rail</b>	Requires 1-7/8" (48 mm) minimum. 2-3/4" (70 mm) minimum with closer on PLATE, 1460-18		
<b>Head Frame</b>	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		
<b>Delayed Action</b>	<ul style="list-style-type: none"> <li>■ Add suffix "DEL" to selected cylinder (eg. 1460 DEL).</li> <li>■ Delays closing:                             <ul style="list-style-type: none"> <li>110° to 75° (using 110° template)</li> <li>180° to 95° (using 180° template)</li> </ul> </li> <li>■ Delay time adjustable up to approximately 1 minute.</li> </ul>		
<b>Maximum opening</b>	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.		

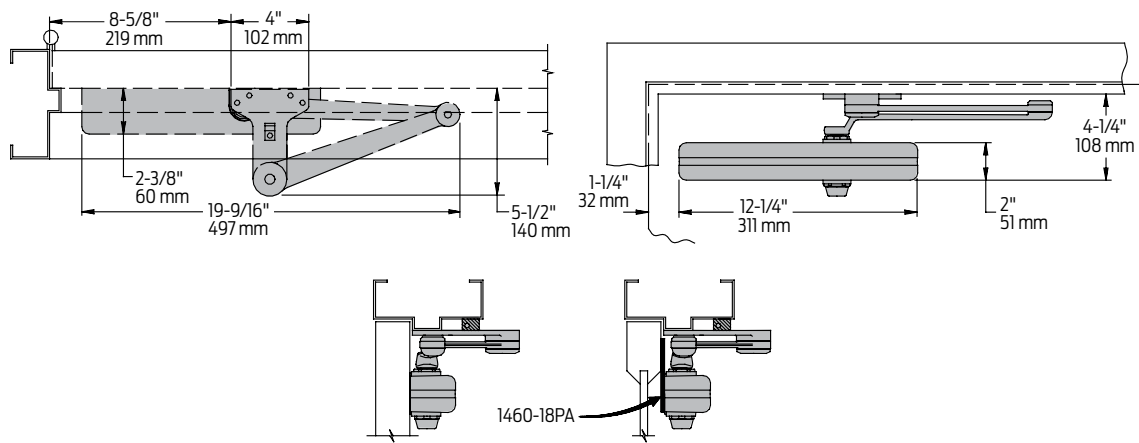


<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point, where a door cannot swing 180°, or where CUSH-N-STOP arm is not used
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Less than 4-3/8" (111 mm) measured from the stop requires PLATE,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

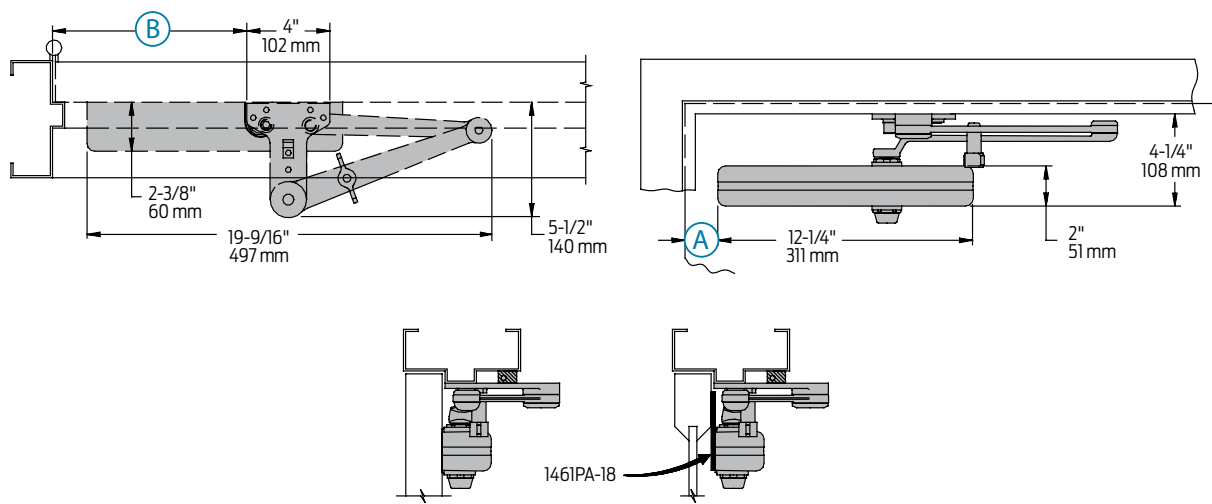
**Notes:**

- 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



<b>Spring CUSH</b>	Hold open points are approximately 5° less than dead stop point
<b>Clearance</b>	1460-62EDA or CUSH shoe projects 5-1/2" (140 mm) from door face
<b>Head Frame</b>	Flush or rabbeted requires PA FLUSH PANEL ADAPTER, 1460-419
<b>EDA or CUSH ARM</b>	Requires SHOE SUPPORT, 1460-30 for fifth screw anchorage where reveal is less than 3-1/16" (78 mm)
<b>Maximum opening</b>	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.*



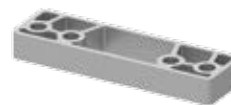
**1460-30**  
Cush Shoe Support

- 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<sup>®</sup> 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- \_\_\_\_\_

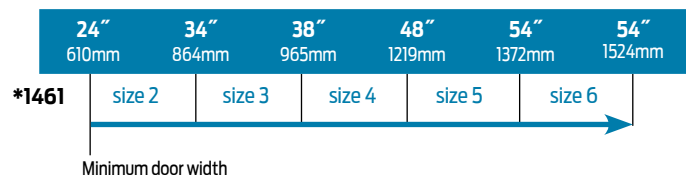
### Table of sizes

- 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

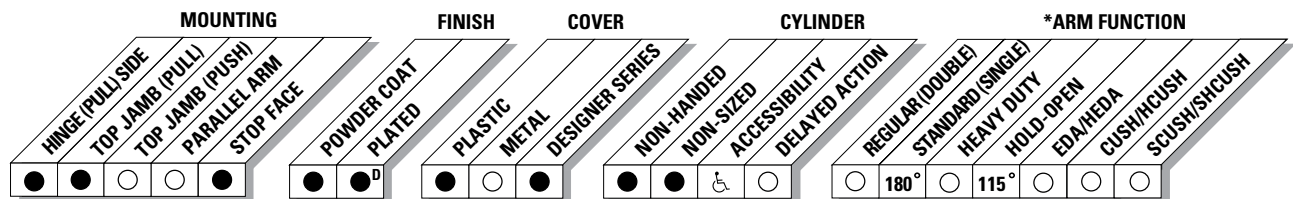


The 1460T is a fully universal slim line, single lever (track) arm closer designed for interior use on narrow head frames and top rails. The modern styling and small projection make it an excellent choice for interior doors.

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Cover</b>	<ul style="list-style-type: none"> <li>■ Slim Line, Standard</li> <li>■ Full Plastic or Full Metal Designers Series, Optional</li> </ul>
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-1/4" Diameter Piston</li> <li>■ 5/8" Diameter Single Heat Treated Pinion Journal</li> </ul>	<b>Fasteners</b>	Self Reaming and Tapping Screws (SRT)
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Hinge pull side, top jamb, pull stop face
<b>Handing</b>	Non-Handed	<b>Arms</b>	Single level with track roller
<b>Templating</b>	Peel-n-Stick templates - 1" x 7-1/2" Mounting Hole Pattern	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Aluminum (689)</li> <li>■ Statuary Bronze (690)</li> <li>■ Light Bronze (691)</li> <li>■ Black (693)</li> <li>■ Dark Bronze (695)</li> <li>■ Brass (696)</li> <li>■ Custom colors optional</li> </ul>
<b>Size</b>	<ul style="list-style-type: none"> <li>■ 1460T adjustable size 2-4</li> <li>■ 1461T adjustable size 1-2</li> </ul>		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
<b>Warranty</b>	30 years		

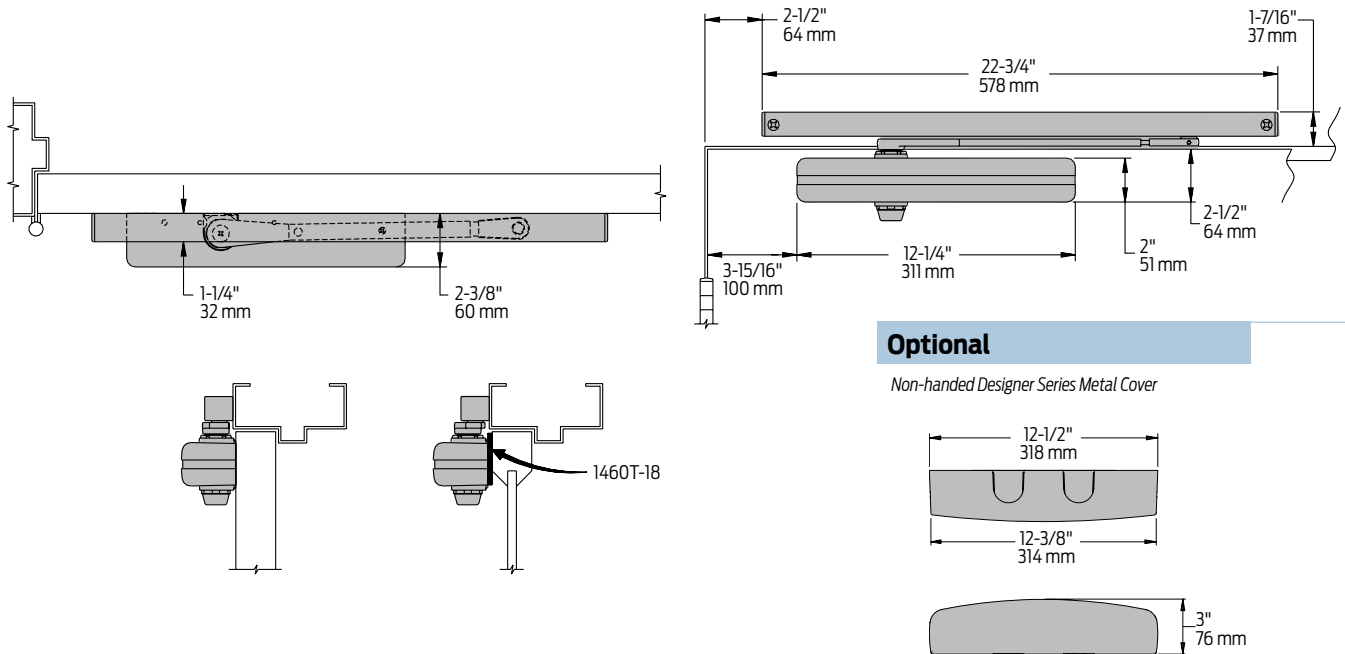
**Special Templates**

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



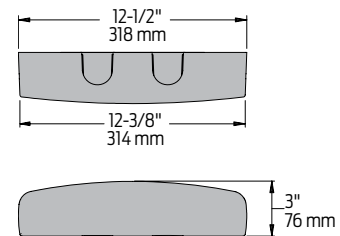
● AVAILABLE  
○ NOT AVAILABLE

♿ 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.

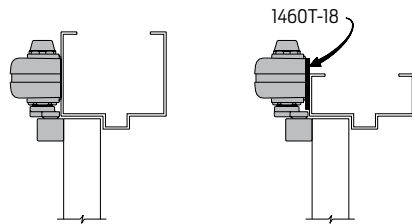
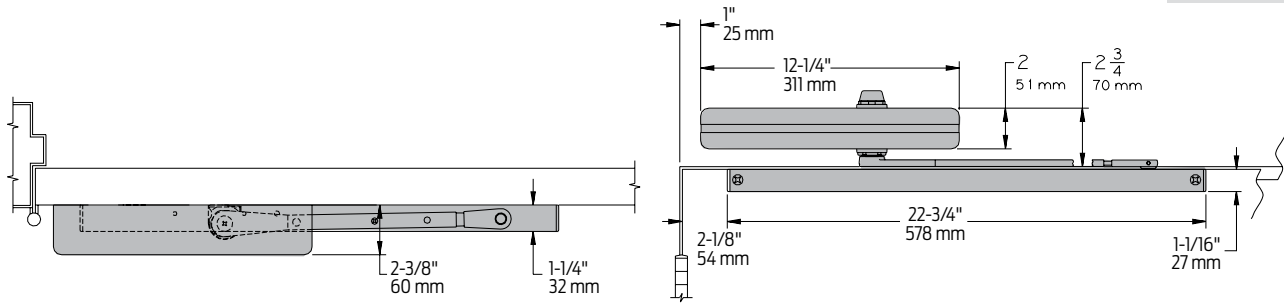


### Optional

*Non-handed Designer Series Metal Cover*

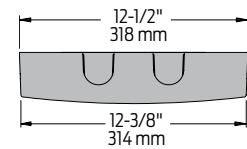


<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	<ul style="list-style-type: none"> <li>Recommended where a door cannot swing 180°</li> <li>Optional track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop</li> </ul>
<b>Reveal</b>	Should not exceed 1/8" (3 mm)
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Less than 2-1/2" (64 mm) requires PLATE, 1460T-18</li> <li>Plate requires 1-1/2" (38 mm) minimum</li> <li>With Full cover, use PLATE, 1460T-18FC</li> <li>With Designer Series metal cover, use PLATE, 1460T-18DS</li> </ul>
<b>Clearance</b>	2-3/8" (60 mm) behind door required for installation
<b>Maximum opening</b>	<ul style="list-style-type: none"> <li>Templating allows up to 180°, trim and frame permitting, limited to 115° when optional bumper is installed</li> <li>Consult factory if door will be held open at 180°</li> <li>Hold-open points at 85°, 90°, 95°, 100°, 110° or 115° with hold-open tracks</li> <li>Please note that many track style door closers are capable of allowing 180° of door swing</li> <li>Be aware that the majority of track style closers are at their weakest closing force in the 180°-130° range</li> <li>Consult factory for applications where an exterior or large/heavy door must swing 180°</li> </ul>



### Optional

*Non-handed Designer Series Metal Cover*

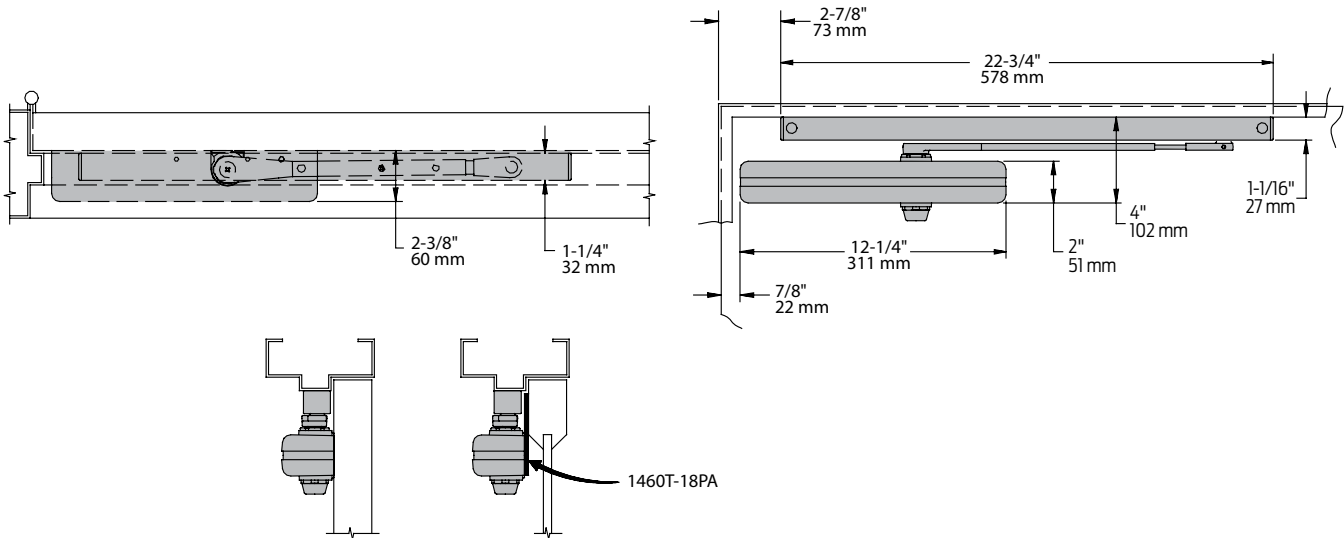


<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	<ul style="list-style-type: none"> <li>Recommended where a door cannot swing 180°</li> <li>Track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop</li> </ul>
<b>Reveal</b>	Should not exceed 1/8" (3 mm)
<b>Top Rail</b>	Minimum 1-1/4" (32 mm)
<b>Head Frame</b>	<ul style="list-style-type: none"> <li>Less than 2-3/4" (70 mm) requires PLATE, 1460T-18</li> <li>Plate requires 1-3/4" (44 mm) minimum</li> <li>With full cover, use PLATE, 1460T-18FC</li> <li>With Designer Series metal cover, use PLATE, 1460T-18DS</li> </ul>
<b>Clearance</b>	1-1/4" (32 mm) behind door for installations
<b>Maximum opening</b>	<ul style="list-style-type: none"> <li>Templating allows up to 180°, limited to 115° when optional bumper is installed</li> <li>Consult factory if door will be held open at 180°</li> <li>Hold-open points at 85°, 90°, 95°, 100°, 110° or 115° with hold-open tracks</li> <li>Please note that many track style door closers are capable of allowing 180° of door swing</li> <li>Be aware that the majority of track style closers are at their weakest closing force in the 180° – 130° range</li> <li>Consult factory for applications where an exterior or large</li> </ul>

# 1460T Series

## Mounting details

### Stop Face (Push Side) Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	<ul style="list-style-type: none"> <li>Recommended where a door cannot swing 110°</li> <li>Track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop</li> </ul>
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Less than 4" (102 mm) measured from the stop face requires PLATE, 1460T-18PA. Plate requires 1-1/2" (38 mm) minimum</li> <li>With Full cover, use PLATE, 1460T-18PAFC</li> <li>With Designer Series metal cover, use PLATE, 1460T-18PADS</li> </ul>
<b>Clearance</b>	1460T projects 2-3/8" (60 mm) from door face
<b>Stop Width</b>	Minimum 1-1/4" (32 mm)
<b>Maximum opening</b>	<ul style="list-style-type: none"> <li>Templating allows 110°, limited to 100° when optional bumper is installed</li> <li>Variable hold-open angles with infinite options</li> </ul>

### Cylinders



**1460(1)T-3071**  
Cast Iron Cylinder Assembly

- Non-handed
- 1461T adjustable 1-2
- 1460T 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**

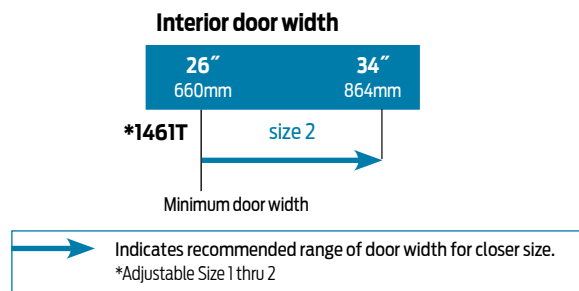
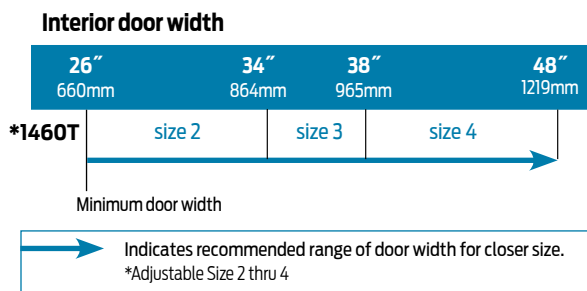
- Plate, 1460T-18
- Plate, 1460T-18DS1
- Plate, 1460T-18FC
- Plate, 1460T-18PA
- Plate, 1460T-18PADS1
- Plate, 1460T-18PAFC

**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.

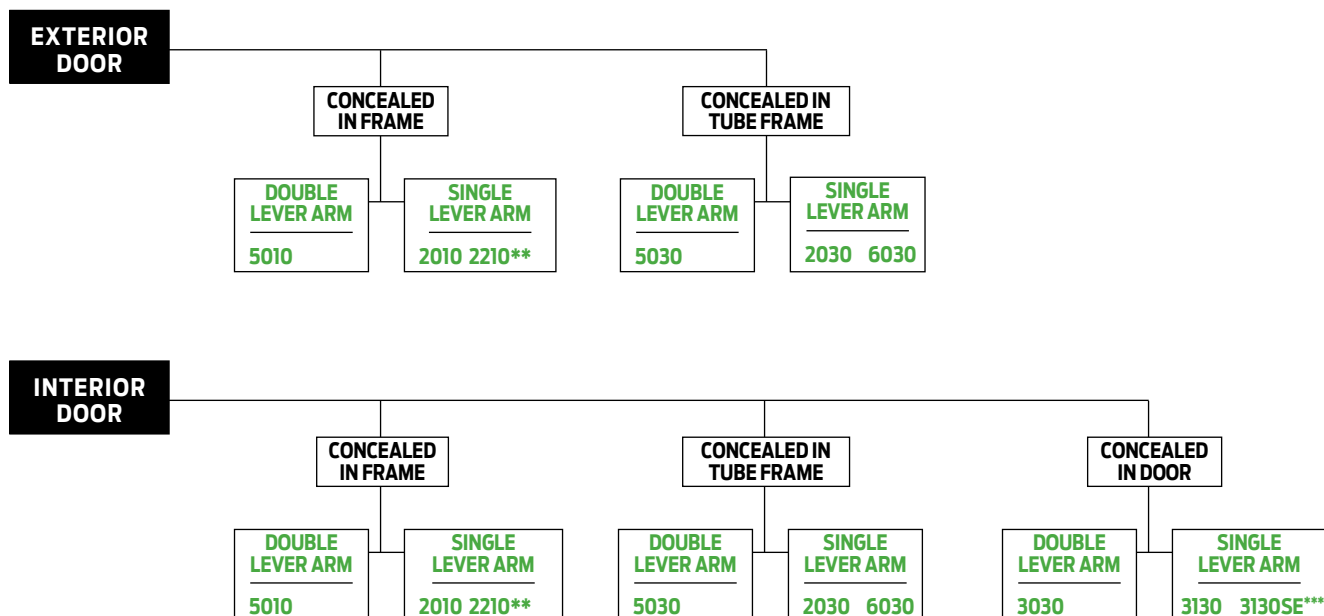
\* Maximum opening force.

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

## Concealed closer series

### APPLICATIONS

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

### FEATURES COMMON TO CONCEALED CLOSERS

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

### DESIGN ASSISTANCE

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

### WARRANTY

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

### SPECIFICATIONS

Refer to "SPECIFICATIONS" section for suggested architectural specifications.

### MATERIALS

(Closers concealed in the door or frame)

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

### FINISHES

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

### LISTINGS & APPROVALS

UL listed for self-closing doors without hold-open under "SWINGING DOOR CLOSERS" (GVEV) file R1943.

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

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

### POSITIVE PRESSURE

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

### FASTENERS

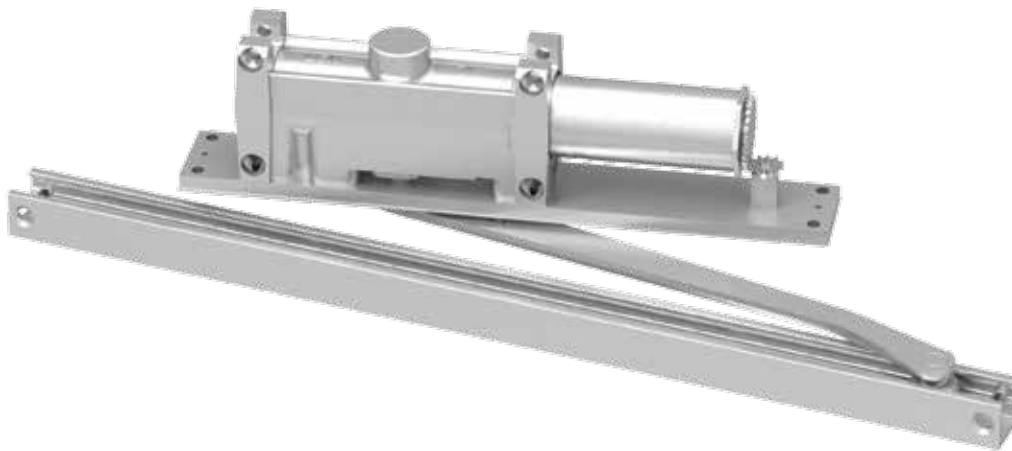
Standard WOOD and MACHINE SCREW (WMS) pack contains phillips head wood and machine screws to install the closer.

TORX machine screws are available for some closers.

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

### MAINTENANCE

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

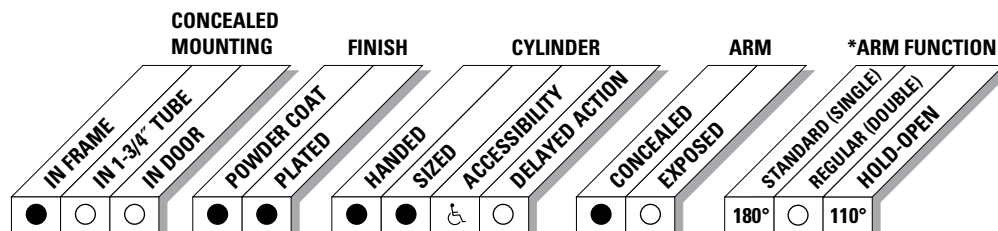


The concealed 2010 Series is a heavy duty closer designed to provide complete concealment. The single lever arm and roller assembly provide smooth, quiet door control and the choice of finishes and track functions meet virtually all architectural requirements.

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

**Special Templates**

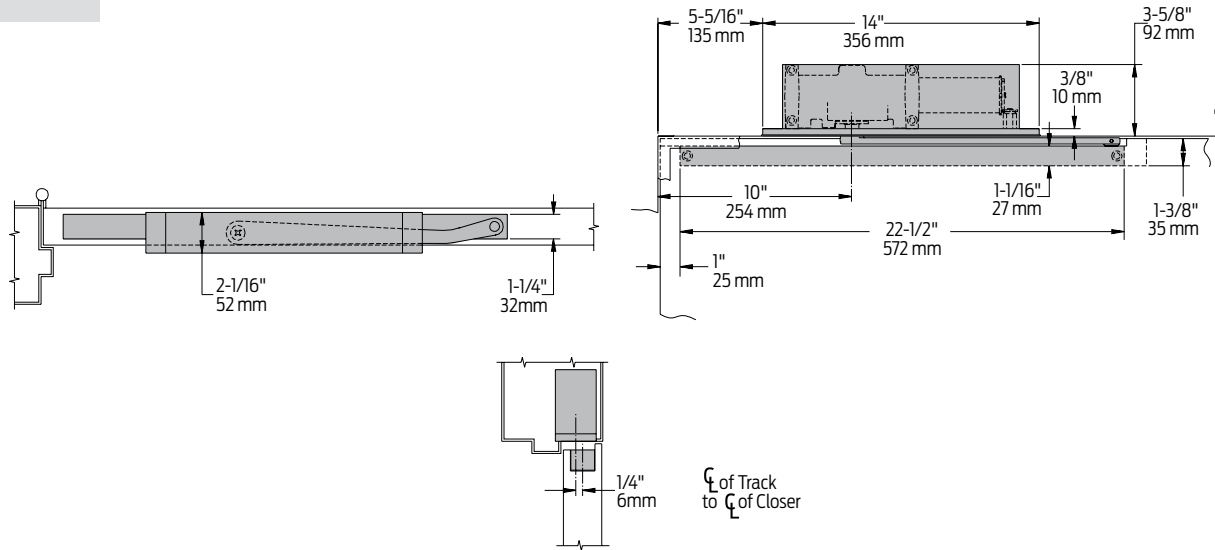
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



● AVAILABLE  
○ NOT AVAILABLE

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

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



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

Notes:

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

### Cylinder



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

- Handed
- With mounting plate
- Standard

### Arm



**2010-3077T**  
Standard Arm

- Handed
- Track roller not included with arm

### Installation Accessories



**2010-420**  
Fire Shield

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



**2010-169**  
Track Bumper

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

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

### Tracks



**2010-3038**  
Standard Track

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



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

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



**2010-3038H**  
Hold-Open Track

- Non-handed
- Will accept bumper assembly
- Optional



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

- Non-handed
- Optional



**2010-3054**  
Hold-Open Clip

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



**2010-3034**  
Track Roller

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



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

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

### How-to-order 2010 Series closers

#### Table of sizes

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

#### Select cylinder size

- 2011
- 2013
- 2014
- 2015
- 2016

#### Select hand

- RH
- LH

#### Specify finish

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

#### Closer will be shipped with:

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

### Closer options

#### Tracks

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

#### Finishes

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

#### Installation accessories

- Fire Shield, 2010-420

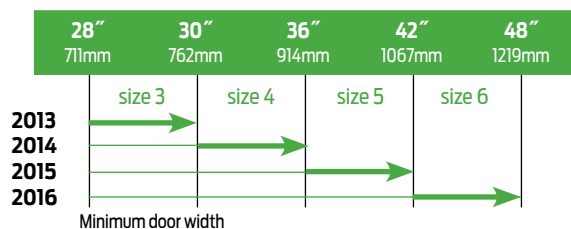
#### Screw pack

- TORX Machine Screw (TORX)

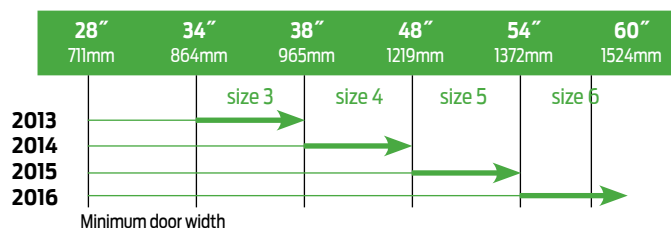
#### Special template

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

#### Exterior (and Vestibule) door width



#### Interior door width




→ Indicates recommended range of door width for closer size.

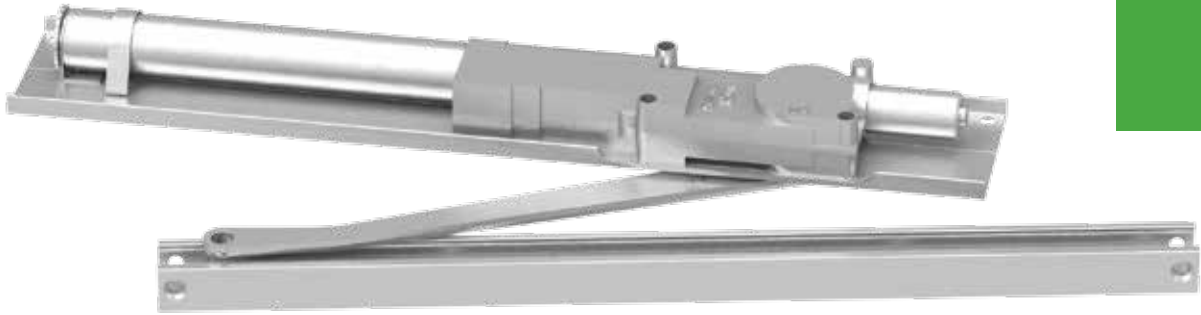
### Reduced opening force 2010 Series closers

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

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

\* Maximum opening force.

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

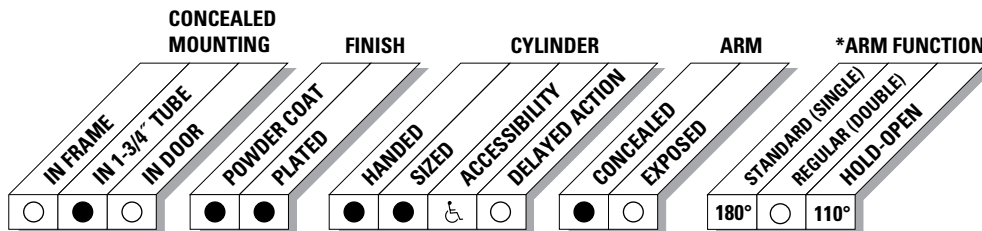


The concealed 2030 Series PACER® is a heavy duty closer designed to fit in a narrow, minimum 1-3/4" aluminum transom. The single lever arm and roller assembly provide smooth, quiet door control and the choice of finishes and track functions meet virtually all architectural requirements.

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

**Special Templates**

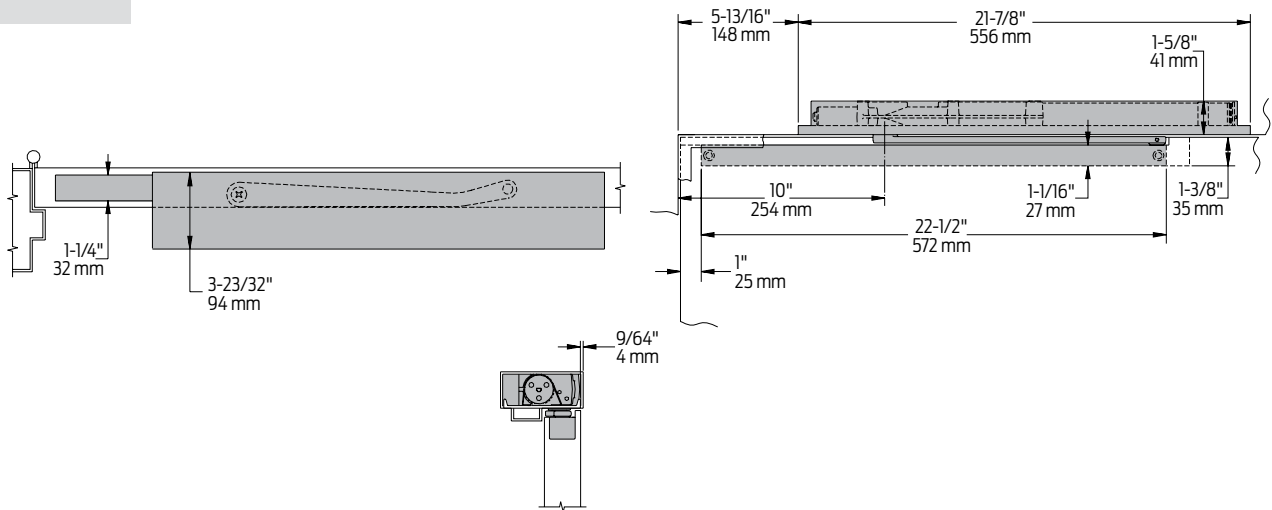
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



● AVAILABLE  
○ NOT AVAILABLE

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

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



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

**Notes:**

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

**Cylinder**



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

- Handed
- With mounting plate
- Standard

**Arm**



**2030-3077T**  
Standard Arm

- Handed
- Track roller not included with arm

**Tracks**



**2030-3038**  
Standard Track

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



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

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



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

- Non-handed
- Will accept bumper assembly
- Optional



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

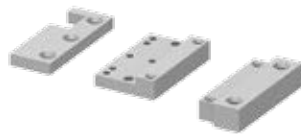
- Non-handed
- Optional

### Installation Accessories



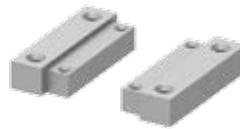
**2030-420**  
Fire Shield

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



**2030-416**  
Wood Mounting Clip Set

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



**2030-417**  
Wood Mounting Clip Set

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



**2030-169**  
Track Bumper

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

*NOTE: Track bumper does not replace auxiliary stop*



**2030-3054**  
Hold-Open Clip

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



**2030-3034**  
Track Roller

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



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

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

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

**Select cylinder size**

- 2031
- 2032
- 2033
- 2034
- 2035

**Specify finish**

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

**Closer will be shipped with:**

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

**Select hand**

- RH
- LH

**Closer options**

**Tracks**

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

**Finishes**

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

**Installation accessories**

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

**Screw pack**

- TORX Machine Screw (TORX)

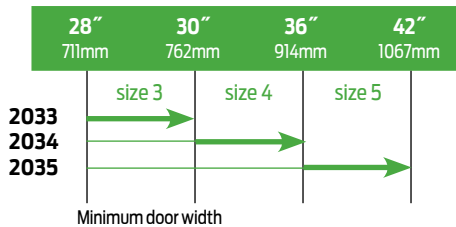
**Special template**

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

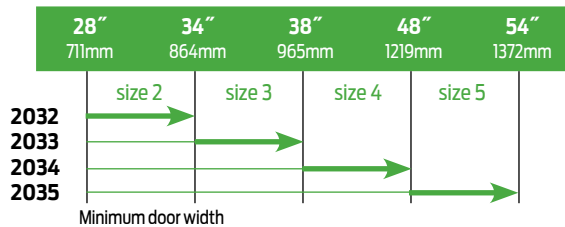
**Table of sizes**

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

**Exterior (and Vestibule) door width**



**Interior door width**




→ Indicates recommended range of door width for closer size.

**Reduced opening force 2030 Series closers**

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

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

\* Maximum opening force.

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



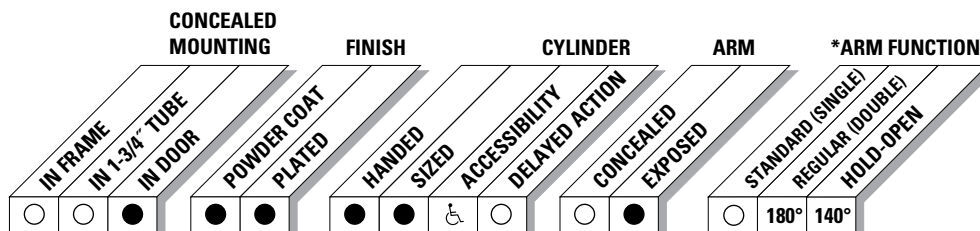


The concealed 3030 Series is designed to mount in a 1-3/4" interior door. The double lever arm provides superior door control and the choice of finishes and arm functions meet virtually all architectural requirements.

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

**Special Templates**

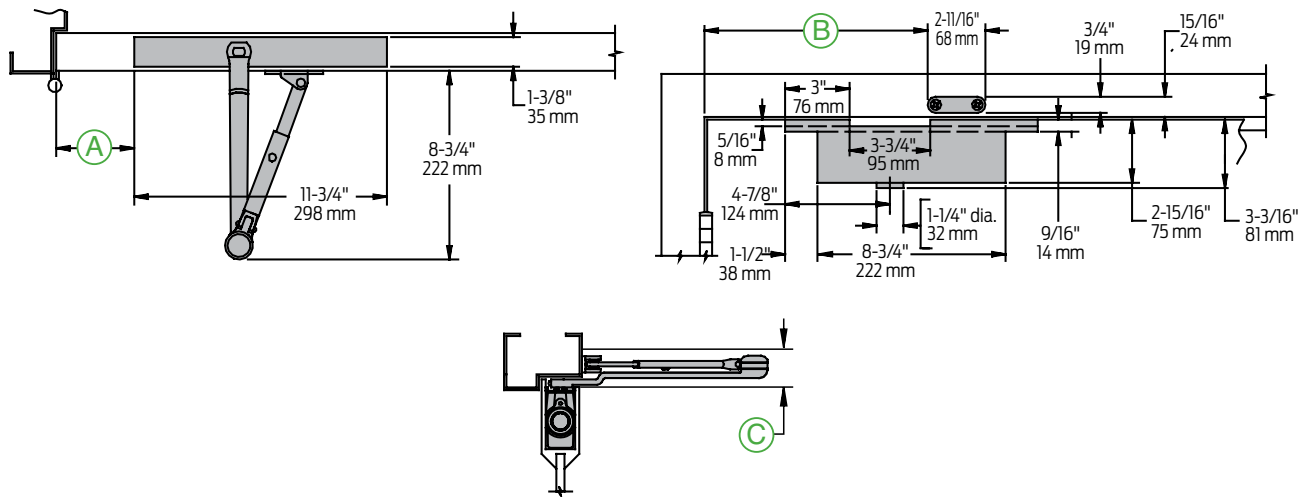
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



● AVAILABLE  
○ NOT AVAILABLE

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

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



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

**Notes:**

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

**Cylinder**



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

- Handed
- With mounting plate
- Standard

**Arms**



**3030-3077**  
Regular arm

- Non-handed



**3030-3049**  
Hold-open arm

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

### How-to-order 3030 Series closers

#### Select cylinder size

- 3031
- 3032
- 3033
- 3034

#### Select hand

- RH
- LH

#### Specify finish

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

#### Closer will be shipped with:

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

### Closer options

#### Arm

- Hold-open (H)

#### Finishes

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

#### Screw pack

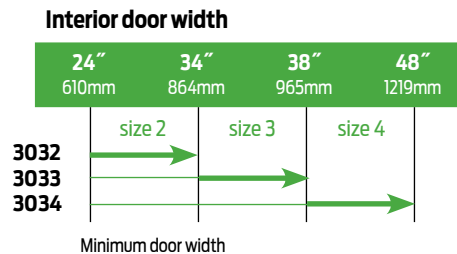
- TORX Machine Screw (TORX)

#### Special template

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

### Table of sizes

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



Indicates recommended range of door width for closer size.

### Reduced opening force 3030 Series closers

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

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

\* Maximum opening force.

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

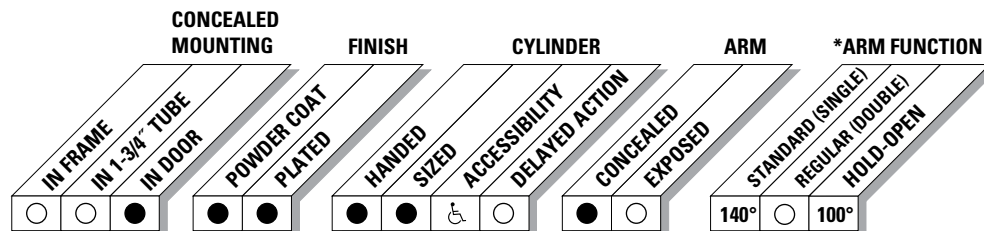


The concealed 3130 Series is designed to mount in a 1-3/4" interior door. The single lever arm and roller assembly provides complete concealment and the choice of finishes and track functions meet virtually all architectural requirements.

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

**Special Templates**

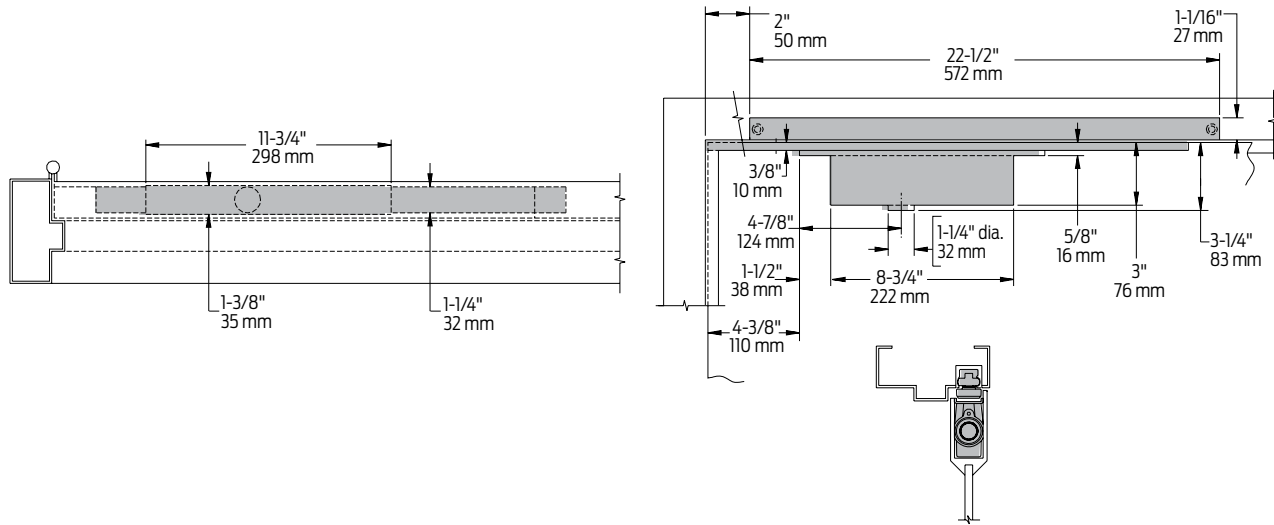
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



● AVAILABLE  
○ NOT AVAILABLE

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

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



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

**Notes:**

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

### Cylinder



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

- Handed
- With mounting plate
- Standard

### Arm



**3130-3077T**  
Standard Arm

- Handed
- Track roller not included with arm
- Standard

### Tracks



**3130-3038**  
Track

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



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

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



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

- Non-handed
- Will accept bumper assembly
- Optional



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

- Non-handed
- Optional

### Installation Accessories



**3130-169**  
Track Bumper

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



**3130-3054**  
Hold-Open Clip

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



**3130-3034**  
Track Roller

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



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

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

### How-to-order 3130 Series closers

#### Select cylinder size

- 3131
- 3132
- 3133

#### Select hand

- RH
- LH

#### Specify finish

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

#### Closer will be shipped with:

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

### Closer options

#### Track

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

#### Finishes

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

#### Screw pack

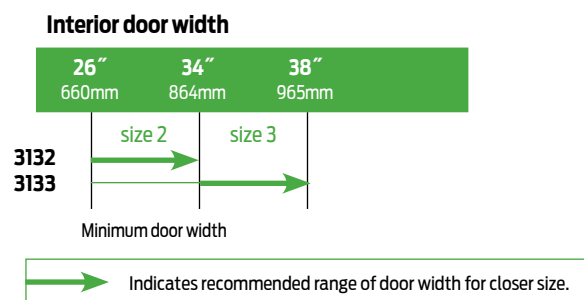
- TORX Machine Screw (TORX)

#### Special template

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

### Table of sizes

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



### Reduced opening force 3130 Series closers

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

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

\* Maximum opening force.

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

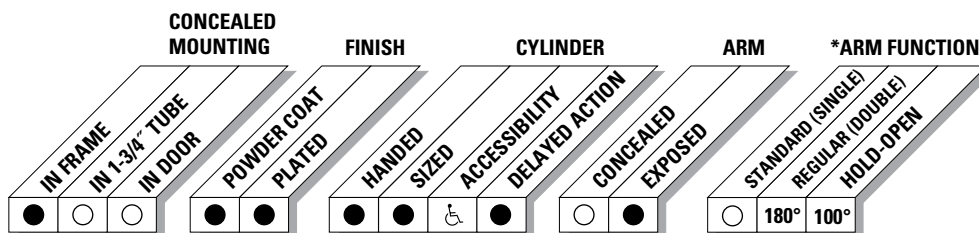


The concealed 5010 Series is a heavy duty closer designed for institutional, high traffic, or other applications exposed to weather or abuse. The double lever arm provides superior door control and a choice of finishes, cylinder functions, and arm functions that meet virtually all architectural requirements.

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

**Special Templates**

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



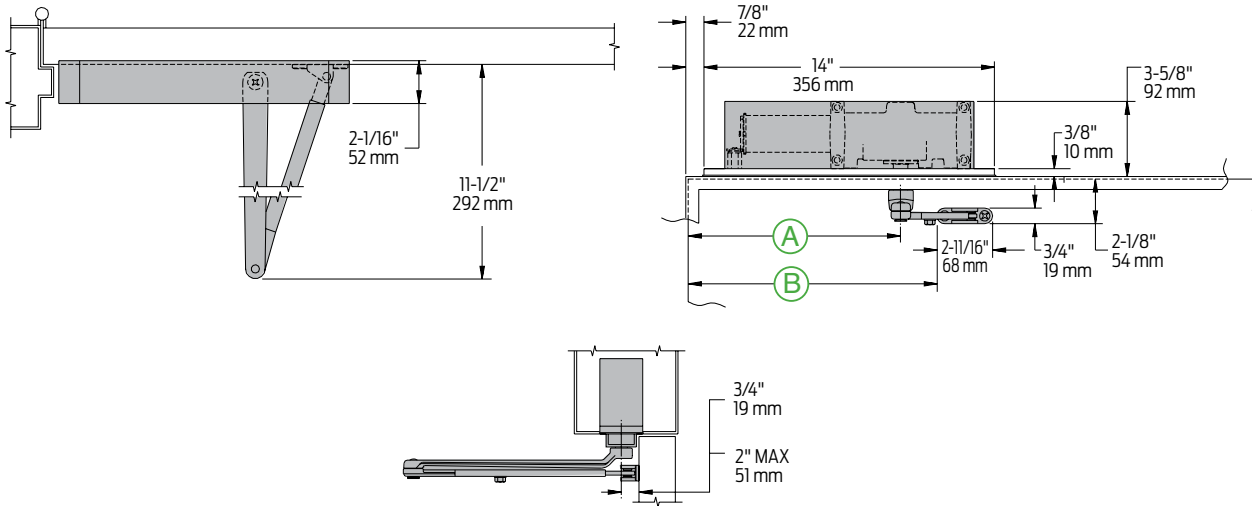
● AVAILABLE  
○ NOT AVAILABLE

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

# 5010 Series

## Mounting details

### Concealed Mounting



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

**Notes:**

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

Cylinder



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

- Handed
- With mounting plate
- Standard

Arms



**5010-3077**  
Regular Arm

- Non-handed



**5010-3049**  
Hold-Open Arm

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

### How-to-order 5010 Series closers

#### Select cylinder size

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

#### Select hand

- RH
- LH

#### Specify finish

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

#### Closer will be shipped with:

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

### Closer options

#### Cylinder function

- Delayed Action (DEL)

#### Arm

- Hold-Open (H)

#### Finishes

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

#### Screw pack

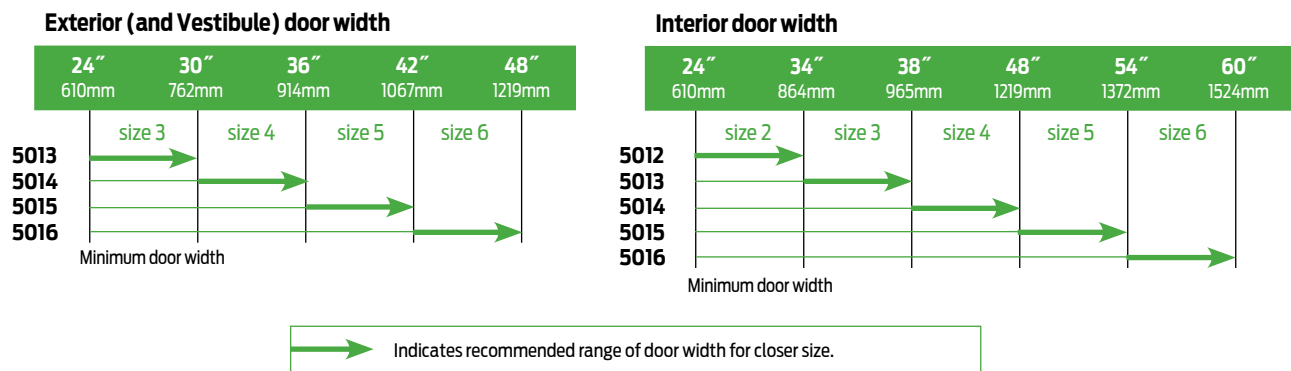
- TORX Machine Screw (TORX)

#### Special template

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

### Table of sizes

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



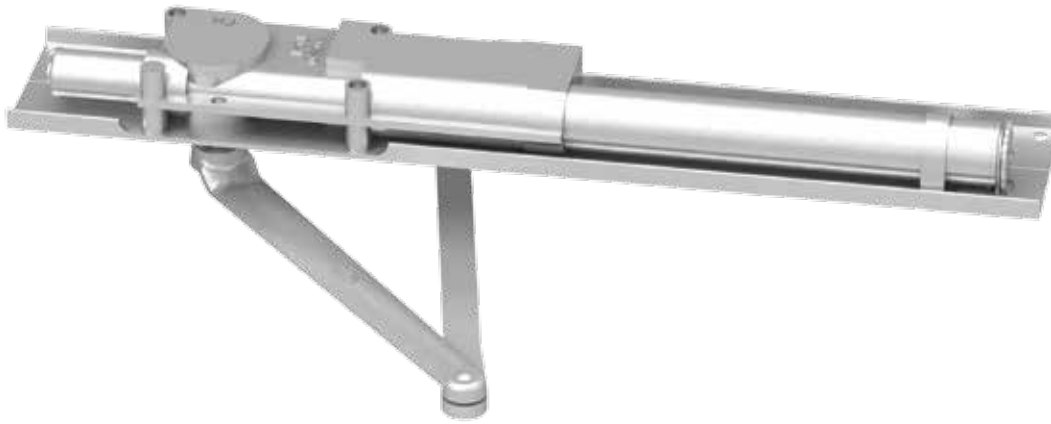
### Reduced opening force 5010 Series closers

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

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

\* Maximum opening force.

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

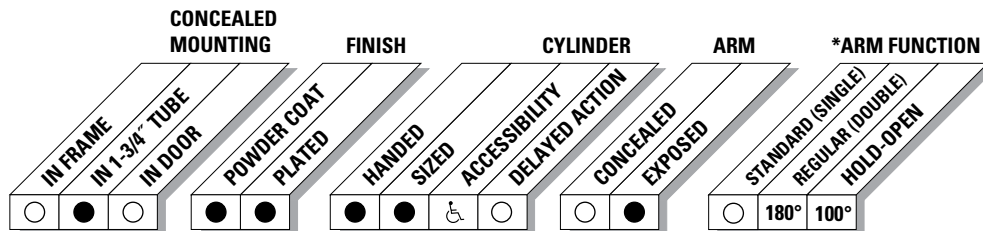


The concealed 5030 Series PACER® is a heavy duty closer designed to fit in a narrow, minimum 1-3/4" aluminum transom. The double lever arm provides superior door control and the choice of finishes and arm functions meet virtually all architectural requirements.

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

**Special Templates**

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



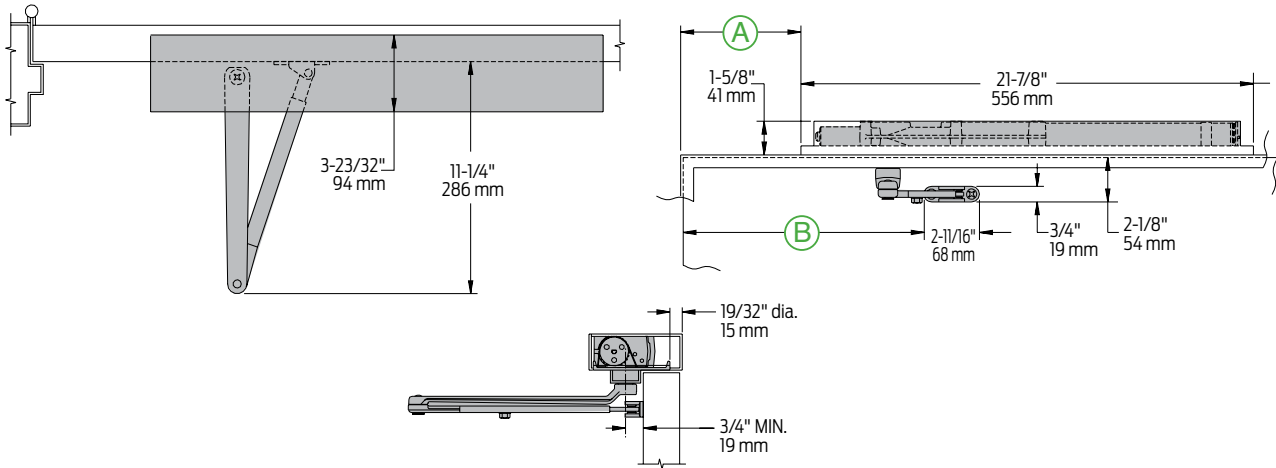
● AVAILABLE  
○ NOT AVAILABLE

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

# 5030 Series

## Mounting details

### Concealed Mounting



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

**Notes:**

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

## Cylinder



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

- Handed
- With mounting plate
- Standard

## Arms



### 5030-3077 Regular Arm

- Non-handed



### 5030-3049 Hold-Open Arm

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

## Installation Accessories



### 5030-416 Wood Mounting Clip Set

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



### 5030-417 Wood Mounting Clip Set

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

### How-to-order 5030 Series closers

#### Select cylinder size

- 5031
- 5033
- 5034
- 5035
- 5036

#### Select hand

- RH
- LH

#### Specify finish

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

#### Closer will be shipped with:

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

### Closer options

#### Arm

- Hold-Open (H)

#### Finishes

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

#### Installation accessories

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

#### Screw pack

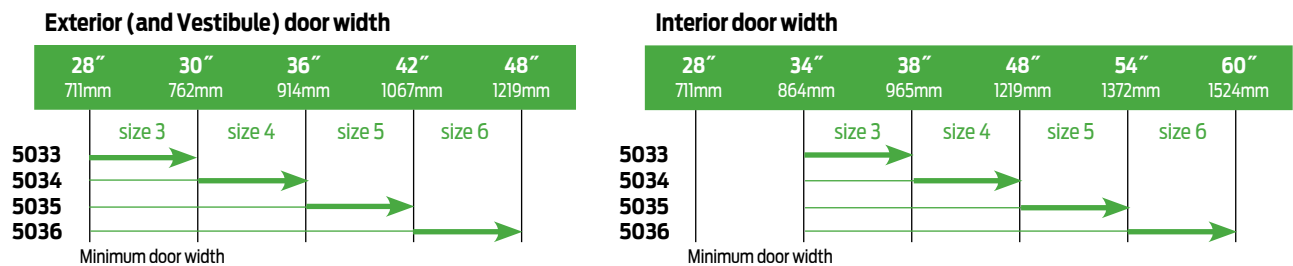
- TORX Machine Screw (TORX)

#### Special template

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

### Table of sizes

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




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

### Reduced opening force 5030 Series closers

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

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

\* Maximum opening force.

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

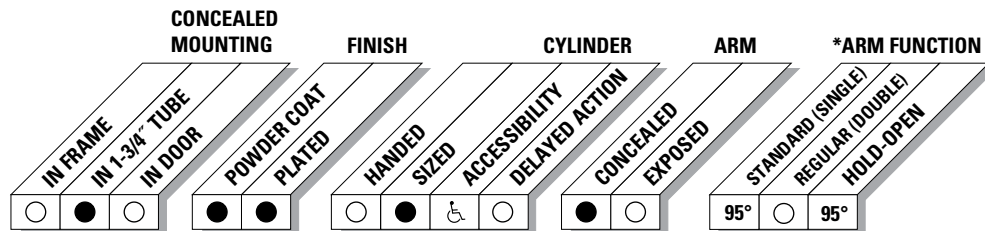


The concealed 6030 Series PACER® is a heavy duty, double acting closer designed to fit in a narrow, minimum 1-3/4" header. The single lever arm and roller assembly provides smooth, quiet door control and the choice of finishes and track functions meet virtually all architectural requirements. Installation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

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

**Special Templates**

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



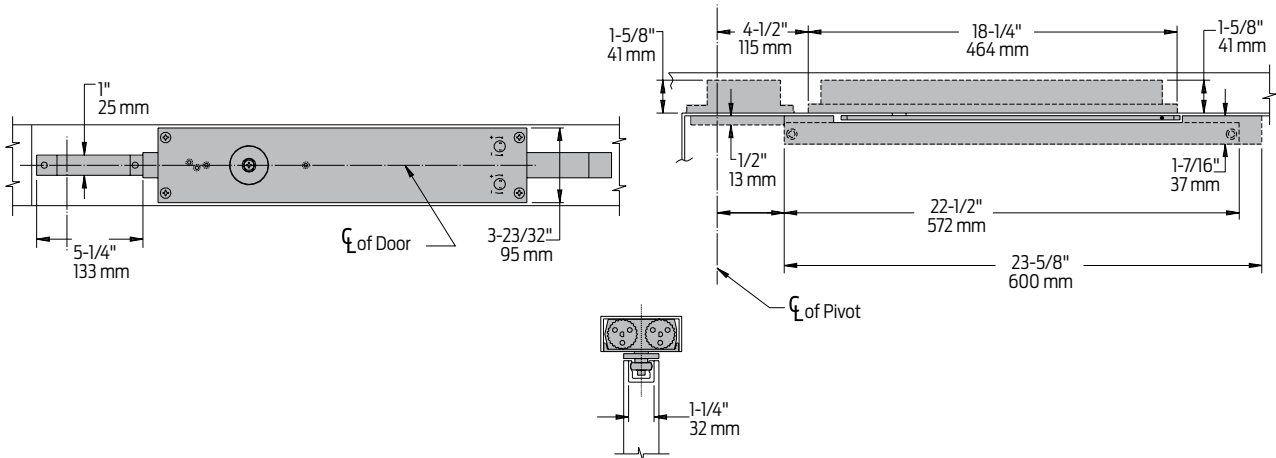
● AVAILABLE  
○ NOT AVAILABLE

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

# 6030 Series

## Mounting details

### Concealed Mounting



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

**Notes:**

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

### Cylinder



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

- Non-handed
- With mounting plate
- Standard

### Arm



#### 6030-3077T Standard Arm

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

### Tracks



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

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



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

- Non-handed
- Optional

### Installation Accessories



#### 6030-416 Wood Mounting Clip Set

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



#### 6030-169 Track Bumper

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

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



#### 6030-3054 Hold-Open Clip

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



#### 6030-3034 Track Roller

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



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

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

### How-to-order 6030 Series closers

#### Select cylinder size

- 6031
- 6032
- 6033
- 6034
- 6035

#### Specify finish

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

#### Closer will be shipped with:

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

### Closer options

#### Track

- Hold-open with Bumper (HBUMPER)

#### Finishes

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

#### Installation accessories

- Wood Clip Set, 6030-416

#### Screw pack

- TORX Machine Screw (TORX)

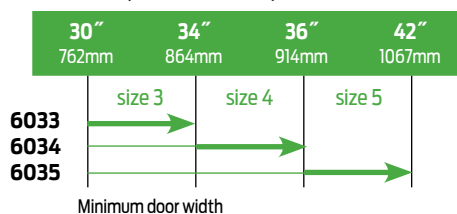
#### Special template

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

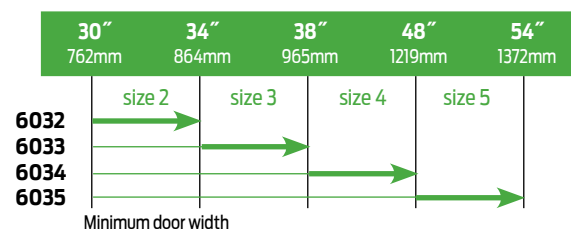
### Table of sizes

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

#### Exterior (and Vestibule) door width



#### Interior door width




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

### Reduced opening force 6030 Series closers

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

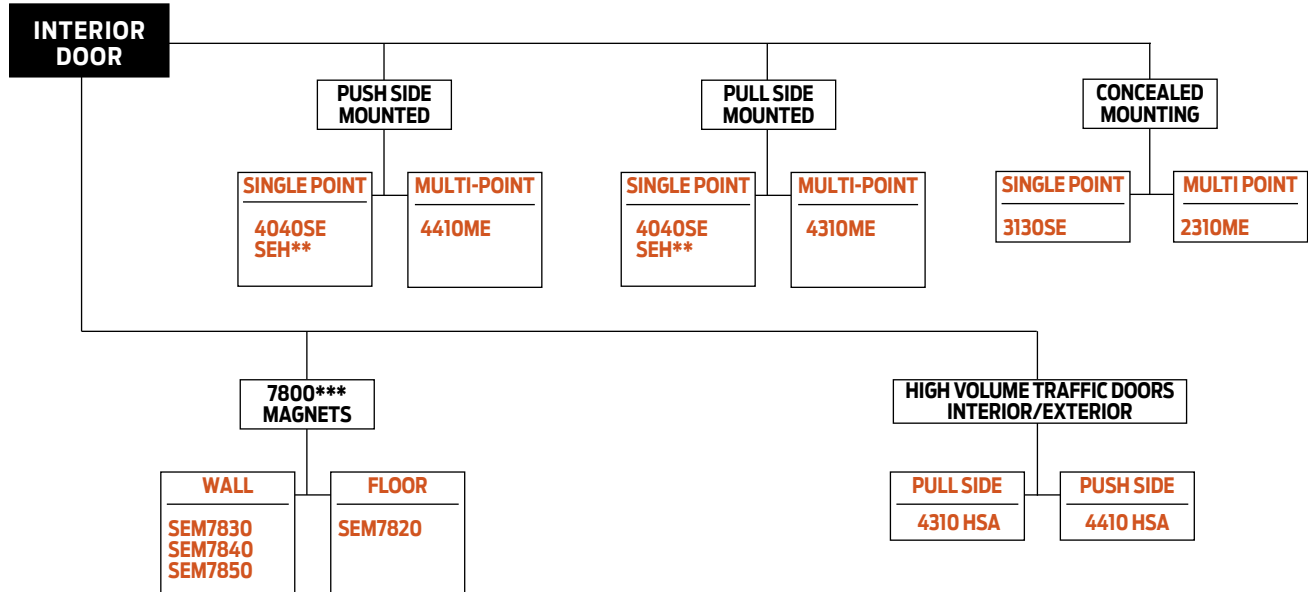
Refer to POWER OPERATORS section for information on systems that meet reduced opening force requirements without affecting closing power.

\* Maximum opening force.

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

## Product selection guide

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



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

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

## Product comparison

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

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

● AVAILABLE  
○ NOT AVAILABLE

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

### SENTRONIC® CLOSER/HOLDERS

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

### SINGLE POINT HOLD-OPEN (SE)

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

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

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

### HOLDER SCANNER ACTIVATED (HSA)

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

### MAGNETS (SEM) - ELECTROMAGNETIC DOOR HOLDERS

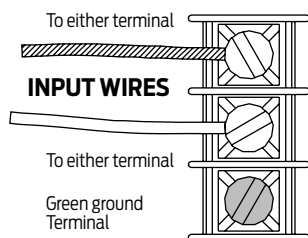
SEM Series magnets work with manual door closers to provide single point hold-open. Now available in new **tri-voltage** with 35 lbs. of holding force.

### APPLICATIONS

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

### GENERAL NOTES

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



**SE WIRING DIAGRAM**

### LISTINGS AND APPROVALS

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

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

### HOLDING SOLENOIDS CURRENT DRAW

#### SE/ME

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

#### SEM (TRI-VOLT)

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

#### HSA

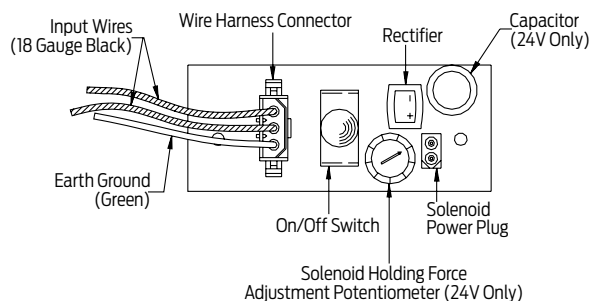
24V AC/DC (+10% -15%) @ 120 mA max.

### TRANSFORMER DATA

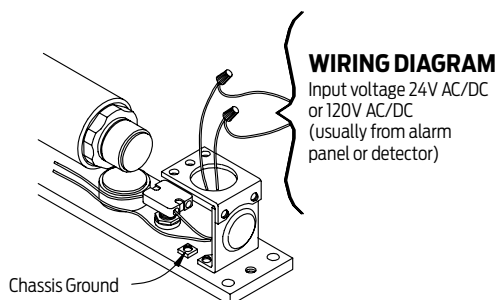
120V AC 50-60 Hz (primary); 24V AC @ 400 mA max. (secondary)  
An LCN supplied transformer will power (recommended) 2 SE, 3 SE/ME, and 15 SEM.

### ME WIRING

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



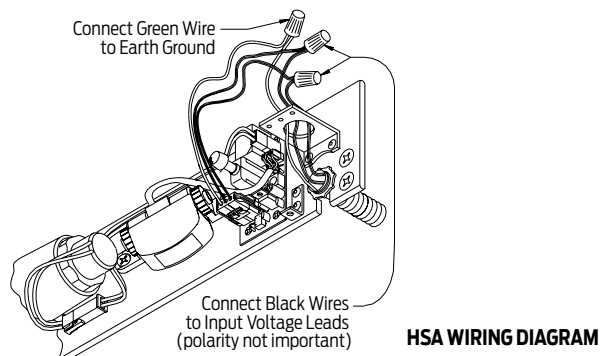
**ME (4310, 4410) WIRING DIAGRAM (24V only)**



**ME (2310) WIRING DIAGRAM**

## HSA WIRING

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



## FEATURES COMMON TO FIRE/LIFE SAFETY CLOSERS

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

## WARRANTY

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

## SPECIFICATIONS

Refer to "SPECIFICATIONS" section for suggested architectural specifications.

## DESIGN ASSISTANCE

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

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

## MATERIALS

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

## FINISHES

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

## MAINTENANCE

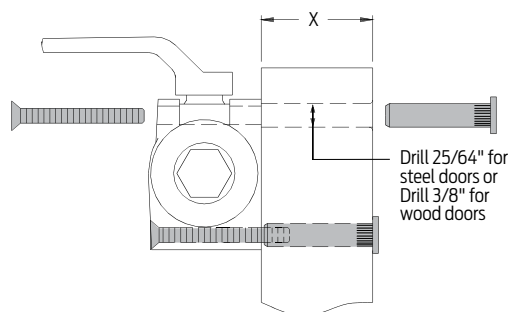
Closers mounted according to LCN installation instructions require no periodic adjustments. Quarterly inspections are recommended. Refer to the installation instructions for complete, product specific details.

## POSITIVE PRESSURE

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

## FASTENERS

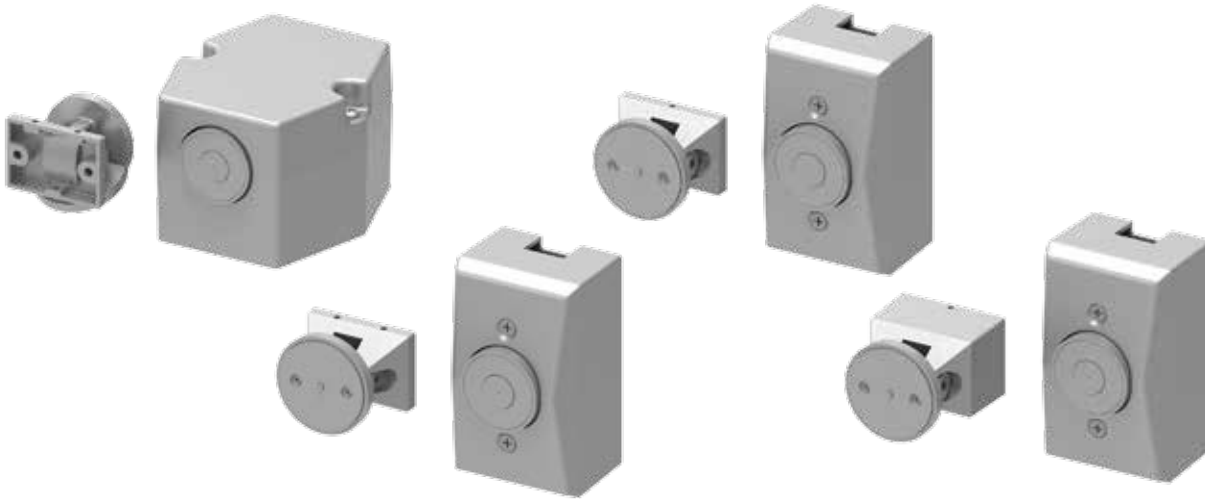
Standard WOOD and MACHINE SCREW (WMS) pack contains phillips head wood and machine screws to install the closer. Thru Bolts and/or TORX® machine screws are available for most closers. LCN thru bolts (TB) can be installed on 1-3/4" thick doors with either the 1/4"-20 machine screws or optional TORX screws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



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

Notes

Lined area for notes



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

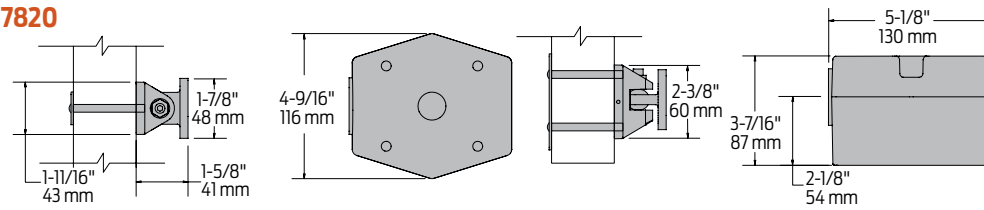
<b>Certifications</b>	Grade 1 - ANSI A156.15, UL 10C for metal smoke barrier or labeled door, ADA, Life Safety Code, NFPA 101, 100 Hour Salt Spray, Meets BAA - Buy American Act
<b>Voltage</b>	Tri-voltage design with 35 lbs. of holding force
<b>Housing</b>	Die cast
<b>Fasteners</b>	Wood and machine screw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

# SEM7800 Series

## Magnets

Features and mounting details

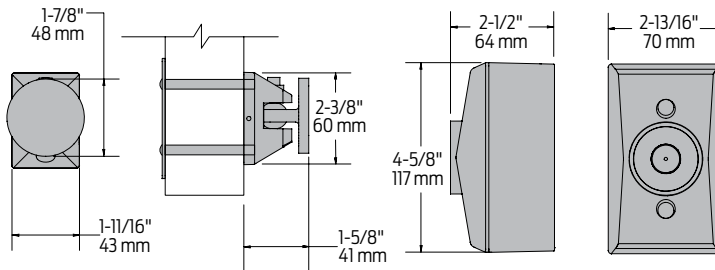
### 7820



**Mounting** Floor mounted

**Total Projection** 6-3/4" (171 mm)

### 7830

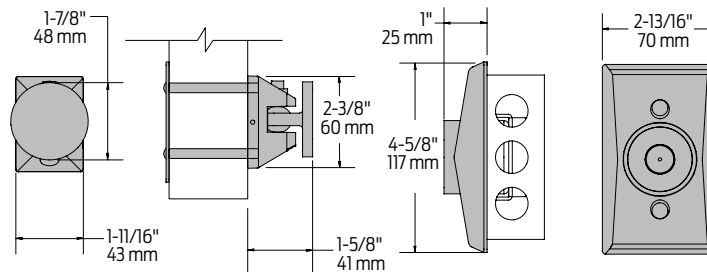


**Mounting** Surface wall mounted

**Total Projection** 4-1/8" (105 mm)

- Suitable for use in pocket door installations

### 7840



**Mounting**

- Low profile recessed wall mount
- 2" (51 mm) x 4" (102 mm) x 1-1/2" (38 mm)

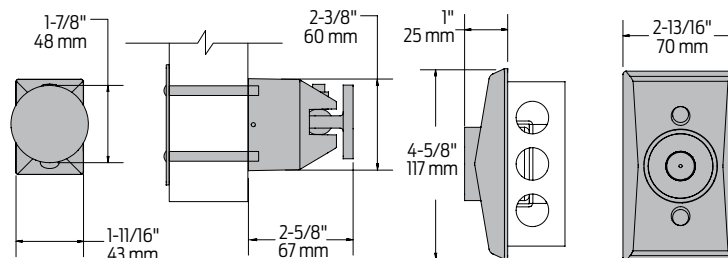
**Total Projection** 2-5/8" (67 mm)

- Suitable for use in pocket door installations

*Note:*

*Outlet box not included.*

### 7850



**Mounting**

- Standard profile recessed wall mount
- 2" (51 mm) x 4" (102 mm) x 1-1/2" (38 mm)

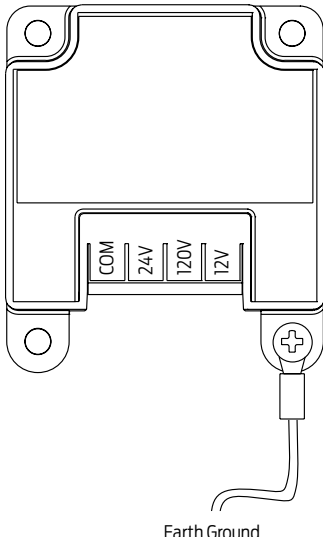
**Total Projection** 3-5/8" (92 mm)

- Suitable for use in pocket door installations

*Note:*

*Outlet box not included.*

**Voltage input**



**Electrical schematic**

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

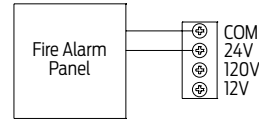


Fig. 1 24V AC/DC Wiring  
Polarity is inimportant

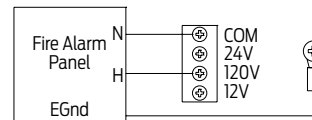


Fig. 2 120V AC Wiring

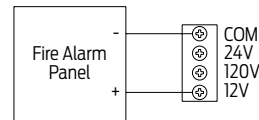


Fig. 3 12V DC Wiring  
Polarity as shown

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

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

**Magnets**



**SEM7820-516**  
Floor Magnet

- Magnet coil
- Standard



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

- Magnet coil
- Standard

**Armatures**



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

- Die cast low profile armature
- Standard



**SEM7850-828**  
Door Armature

- Die cast armature
- Standard

**Cover**



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

- Die cast cover
- Standard

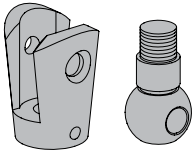
**Box**



**SEM7830-268**  
Wall Box

- Die cast surface wall mount box
- Standard

**Extensions**



**SEM7810-514  
Coupler Assembly Kit**

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



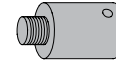
**SEM7810-E050  
Extension - 1/2"**

- Metal
- Standard



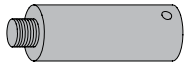
**SEM7810-E075  
Extension - 3/4"**

- Metal
- Standard



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

- Metal
- Standard



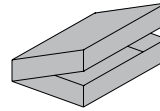
**SEM7810-E200  
Extension - 2"**

- Metal
- Standard



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

- Metal
- Standard



**SEM7810-517  
Extension kit**

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

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

# SEM7800 Series

## Ordering Information

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

#### Select magnet series

- SEM7820
- SEM7830
- SEM7840
- SEM7850

#### Specify finish

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

#### Magnets will be shipped with:

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

### How-to-order SEM 7810 extensions

#### Select magnet series

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

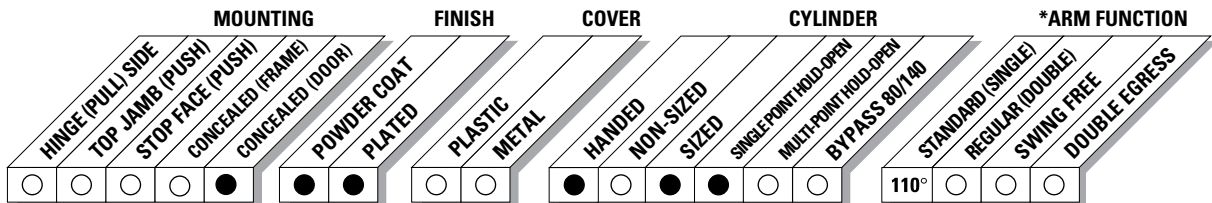


The 3130SE SENTRONIC® is a concealed in the door, closer/ holder designed to provide single point hold-open for fire and smoke barrier doors. Door is held open until current interruption releases the holding mechanism and the door closes. Single lever (track) arm closer is specifically designed for interior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

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

**Special Templates**

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



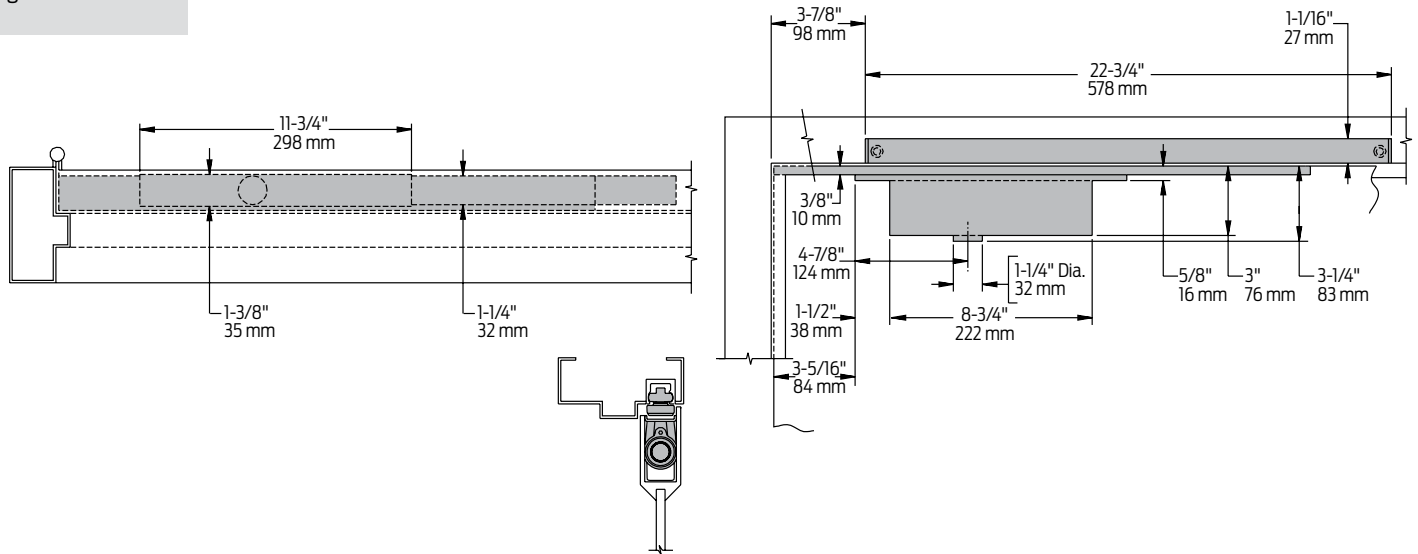
● AVAILABLE  
○ NOT AVAILABLE

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

# 3130SE Series

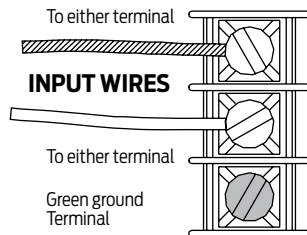
## Mounting details

### Concealed Mounting



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

#### SE Wiring Diagram



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

### Cylinder



**3130SE-3071**  
SE Cylinder Assembly

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

### Arms



**3130SE-3077T**  
Standard Arm

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



**3130SEL-3077T**  
Long Arm

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

### Tracks



**3130SE-3038**  
SE Track

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



**3130SEL-3038**  
SEL Long Track

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

### Installation Accessories



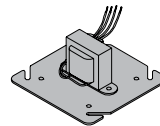
**3130SE-81**  
Conduit Quick-Connector

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



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

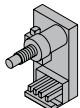
- Quiet, low friction roller assembly
- Shoulder dimension "X" = 1/8" (3 mm)
- Alloy metal slider for use in SE series tracks only



**4040SE-3210**  
Transformer

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

### Switch



**3130SE-3436**  
Test Switch

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

#### Select cylinder size

- 3133SE
- 3134SE

#### Select hand

- RH
- LH

#### Voltage

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

#### Specify finish

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

#### Closer will be shipped with:

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

### Closer options

#### Arm

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

#### Finishes

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

#### Installation accessories

- Transformer, 4040SE-3210

#### Screw pack

- TORX Machine Screw (TORX)

#### Special template

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

### Table of sizes

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

#### Interior door width

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

Minimum door width

→ Indicates recommended range of door width for closer size.

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

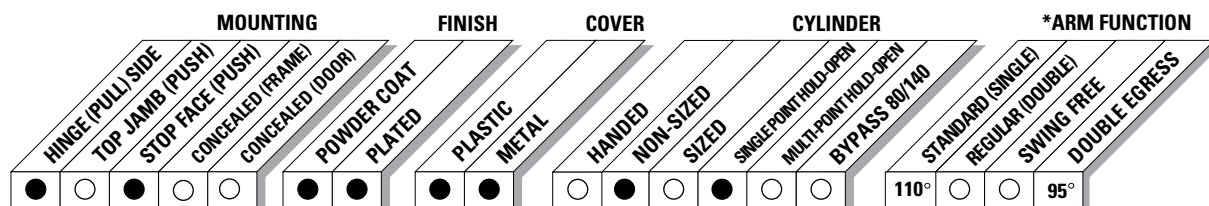


The 4040SE SENTRONIC® is a heavy duty, non-handed, nonsized closer/holder designed to provide single point hold-open for fire and smoke barrier doors. The door is held open until current interruption releases the holding mechanism and the door closes. Single lever (track) arm closer is specifically designed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

<b>Certifications</b>	Grade 1 - ANSI A156.15, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101	<b>Cover</b>	<ul style="list-style-type: none"> <li>Clip-on plastic, standard</li> <li>Metal, optional</li> </ul>
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>Cast Iron Body</li> <li>Full Complement Bearing</li> <li>1-1/2" Diameter Piston</li> <li>3/4" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Fasteners</b>	Wood and machine screw pack
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Hinge (Pull Side), Stop Face (Push Side)
<b>Handing</b>	Non-Handed	<b>Arms</b>	Standard arm and SE track, standard Double egress arm and SEL track, optional
<b>Size</b>	Adjustable Spring Size, up to 4	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>Aluminum (689)</li> <li>Statuary Bronze (690)</li> <li>Light Bronze (691)</li> <li>Black (693)</li> <li>Dark Bronze (695)</li> <li>Brass (696)</li> <li>Custom colors optional</li> </ul>
<b>Warranty</b>	2 years	<b>Wiring</b>	Concealed or surface, interfaces with fire alarm systems

### Special Templates

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



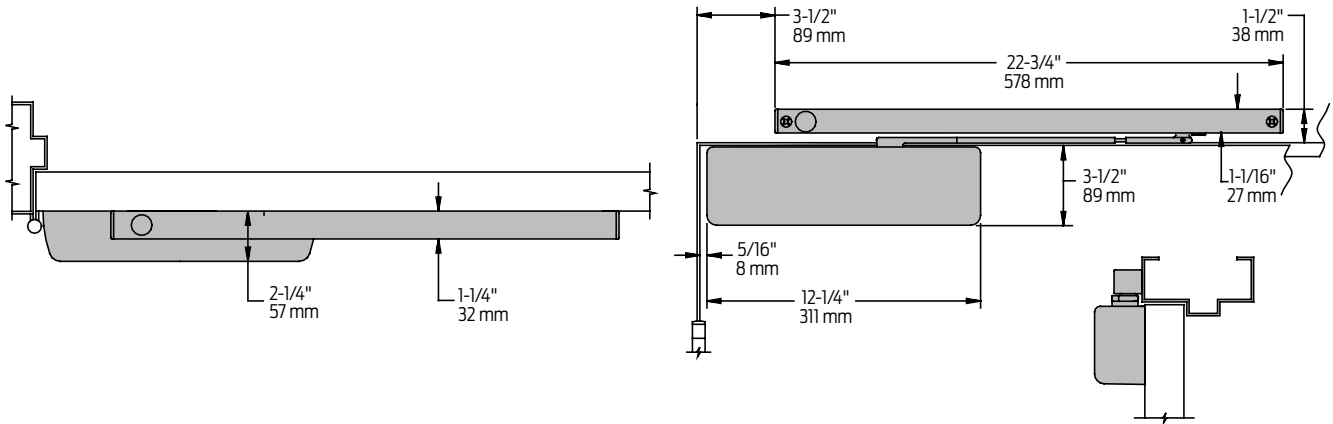
● AVAILABLE  
○ NOT AVAILABLE

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

# 4040SE Series

## Mounting details

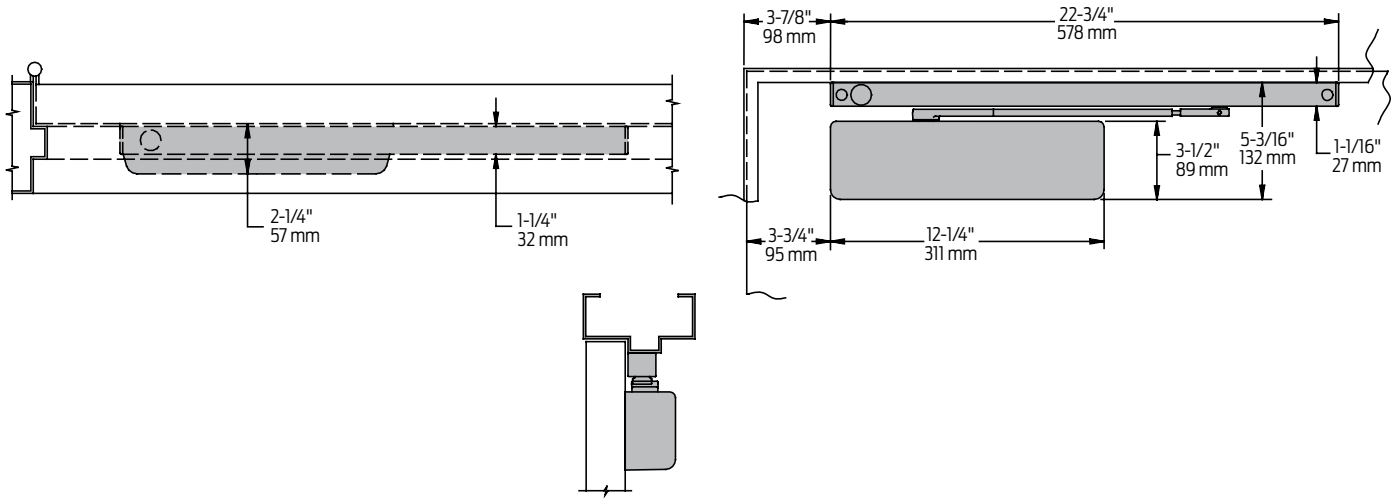
Hinge (Pull)  
Side Mounting



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

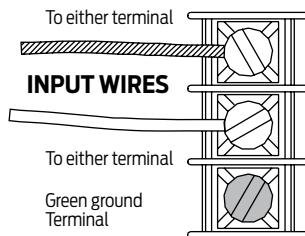
**Notes:**

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



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

#### SE Wiring Diagram



#### Notes:

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

### Cylinder



**4040SE-3071**  
Cylinder Assembly

- Non-handed
- Cast iron
- Standard

### Covers



**4040SE-72**  
Plastic Cover

- Non-handed
- Clip-on
- Standard



**4040SE-72MC**  
Metal Cover

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

### Arms



**4040SE-3077T**  
Standard Arm

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



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

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

### Tracks



**4040SE-3038**  
SE Track

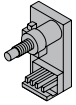
- Non-handed
- For SE closers. Mounts on either head frame or stop
- 24V or 120V AC/DC input for holding solenoid, please specify.
- Includes test switch assembly with fuse
- Standard



**4040SEL-3038**  
SEL Long Track

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

### Switch



**4040SE-3436**  
Test Switch

### Installation Accessories



**4040SE-18**  
Plate

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



**4040SE-18PA**  
Plate

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



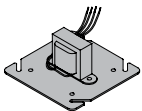
**4040SE-81**  
Conduit Quick-Connector

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



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

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



**4040SE-3210**  
Transformer

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

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

#### Select cylinder size

- SE
- SEL

#### Voltage

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

#### Specify finish

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

#### Closer will be shipped with:

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

### Closer options

#### Cover

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

#### Finishes

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

#### Arm

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

#### Screw pack

- TB\*, Wood & Machine Screw (TBWMS)
- TORX Machine Screw (TORX)
- TB\* & TORX Machine Screw (TBTRX)

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

#### Installation accessories

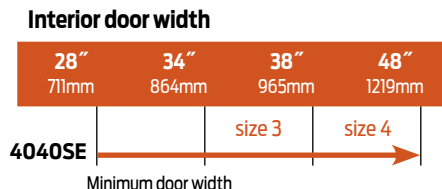
- Plate, 4040SE-18
- Plate, 4040SE-18PA
- Transformer, 4040SE-3210

#### Special template

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

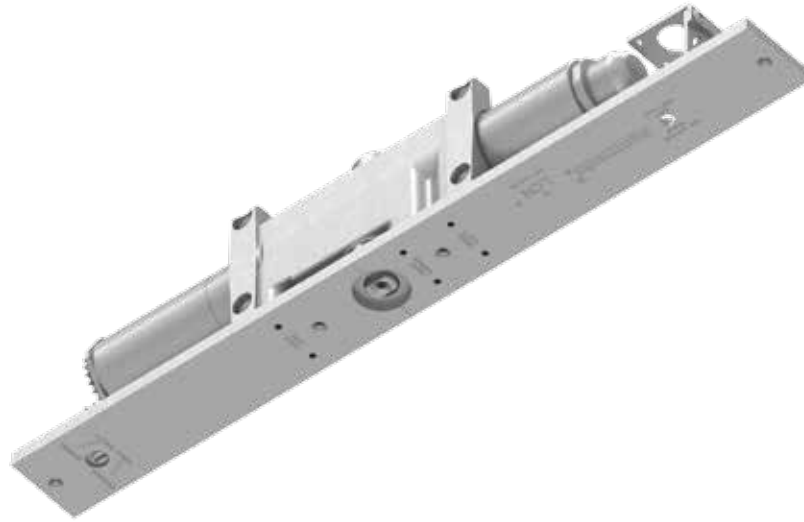
### Table of sizes

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



Indicates recommended range of door width for closer size.

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

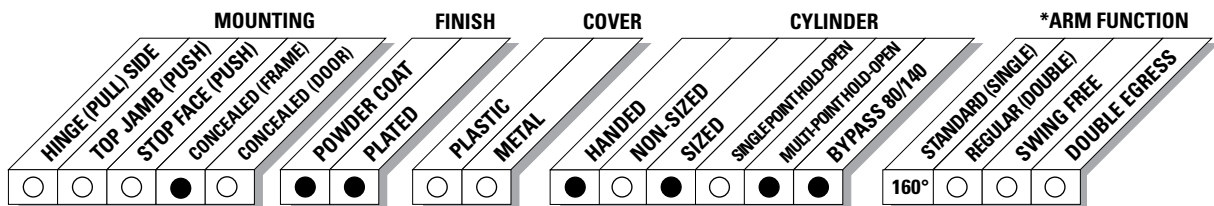


The 2310ME SENTRONIC® is a concealed heavy duty, electrically controlled closer/holder designed to provide infinitely adjustable hold-open for fire and smoke barrier doors. Door is held open until current interruption releases mechanism and the door closes. Single lever (track) arm closer is specifically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

<b>Certifications</b>	Grade 1 - ANSI A156.15, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101	<b>Fasteners</b>	Wood and machine screw pack
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>Cast iron Body</li> <li>Full Complement Bearing</li> <li>1-1/2" Diameter Piston</li> <li>11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Mounting</b>	Concealed (in frame)
<b>Fluid</b>	All Weather Fluid	<b>Arms</b>	Standard handed arm and non-handed track ( two piece metal finish plate)
<b>Handing</b>	Handed	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>Aluminum (689)</li> <li>Statuary Bronze (690)</li> <li>Light Bronze (691)</li> <li>Black (693)</li> <li>Dark Bronze (695)</li> <li>Brass (696)</li> <li>Custom colors optional</li> <li>Optional SRI primer - powder coat only</li> <li>Optional plated finishes</li> </ul>
<b>Size</b>	Sized, 4 only	<b>Wiring</b>	<ul style="list-style-type: none"> <li>Concealed or exposed</li> <li>Built in on/off switch controls hold-open function</li> <li>Interfaces with fire alarm system</li> </ul>
<b>Warranty</b>	2 years		

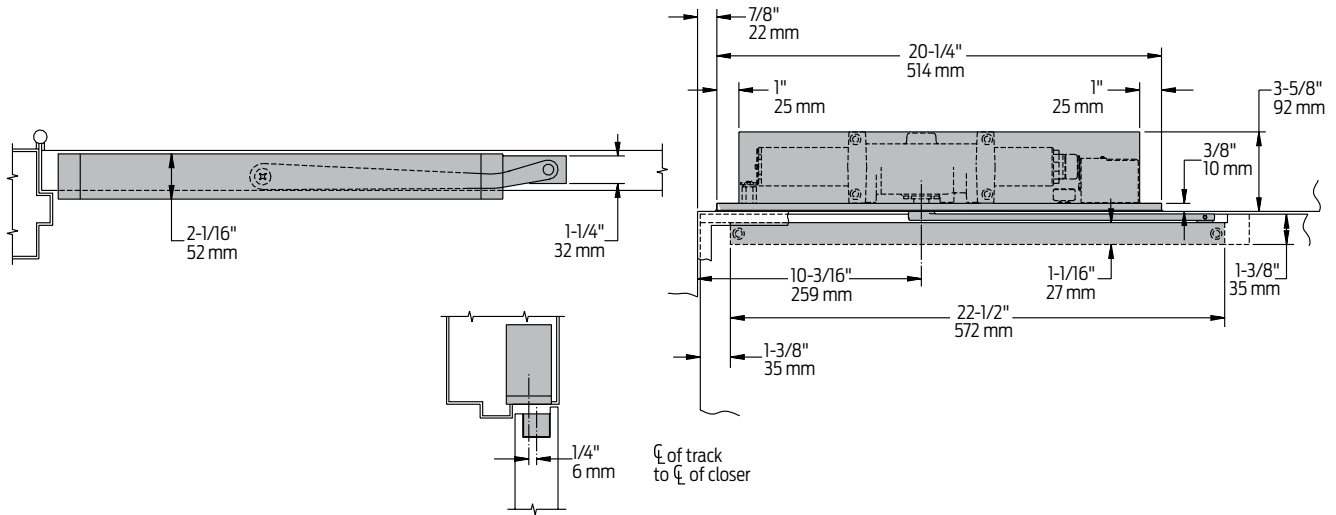
**Special Templates**

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



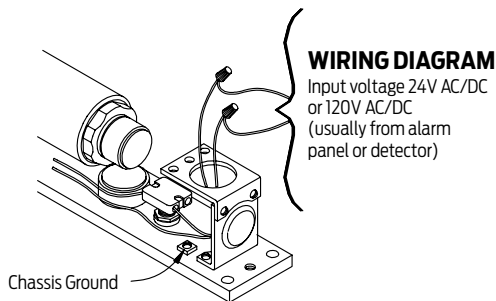
● AVAILABLE  
○ NOT AVAILABLE

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



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

#### Me (2310) Wiring Diagram



#### Notes

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

### Cylinders



**2310ME-3971**  
ME Cylinder Assembly

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



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

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

### Arm



**2310ME-3077T**  
Standard Arm

- Handed

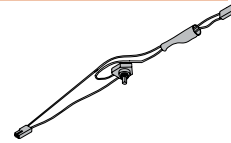
### Track



**2310ME-3038**  
Standard Track

- Non-handed
- Standard

### Switch



**2310ME-3351**  
Switch

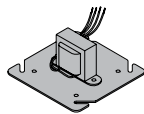
- "On/Off" switch assembly provides continuous hold-open function
- 24V or 120V, please specify

### Installation Accessories



**2310ME-420**  
Fire Shield

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



**2310ME-3210**  
Transformer

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



**2310ME-3034**  
Track Roller

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

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

#### Select hand

- RH
- LH

#### Voltage

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

#### Specify finish

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

#### Closer will be shipped with:

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

## Closer options

#### Cylinder function

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

#### Finishes

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

#### Screw pack

- TORX Machine Screw (TORX)

#### Installation accessories

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

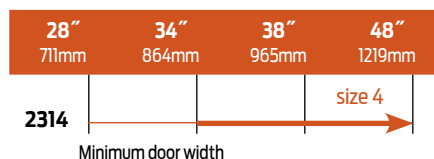
#### Special template

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

## Table of sizes

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

#### Interior door width



→ Indicates recommended range of door width for closer size.

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

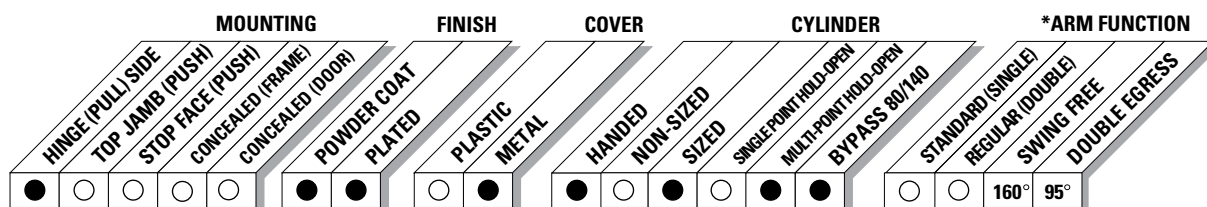


The 4310ME SENTRONIC® is a heavy duty, electrically controlled closer/holder designed to provide infinitely adjustable hold-open for fire and smoke barrier doors. Door is held open until current interruption releases mechanism and the door closes. Single lever (track) arm closer is specifically designed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

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

**Special Templates**

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



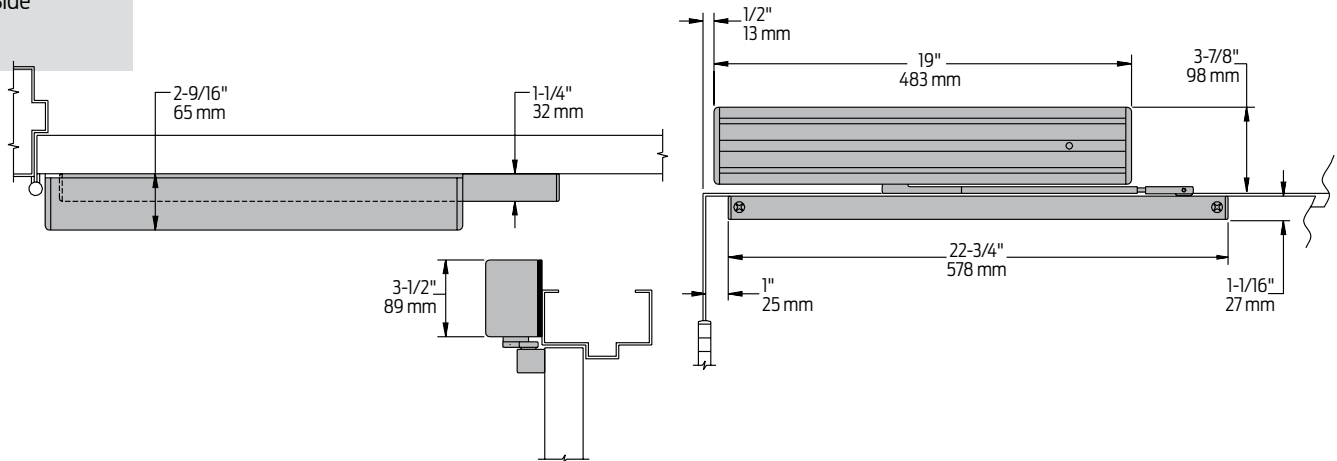
● AVAILABLE  
○ NOT AVAILABLE

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

# 4310ME Series

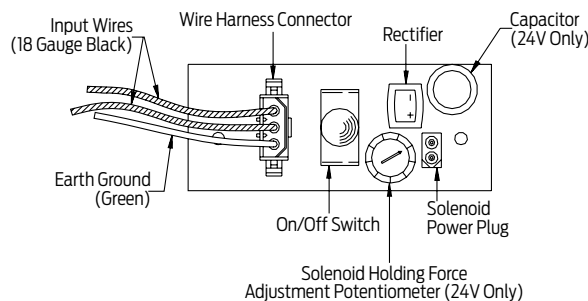
## Mounting details

### Hinge (Pull) Side Mounting



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

### ME (4310, 4410) Wiring Diagram



#### Notes:

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

### Cylinder



**4310ME-3971**  
ME Cylinder Assembly

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



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

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

### Cover



**4310ME-72MC**  
Metal Cover

- Handed
- Standard

### Arms



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

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



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

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

### Track

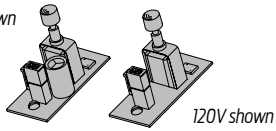


**4310ME-3038**  
Track

- Non-handed
- Standard

### Switch

24V shown



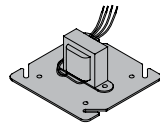
#### **4310ME-3351** Switch Assembly

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



#### **4310ME-3034** Track Roller

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



#### **4310-3210** Transformer

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



#### **4310ME-3354** ME Wiring Harness

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

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

#### Select hand

- RH
- LH

#### Voltage

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

#### Specify finish

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

#### Closer will be shipped with:

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

### Closer options

#### Cylinder function

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

#### Arm

- Double Egress (DE)

#### Finishes

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

#### Screw pack

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

#### Installation accessories

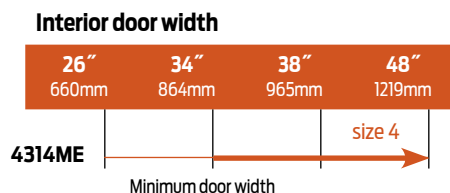
- Transformer, 4310ME-3210

#### Special template

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

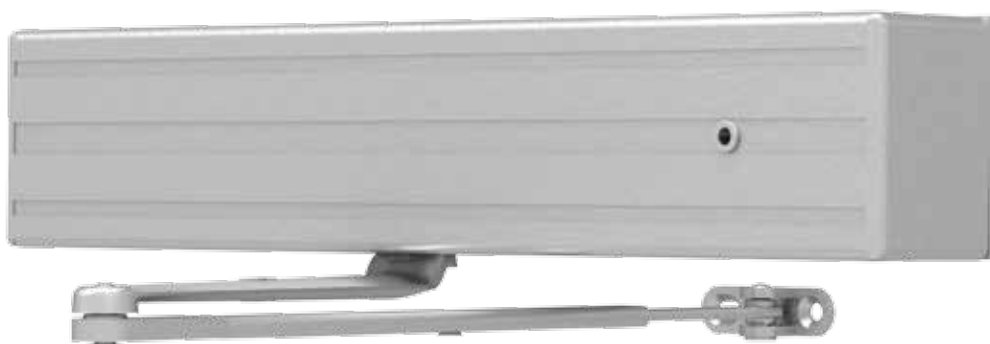
### Table of sizes

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



Indicates recommended range of door width for closer size.





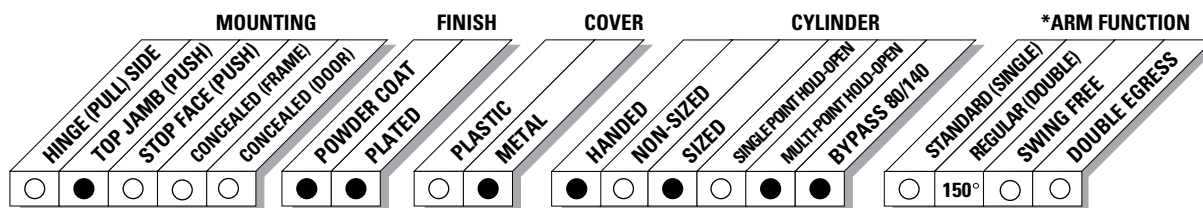
The 4410ME SENTRONIC® is a heavy duty, electrically controlled closer/holder designed to provide infinitely adjustable hold-open for fire and smoke barrier doors. Door is held open until current interruption releases mechanism and the door closes. Double lever arm closer is specifically designed for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

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

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

**Special  
Templates**

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



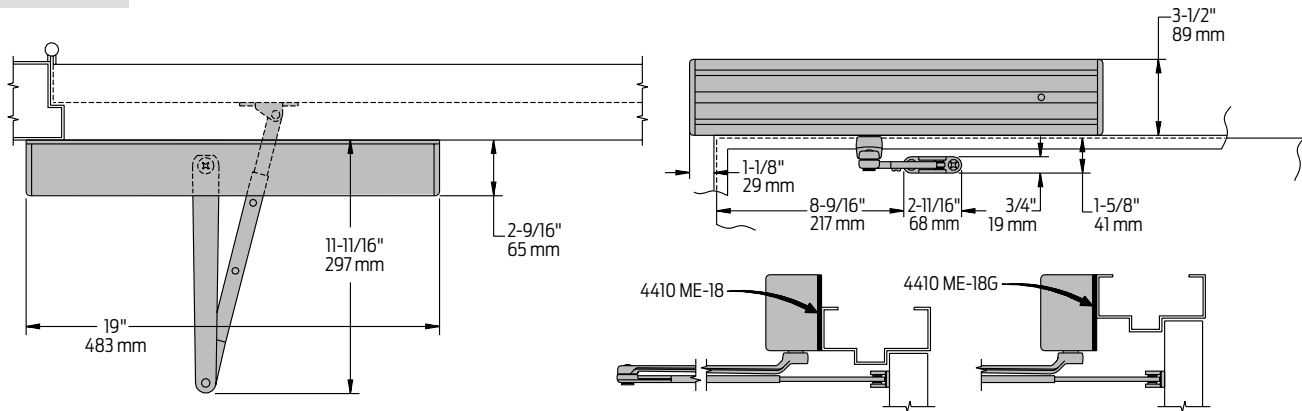
● AVAILABLE  
○ NOT AVAILABLE

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

# 4410ME Series

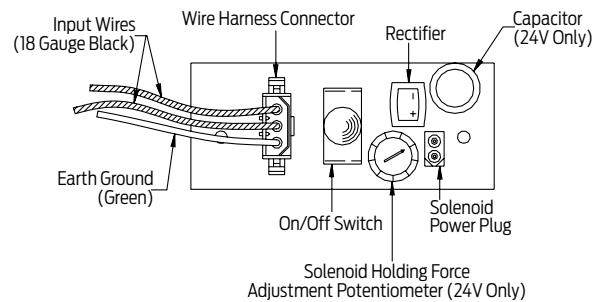
## Mounting details

### Top Jamb (Push Side) Mounting



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

### ME (4310, 4410) Wiring Diagram



### Cylinders



**4414ME-3971**  
ME Cylinder Assembly

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



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

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

### Cover



**4410ME-72MC**  
Metal Cover

- Handed

### Arms



**4410ME-3077**  
Regular Arm

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

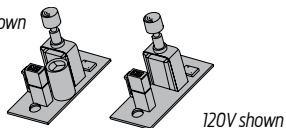


**4410ME-3077L**  
Long Arm

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

### Switch

24V shown



#### 4410ME-3351 Switch Assembly

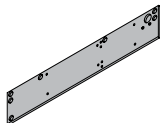
- Provides continuous hold-open function
- Available as 24V or 120V, please specify

### Installation Accessories



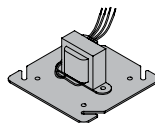
#### 4410ME-18 Mounting Plate

- Standard



#### 4410ME-18G Mounting Plate

- Substituted for standard plate on flush ceiling installations
- Optional



#### 4410ME - 3210 Transformer

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



#### 4410ME-3354 ME Wiring Harness

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

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

**Select hand**

- RH
- LH

**Voltage**

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

**Specify finish**

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

**Closer will be shipped with:**

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

**Closer options**

**Cylinder function**

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

**Arm**

- Long (LONG)

**Finishes**

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

**Screw pack**

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

**Installation accessories**

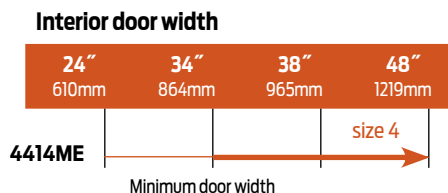
- Plate, 4410ME-18G  
(substituted for standard mounting plate)
- Transformer, 4410ME-3210

**Special template**

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

**Table of sizes**

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



→ Indicates recommended range of door width for closer size.



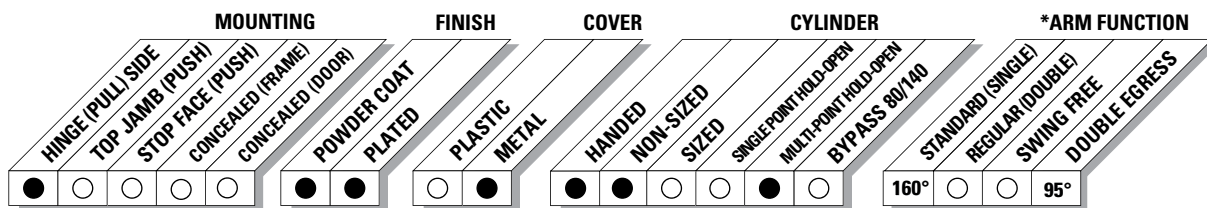


The 4310HSA SENTRONIC® is an electrically controlled closer/holder designed to provide easy passage for groups of pedestrians through high traffic doors. Pedestrians, moving through the doorway, trigger the built-in scanner. When the door is opened to 80° or more, the door is electrically held open to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

<b>Certifications</b>	Grade 1 - ANSI A156.4, ANSI 156.15, NFPA 101, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Cover</b>	Metal, Standard
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>Cast Iron Body</li> <li>Full Complement Bearing</li> <li>1-1/2" Diameter Piston</li> <li>11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Arms</b>	<ul style="list-style-type: none"> <li>Standard arm (with track)</li> <li>Double egress arm, optional</li> </ul>
<b>Fluid</b>	All Weather Fluid	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>Aluminum (689)</li> <li>Statuary Bronze (690)</li> <li>Light Bronze (691)</li> <li>Black (693)</li> <li>Dark Bronze (695)</li> <li>Brass (696)</li> <li>Custom colors optional</li> </ul>
<b>Handing</b>	Handed	<b>Wiring</b>	<ul style="list-style-type: none"> <li>Optional SRI primer - powder coat only</li> <li>Optional plated finishes</li> <li>Concealed or surface wiring</li> <li>24V AC/DC input only</li> <li>120V requires 4310HSA-3210 transformer</li> <li>HSA features a scanner activated hold-open function, fixed 15 seconds or 30 seconds</li> </ul>
<b>Size</b>	Field adjustable, shipped at size 3		
<b>Warranty</b>	2 years		
<b>Fasteners</b>	Wood and machine screw pack		
<b>Mounting</b>	Hinge (Pull Side) interior doors		

**Special Templates**

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



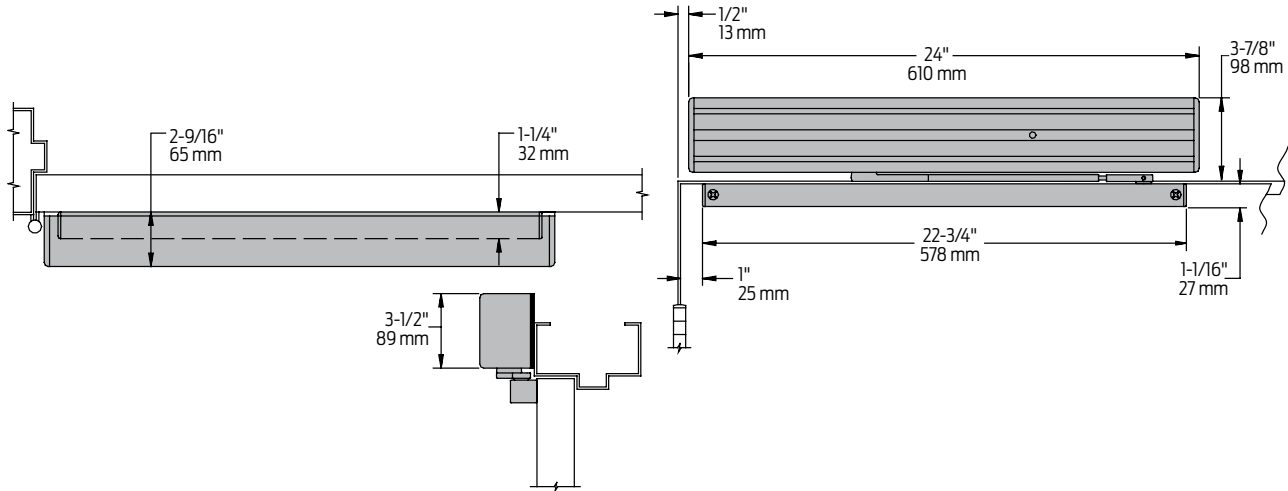
● AVAILABLE  
○ NOT AVAILABLE

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

# 4310 HSA Series

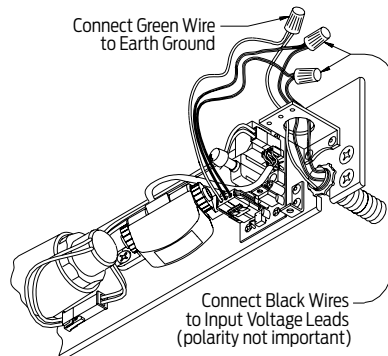
## Mounting details

### Hinge (Pull) Side Mounting



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

### HSA (4310) Wiring Diagram



#### Notes:

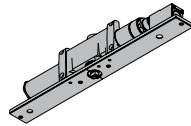
- Functions as full rack and pinion door closer when current is interrupted or continuous hold-open is not engaged
- Built-in "On/Off" switch provides continuous hold-open function

### Cylinders



**4311HSA-3971**  
HSA Cylinder Assembly

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



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

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

### Cover



**4310HSA-72MC**  
Metal Cover

- Handed
- Standard

### Track



**4310HSA-3038**  
Track

- Non-handed
- Standard

### Arms



**4310HSA-3077T**  
Standard Arm

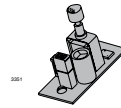
- Handed



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

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

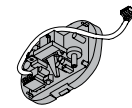
### Switch



**4310HSA-3448**  
Switch Assembly

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

### Scanner



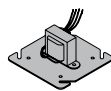
**4310HSA-3428**  
Scanner Module

### Installation Accessories



**4310HSA-3034**  
Track Roller

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



**4310HSA-3210**  
Transformer

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

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

#### Select hand

- RH
- LH

#### Voltage

- 24V AC/DC

#### Specify finish

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

#### Closer will be shipped with:

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

### Closer options

#### Arm

- Double Egress (DE)

#### Finishes

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

#### Screw pack

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

#### Installation accessories

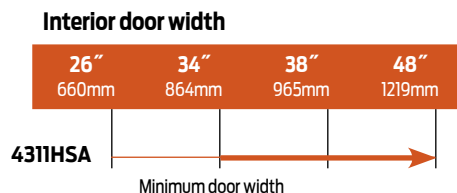
- Transformer, 4310HSA-3210

#### Special template

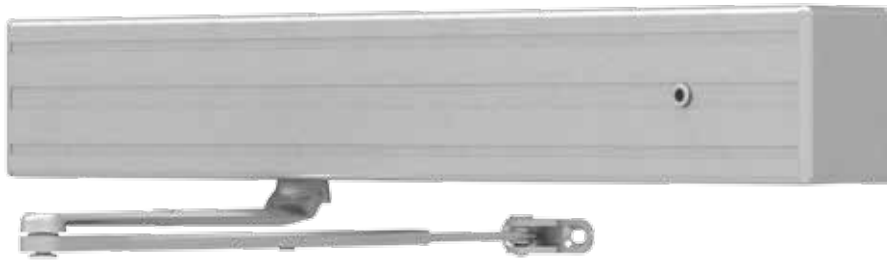
- ST- \_\_\_\_\_ (if required)

### Table of sizes

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



Indicates recommended range of door width for closer size.



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

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

**Body Construction**

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

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

**Arms**

- Regular Arm
- Long arm, optional

**Finishes/Colors/  
Powder Coat**

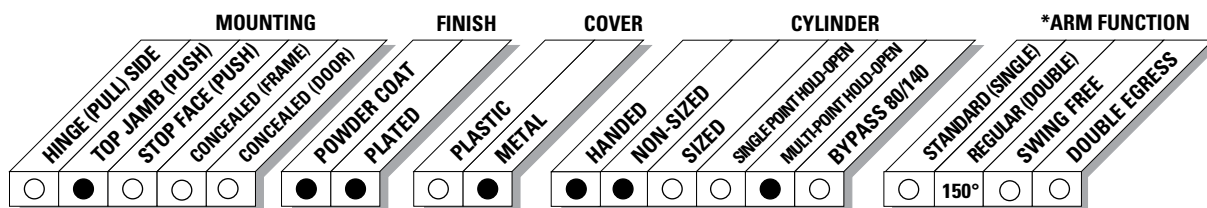
- Aluminum (689)
- Statuary Bronze (690)
- Light Bronze (691)
- Black (693)
- Dark Bronze (695)
- Brass (696)
- Custom colors optional
- Optional plated finishes

**Wiring**

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

**Special Templates**

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



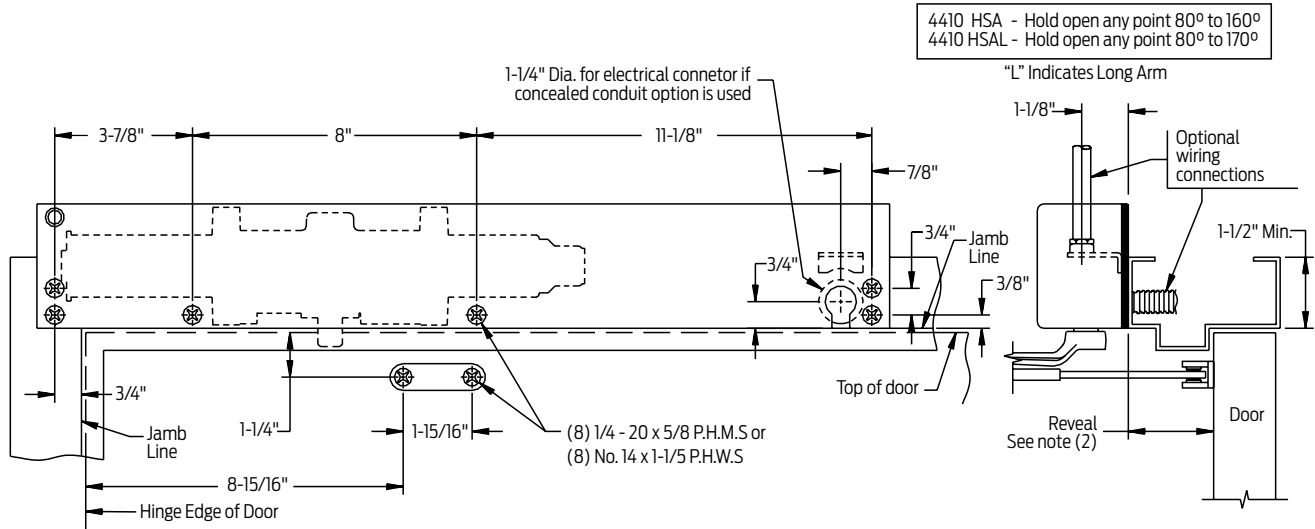
● AVAILABLE  
○ NOT AVAILABLE

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

# 4410 HSA Series

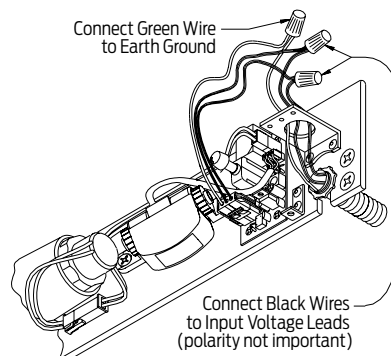
## Mounting details

### Top Jamb (Push) Side Mounting



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

### HSA Wiring Diagram

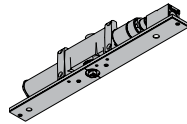


### Cylinders



#### 4412HSA-3971

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



#### 4412HSA-3071

##### HSA Cylinder / Plate Assembly

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

### Cover



#### 4410HSA-72MC Metal Cover

- Handed
- Standard

### Arms



#### 4410HSA-3077 Regular Arm

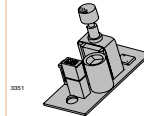
- Non-handed
- 3-7/8" (98 mm) maximum reveal



#### 4410HSA-3077L Long Arm

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

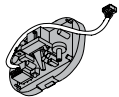
### Switch



#### 4410HSA-3448 Switch Assembly

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

### Scanner



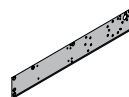
#### 4410HSA-3428 Scanner Module

### Installation Accessories



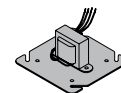
#### 4410HSA-18 Mounting Plate

- Standard



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

- Substituted on flush ceiling installations
- Optional



#### 4410HSA-3210 Transformer

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

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

#### Select hand

- RH
- LH

#### Voltage

- 24V AC/DC

#### Specify finish

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

#### Closer will be shipped with:

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

### Closer options

#### Arm

- Long Arm (LONG)

#### Finishes

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

#### Screw pack

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

#### Installation accessories

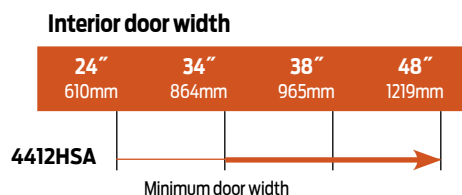
- Plate, 4410HSA-18
- Plate, 4410HSA-18G  
(substituted for standard mounting plate)
- Transformer, 4410HSA-3210

#### Special template

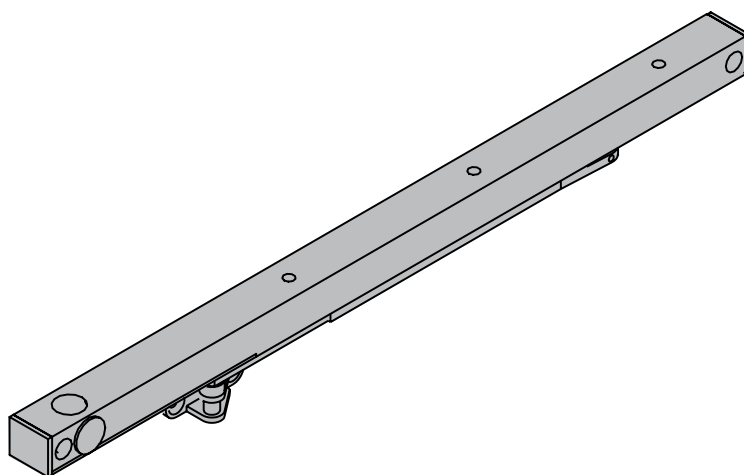
- ST- \_\_\_\_\_ (if required)

### Table of sizes

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



 Indicates recommended range of door width for closer size.



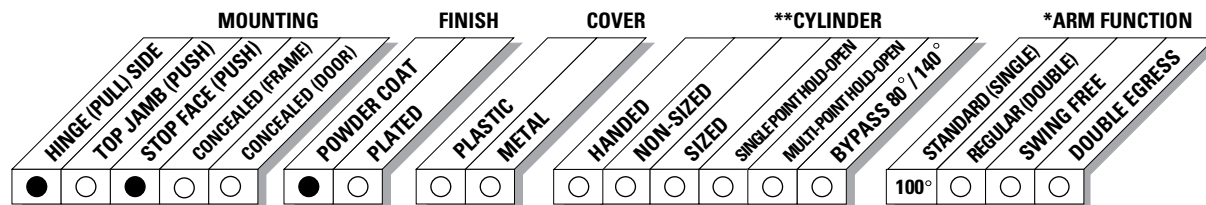
The SEH SENTRONIC® is a holder designed to provide single point hold-open for fire and smoke barrier doors that must be used with an opposite side mounted UL listed door closer. The door is held open until current interruption releases the holding mechanism and the door closes. Single lever (track) arm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

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

<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Aluminum (689)</li> <li>■ Statuary Bronze (690)</li> <li>■ Light Bronze (691)</li> <li>■ Black (693)</li> <li>■ Dark Bronze (695)</li> <li>■ Brass (696)</li> <li>■ Custom colors optional</li> </ul>
<b>Wiring</b>	<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
	<ul style="list-style-type: none"> <li>■ Concealed or surface</li> <li>■ 24V or 120V, please specify</li> <li>■ Interfaces with alarm system, please consult with factory for full details</li> </ul>

**Special Templates**

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



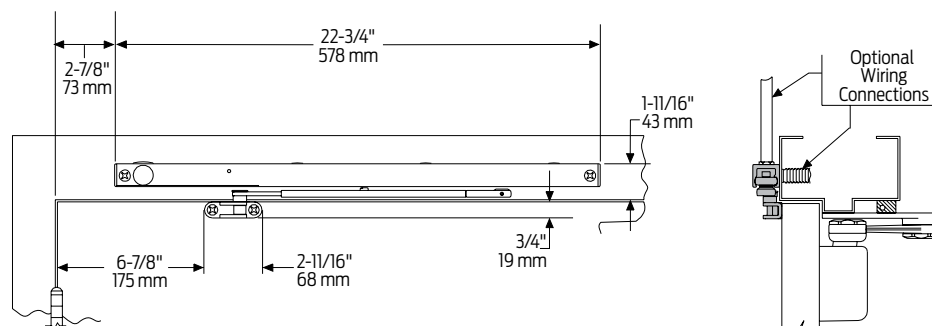
● AVAILABLE  
○ NOT AVAILABLE

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

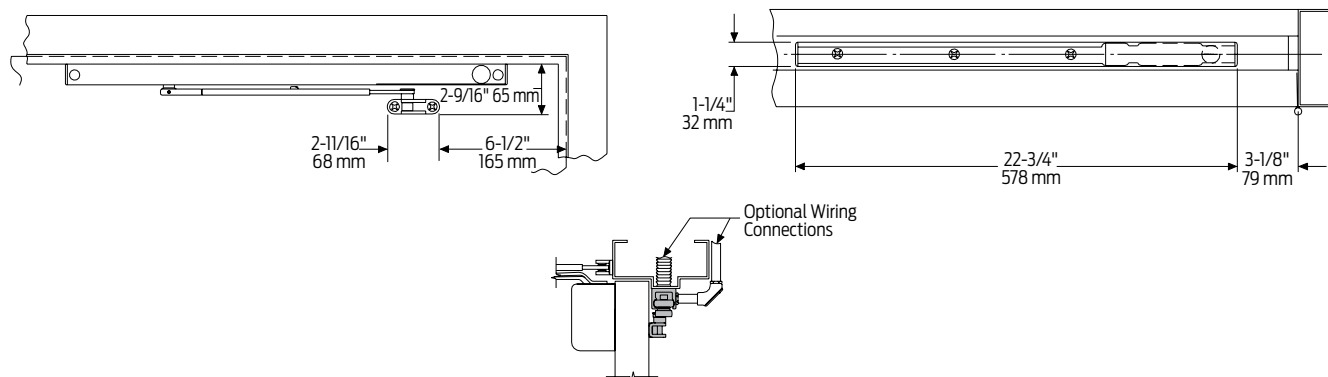
## Mounting details

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

Hinge (pull) side mount



Stop face (push side) mount

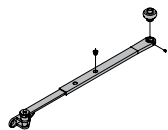


<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Swing Clear Hinges</b>	Consult factory
<b>Auxiliary Stop</b>	Recommended at hold-open point
<b>Reveal</b>	Should not exceed 1/8" (3 mm) for standard arm
<b>Head Frame</b>	Requires 2" (51 mm) minimum
<b>Stop Width</b>	1-1/4" (32 mm) minimum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

**Notes:**

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

### Arm



**SEH-3077T**  
Holder Arm

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

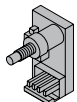
### Track



**SEH-3038**  
SEH Track

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

### Switch



**SEH-3436**  
Test Switch

### Installation Accessories



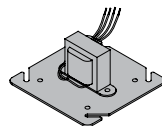
**SEH-81**  
Conduit Quick-Connector

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



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

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



**4040SEH-3210**  
Transformer

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

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

**Voltage**

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

**Specify finish**

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

**Closer will be shipped with:**

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

**Options**

**Finishes**

- Custom Powder Coat (RAL)

**Screw pack**

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

**Installation accessories**

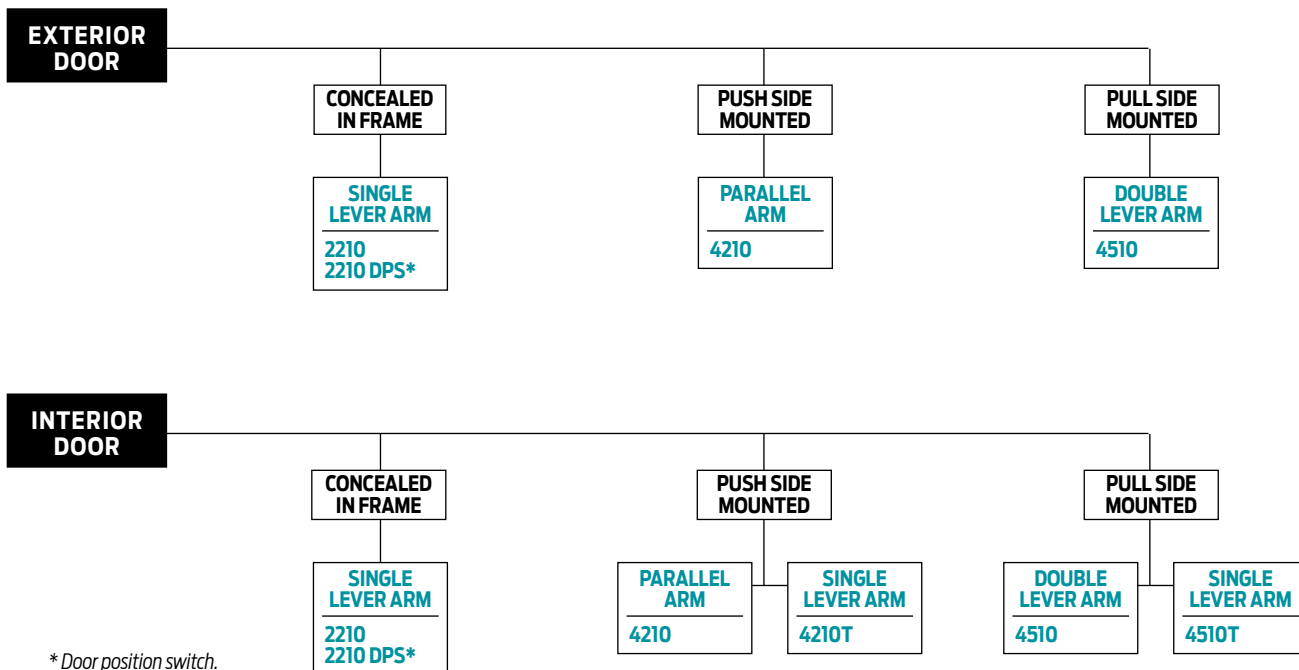
- Transformer, 4040SE-3210

**Special template**

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

## Product selection guide

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.

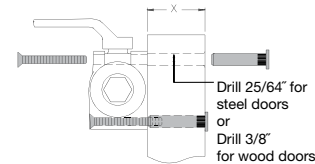
## POSITIVE PRESSURE

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

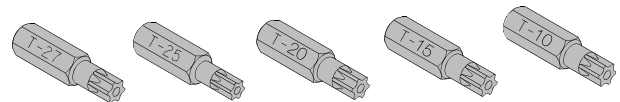
TORX MACHINE SCREW (TORX) pack contains tamper resistant machine screws to install the closer. Thru Bolts for TORX machine screws are available for all high security closers, except 2210 series.

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.

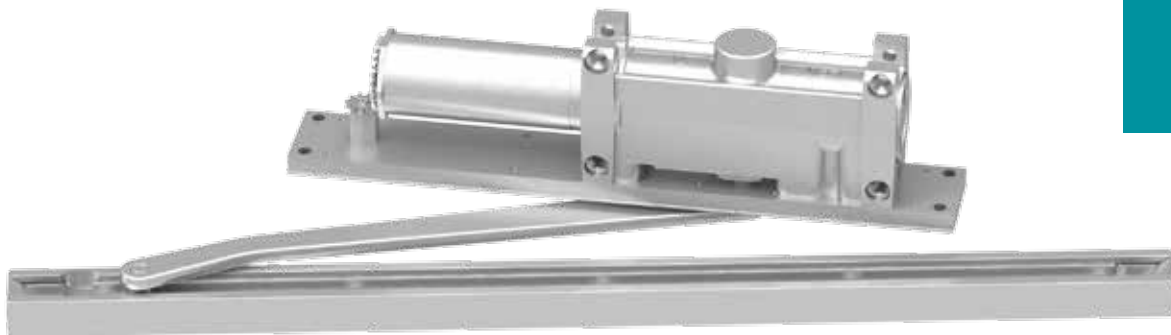


## FASTENERS

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.

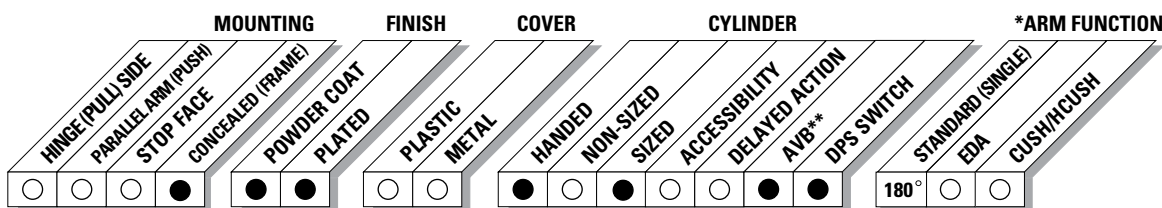


The concealed 2210 Series, heavy duty, high security track closer features complete concealment with special components to minimize tampering and vandalism. Forged steel, single lever arm and heavy steel mounting plate are designed for correctional, vandal prone, institutional, and other high traffic applications. A choice of finishes and cylinder functions meet correctional and vandal resistant requirements.

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Cover</b>	Metal, standard
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>Cast Iron Body</li> <li>Full Complement Bearing</li> <li>1-1/2" Diameter Piston</li> <li>11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Fasteners</b>	TORX machine screw pack
<b>Fluid</b>	All Weather Liquid X Fluid	<b>Mounting</b>	<ul style="list-style-type: none"> <li>Concealed, single acting cylinder in head frame</li> <li>Concealed, arm and track in top rail of door</li> </ul>
<b>Handing</b>	Handed	<b>Arms</b>	Standard security arm and security track
<b>Size</b>	Sized, interior, exterior and vestibule 3-5 (refer to chart)	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>Aluminum (689)</li> <li>Statuary Bronze (690)</li> <li>Light Bronze (691)</li> <li>Black (693)</li> <li>Dark Bronze (695)</li> <li>Brass (696)</li> <li>Custom colors optional</li> </ul>
<b>Warranty</b>	15 years (2210); 2 years (2210DPS)		<ul style="list-style-type: none"> <li>Optional SRI primer - powder coat only</li> <li>Optional plated finishes</li> </ul>

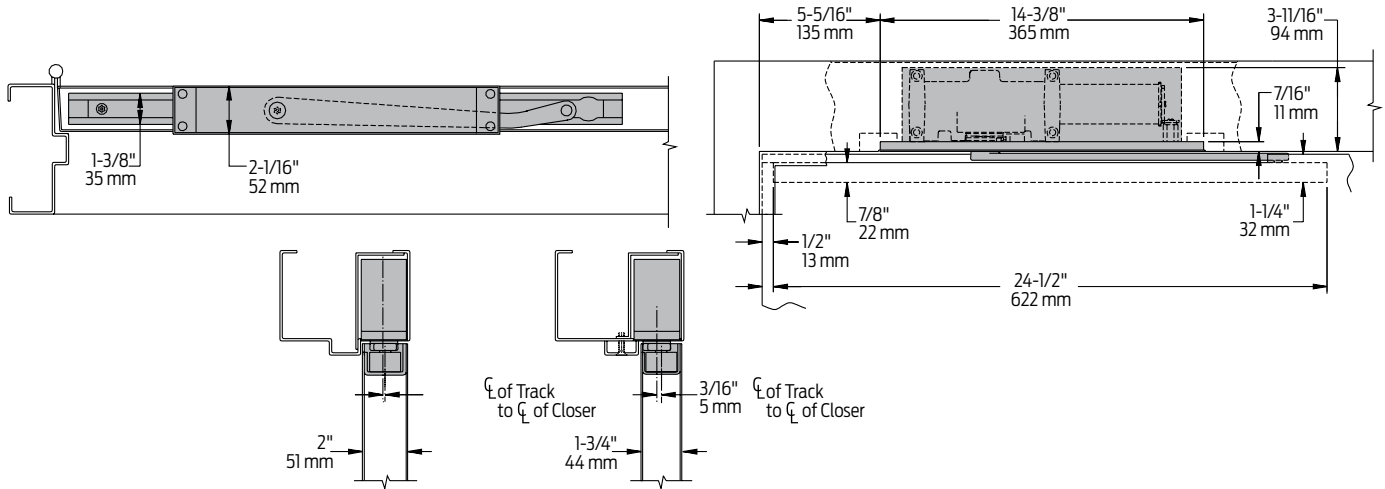
**Special Templates**

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



● AVAILABLE  
○ NOT AVAILABLE

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



<b>Butt Hinges</b>	Should not exceed 4-1/2" (114 mm) in width
<b>Auxiliary Stop</b>	Recommended where a door cannot swing 180°
<b>Top Rail</b>	1-1/4" (32 mm) mortise required. 3/8" (10 mm) cutout required at top of door, stop face only
<b>Door Thickness</b>	1-3/4" (44 mm) minimum
<b>Door Width</b>	28" (711 mm) minimum
<b>Head Frame</b>	<ul style="list-style-type: none"> <li>5-3/4" (146 mm) wide and 4" (102 mm) high with 2-3/16" (56 mm) rabbet required</li> <li>Consult factory if any dimension is less</li> </ul>
<b>Steel Mounting Plate</b>	Thickness 3/8" (10 mm)
<b>Door Position Switch</b>	<ul style="list-style-type: none"> <li>Optional, newly redesigned, field adjustable switch can interface with security and monitoring systems</li> <li>Add suffix "DPS" to selected cylinder</li> <li>Provides normally open (N.O.) and normally closed (N.C.) circuit</li> <li>A three wire connector harness with 84" (2134 mm), 16 AWG leads is furnished to simplify connection to field wiring</li> <li>Single pole double throw (SPDT) contacts rated at 125/250 VAC at 10.1 amps maximum resistive load are standard</li> </ul>
<b>Advanced Variable Backcheck</b>	<ul style="list-style-type: none"> <li>Cylinder starts backcheck at approximately 45° instead of the normal 75°</li> <li>Add suffix "AVB" to selected cylinder (eg. 2213 DPS AVB)</li> </ul>
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>Templating allows 180°</li> <li>Consult factory if door will be held open at 180°</li> <li>Pivot mounting door limits opening to 110° and increases minimum door width to 32" (813 mm). Consult factory</li> <li>Please note that many track style door closers are capable of allowing 180° of door swing</li> </ul> <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>
<b>Options</b>	<ul style="list-style-type: none"> <li>Advanced Variable Backcheck Cylinder</li> <li>Door Position Switch</li> </ul>

### 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

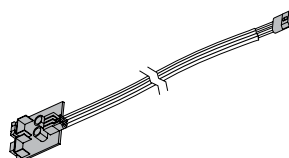
- Heavy gauge metal plate
- Required for complete enclosure
- Four point TORX® mounting screws for extra security
- Closer adjustments not accessible with finish plates installed

### 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

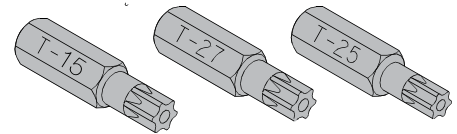
- Advanced Variable Backcheck (AVB)

#### 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

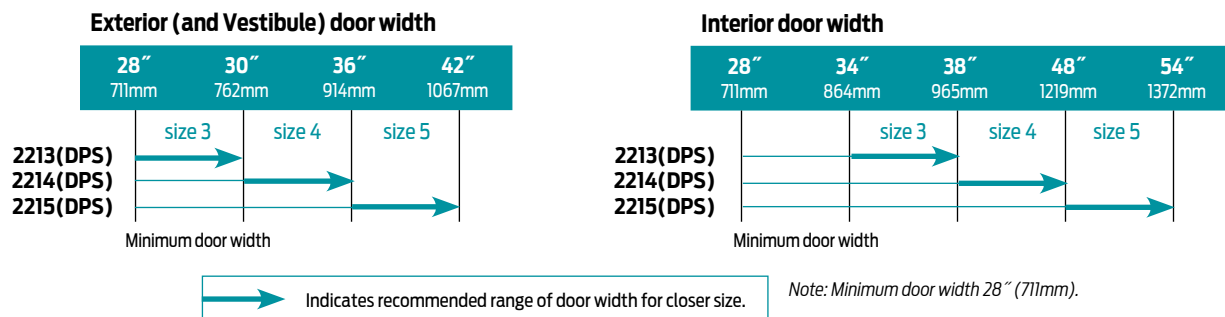
- ST- \_\_\_\_\_

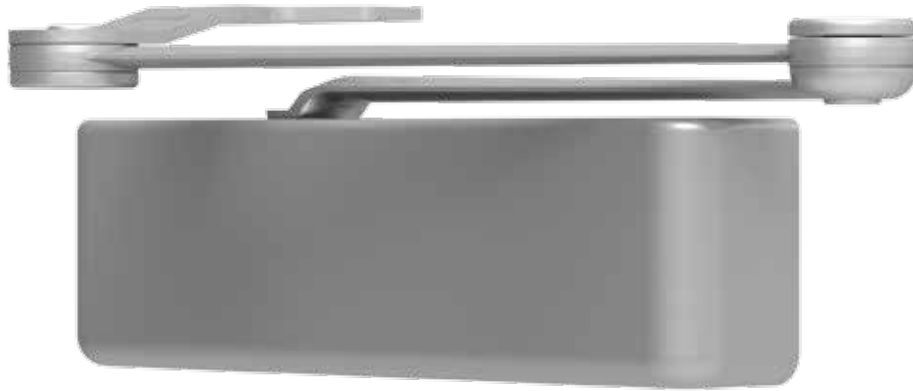


NOTE: Installation of this closer requires T-27, T-25 and T-15 driver bits for TORX machine screws with a security pin. Sold separately.

### 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%)



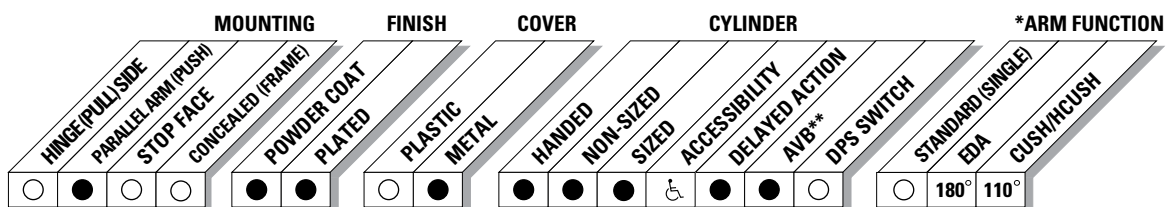


The 4210 SMOOTHEE® Series is a heavy duty, high security closer with special components to minimize tampering and vandalism. Forged steel parallel arms and heavy gauge metal security covers are designed for correctional, vandal prone, institutional and other high traffic applications. The closer has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

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10C, ADA*, 100 Hour Salt Spray, Meets BAA - Buy American Act <i>*4211 cylinder meets ADA</i>	<b>Cover</b>	Metal Security
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>Cast Iron Body</li> <li>Full Complement Bearing</li> <li>1-1/2" Diameter Piston</li> <li>11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Fasteners</b>	TORX machine screw pack
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Parallel (Push Side)
<b>Handing</b>	Handed	<b>Arms</b>	Extra duty, non hold-open
<b>Size</b>	<ul style="list-style-type: none"> <li>Adjustable Exterior and, Vestibule, Size 3-5 or size 6</li> <li>Adjustable, Interior, Size 2-5; or size 6</li> </ul>	<b>Finishes/Colors/Powder Coat</b>	<ul style="list-style-type: none"> <li>Aluminum (689)</li> <li>Statuary Bronze (690)</li> <li>Light Bronze (691)</li> <li>Black (693)</li> <li>Dark Bronze (695)</li> <li>Brass (696)</li> <li>Custom colors optional</li> </ul>
<b>Warranty</b>	15 years		<ul style="list-style-type: none"> <li>Optional SRI primer - powder coat only</li> <li>Optional plated finishes (cover only)</li> </ul>

**Special Templates**

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



● AVAILABLE  
○ NOT AVAILABLE

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

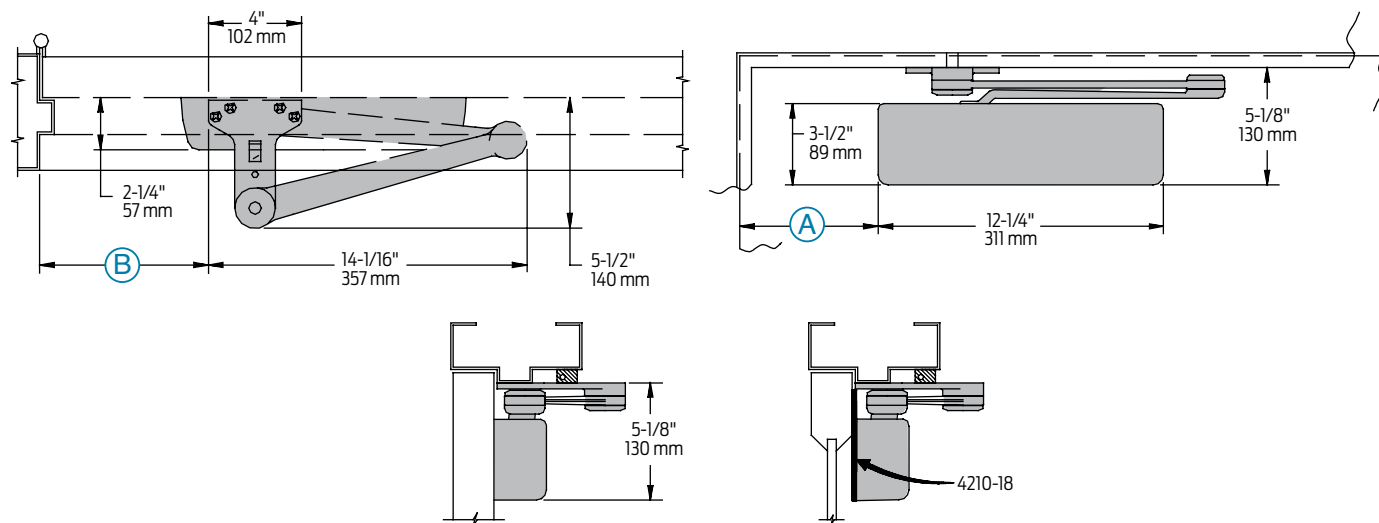
\* Maximum opening with standard template. See individual closer series for degrees of opening per installation.

\*\* Advanced Variable Backcheck.

# 4210 Series

## Mounting details

### Parallel Arm (Push Side) Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width	
<b>Auxiliary Stop</b>	Recommended where the door cannot swing 180° or where CUSH arms not used	
<b>Clearance</b>	For EDA or CUSH is 5-1/2" (140 mm) from push side of door	
<b>Top Rail</b>	Less than 5-1/8" (130 mm) measured from stop, requires PLATE 4210-18. Plate requires 2" (51 mm) minimum top rail	
<b>Stop Width</b>	2-3/4" (70 mm) recommended. Less than 1" (25mm), consult factory	
<b>Delay Action</b>	<ul style="list-style-type: none"> <li>■ Add suffix "DEL" to selected cylinder (eg. 4211DEL)</li> <li>■ Not available with 4215 or 4216 cylinder</li> <li>■ Delays closing from maximum opening to approximately 70°</li> <li>■ Delays time adjustable up to approximately 1 minute</li> </ul>	
<b>Advanced Variable Backcheck</b>	<ul style="list-style-type: none"> <li>■ Cylinder starts backcheck at approximately 45° instead of the normal 75°</li> <li>■ Add suffix "AVB" to selected cylinder (eg. 4211 AVB)</li> </ul>	
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) 140°: A = 4-7/16" (113 mm) B = 5-3/4" (146 mm) 180°: A = 2-15/16" (75 mm) B = 4-1/4" (108 mm)	85°: A = 8-5/16" (211 mm) B = 9-5/8" (244 mm) 90°: A = 7-11/16" (195 mm) B = 9" (229 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

- 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 rabbeted 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

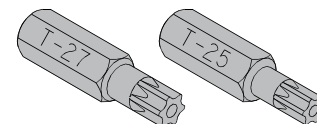
#### Specify finish

- 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

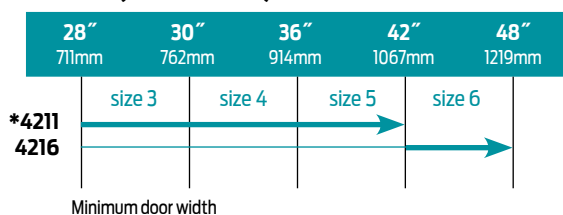
#### Special template

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

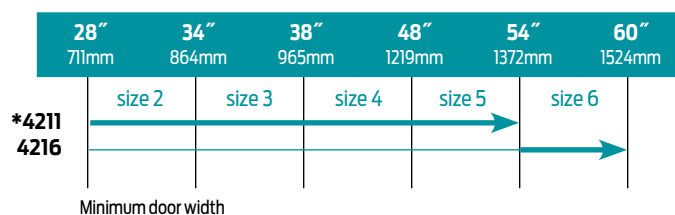
### Table of sizes

- 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.

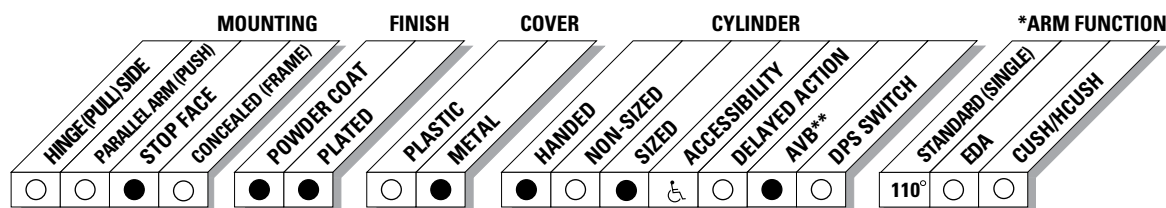


The 4210T SMOOTHIE® Series is a heavy duty, high security track closer with special components to minimize tampering and vandalism. Forged steel arms and heavy gauge metal security covers are designed for correctional, vandal prone, institutional and other high traffic interior applications. The closer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

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

**Special Templates**

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



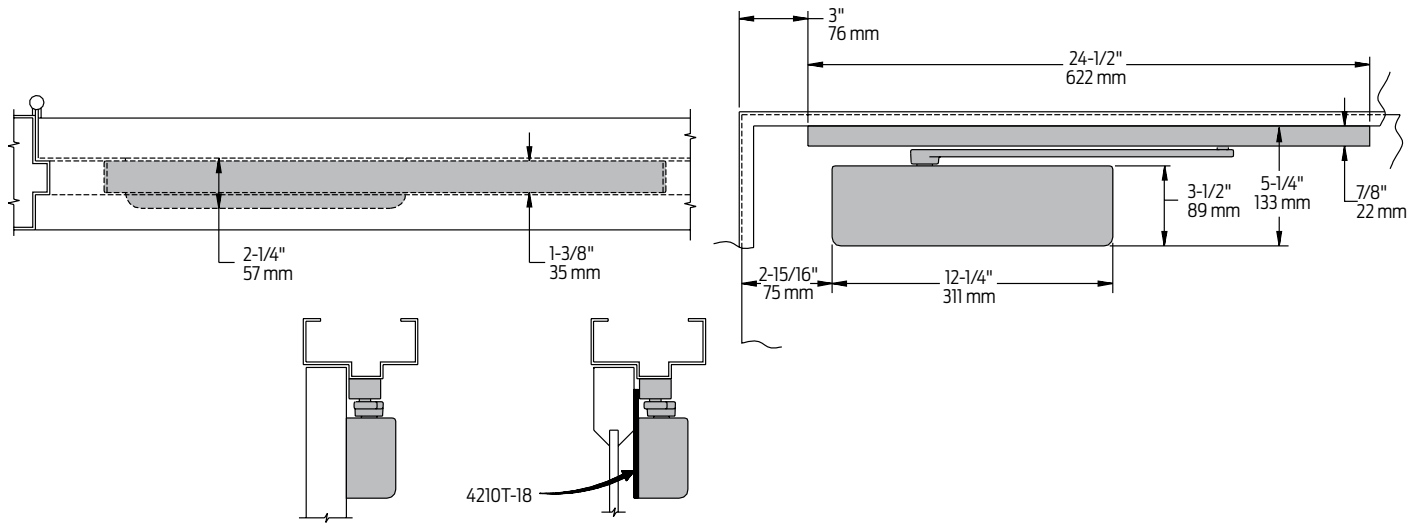
● AVAILABLE  
○ NOT AVAILABLE

♿ 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



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended where the door cannot swing 110°
<b>Clearance</b>	2-1/4" (57 mm) from door
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Less than 5-1/4" (133 mm) measured from stop, requires PLATE 4210T-18</li> <li>Plate requires 2-1/4" (57mm) minimum measured from the stop</li> </ul>
<b>Stop Width</b>	Minimum 1-3/8" (35 mm)
<b>Advanced Variable Backcheck</b>	<ul style="list-style-type: none"> <li>Cylinder starts backcheck at approximately 45° instead of the normal 75°</li> <li>Add suffix "AVB" to selected cylinder (eg. 4213T AVB)</li> </ul>
<b>Maximum opening</b>	Templating allows 110°
<b>Options</b>	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

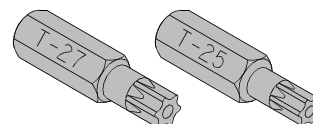
#### Specify finish

- 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

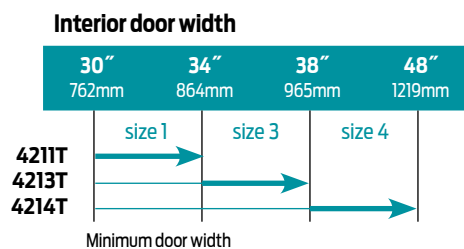
- PLATE, 4210T-18

#### 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

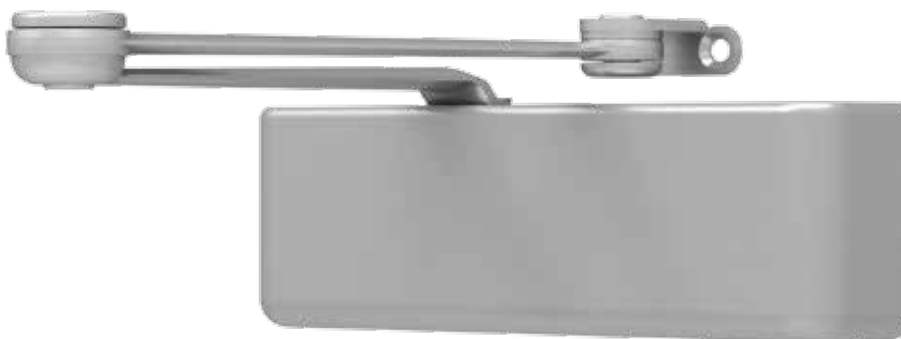
**CAUTION!** Any manual door closer, including those certified by BHMA to conform to ANSI Standard A156.4, that is selected, installed and adjusted based on ADA or other reduced opening force requirements may not provide sufficient power to reliably close and latch a door.

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.

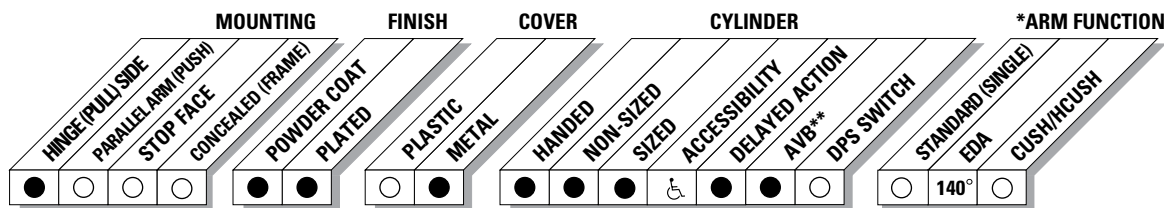


The 4510 SMOOTHEE® Series is a heavy duty, high security closer with special components to minimize tampering and vandalism. Forged steel double lever arms and heavy gauge metal security covers are designed for correctional, vandal prone, institutional and other high traffic applications. The closer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

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

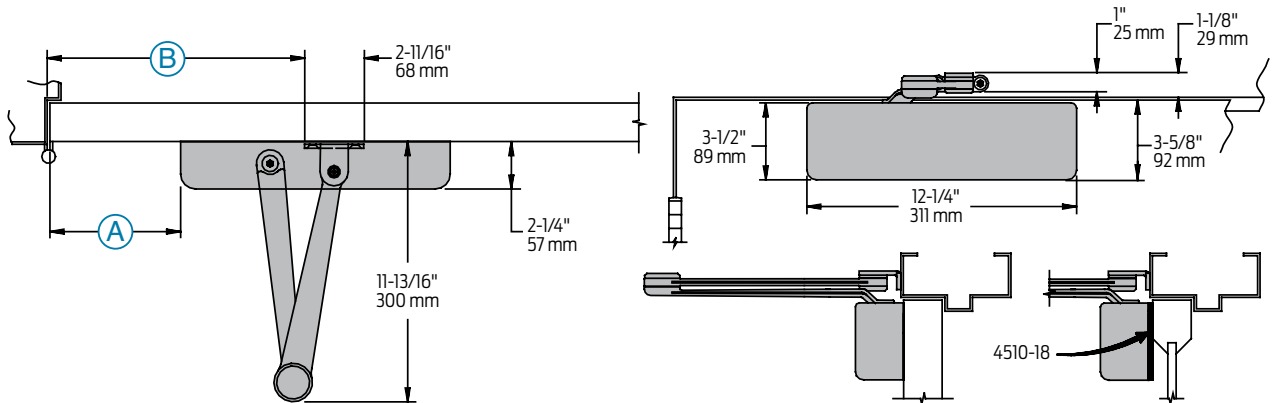
**Special Templates**

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






● AVAILABLE  
○ NOT AVAILABLE

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



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended where a door cannot swing 140°
<b>Reveal</b>	Should not exceed 1/8" (3 mm)
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Less than 3-1/2" (89 mm), requires PLATE 4510-18</li> <li>Plate requires 2" (51mm) minimum top rail</li> </ul>
<b>Head Frame</b>	Less than 1" (25 mm), consult factory
<b>Clearance</b>	2-1/4" (57 mm) behind door required for installation
<b>Arm Clearance</b>	Above door 1-1/8" (29 mm) required
<b>Delay Action</b>	<ul style="list-style-type: none"> <li>Add suffix "DEL" to selected cylinder.</li> <li>Not available with 4516 cylinder.</li> <li>Delays closing from maximum opening to approximately 70°.</li> <li>Delay time adjustable up to approximately 1 minute.</li> </ul>
<b>Advanced Variable Backcheck</b>	<ul style="list-style-type: none"> <li>Cylinder starts backcheck at approximately 45° instead of the normal 75°</li> <li>Add suffix "AVB" to selected cylinder</li> </ul>
<b>Maximum opening</b>	Can be templated for 140°: A = 4-3/16" (106 mm) B = 9-7/8" (251 mm)
<b>Options</b>	<ul style="list-style-type: none"> <li>Delayed action or Advanced Variable Backcheck cylinder</li> </ul>

Cylinder	Cover	Arms
 <p><b>4511(6)-3071</b> Cylinder Assembly</p> <ul style="list-style-type: none"> <li>▪ Handed</li> <li>▪ Cast iron</li> <li>▪ Standard</li> </ul>	 <p><b>4510-72MC</b> Metal Security Cover</p> <ul style="list-style-type: none"> <li>▪ Handed</li> <li>▪ Four point mounting for extra security</li> <li>▪ Closer adjustments not accessible with cover installed</li> <li>▪ Standard</li> </ul>	 <p><b>4510-3077EDA</b> Extra Duty Arm</p> <ul style="list-style-type: none"> <li>▪ Non-handed</li> <li>▪ Solid forged steel main arm and forearm for potentially abusive installations</li> <li>▪ Double slab arm/pinion attachment for maximum strength</li> <li>▪ Standard</li> </ul>

## 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

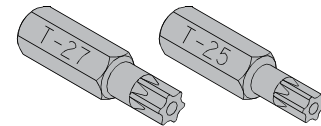
#### Specify finish

- 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

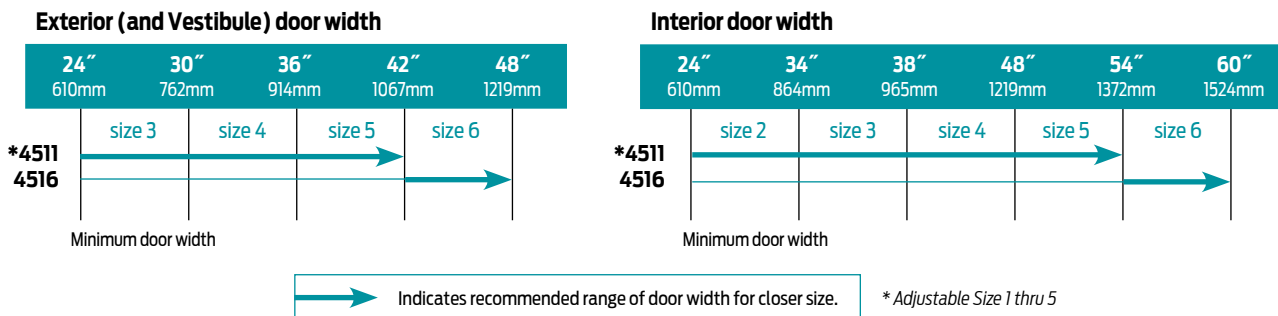
- PLATE, 4510-18

#### 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.

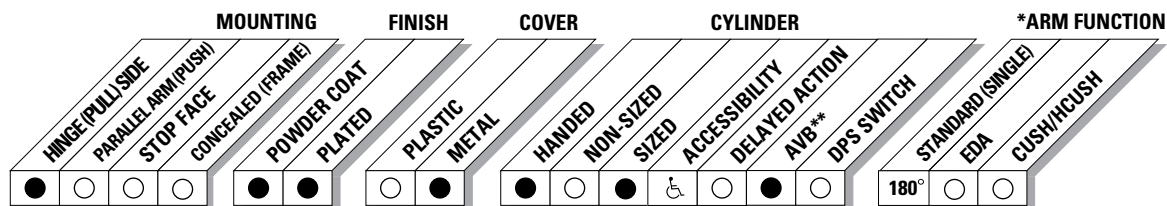


The 4510T SMOOTHIE® Series is a heavy duty, high security track closer with special components to minimize tampering and vandalism. Forged steel single lever arm and heavy gauge metal security cover are designed for correctional, vandal prone, institutional and other high traffic interior applications.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

<b>Certifications</b>	Grade 1 - ANSI A156.4, UL 10C, ADA*, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Cover</b>	Metal Security
	<i>*4510T cylinder meets ADA requirements</i>	<b>Fasteners</b>	TORX machine screw pack
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>Cast Iron Body</li> <li>Full Complement Bearing</li> <li>1-1/2" Diameter Piston</li> <li>11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Mounting</b>	Hinge (Pull Side)
<b>Fluid</b>	All Weather Fluid	<b>Arms</b>	Standard security arm, security track (non hold-open) and track roller
<b>Handing</b>	Handed	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>Aluminum (689)</li> <li>Statuary Bronze (690)</li> <li>Light Bronze (691)</li> <li>Black (693)</li> <li>Dark Bronze (695)</li> <li>Brass (696)</li> <li>Custom colors optional</li> </ul>
<b>Size</b>	Sized, 1, 3 or 4		<ul style="list-style-type: none"> <li>Optional SRI primer - powder coat only</li> <li>Optional plated finishes</li> </ul>
<b>Warranty</b>	15 years		

### Special Templates

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



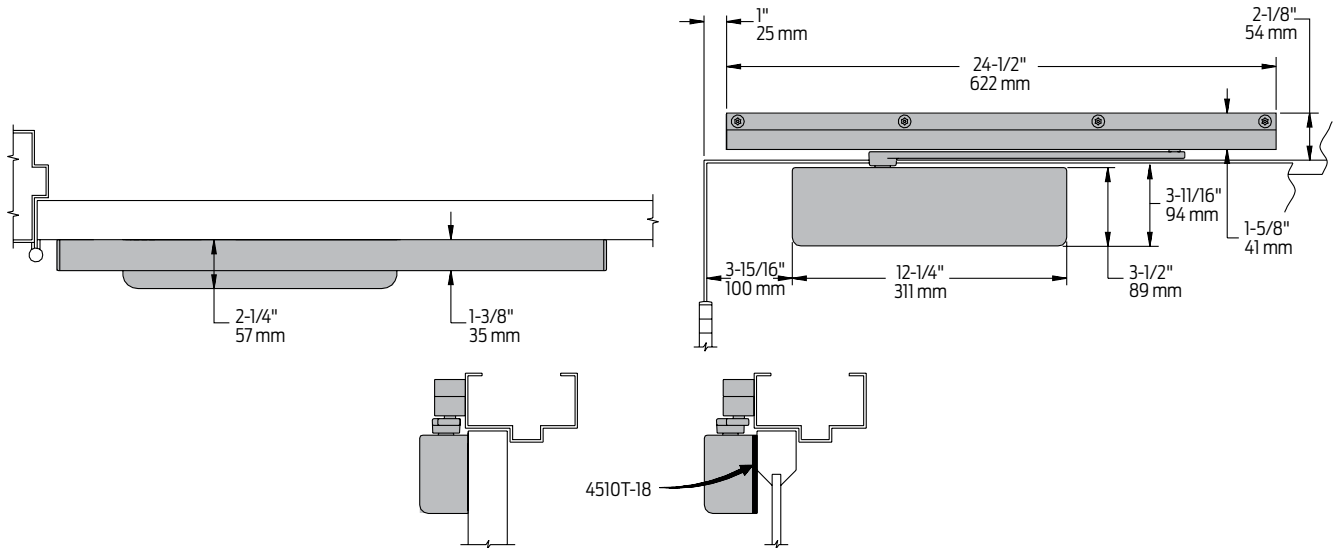
● AVAILABLE  
○ NOT AVAILABLE

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

# 4510T Series

## Mounting details

### Hinge (Pull Side) Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended where a door cannot swing 180°
<b>Reveal</b>	Should not exceed 1/8" (3 mm)
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>■ Less than 3-3/4" (95 mm), requires PLATE 4510T-18</li> <li>■ Plate requires 2" (51 mm) minimum top rail</li> </ul>
<b>Head Frame</b>	Minimum 2-1/8" (54 mm)
<b>Clearance</b>	2-1/4" (57 mm) behind door required for installation
<b>Advanced Variable Backcheck</b>	<ul style="list-style-type: none"> <li>■ Cylinder starts backcheck at approximately 45° instead of the normal 75°</li> <li>■ Add suffix "AVB" to selected cylinder (eg. 4513T AVB)</li> </ul>
<b>Maximum opening</b>	<ul style="list-style-type: none"> <li>■ Templating allows 180°</li> <li>■ Consult factory if door will be held open at 180°.</li> </ul>
<b>Options</b>	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

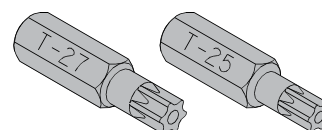
#### Specify finish

- 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

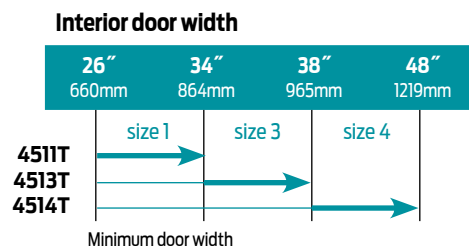
- TB\* and TORX Machine Screw (TBTRX)  
\*Specify door thickness if other than 1-3/4".

#### 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.

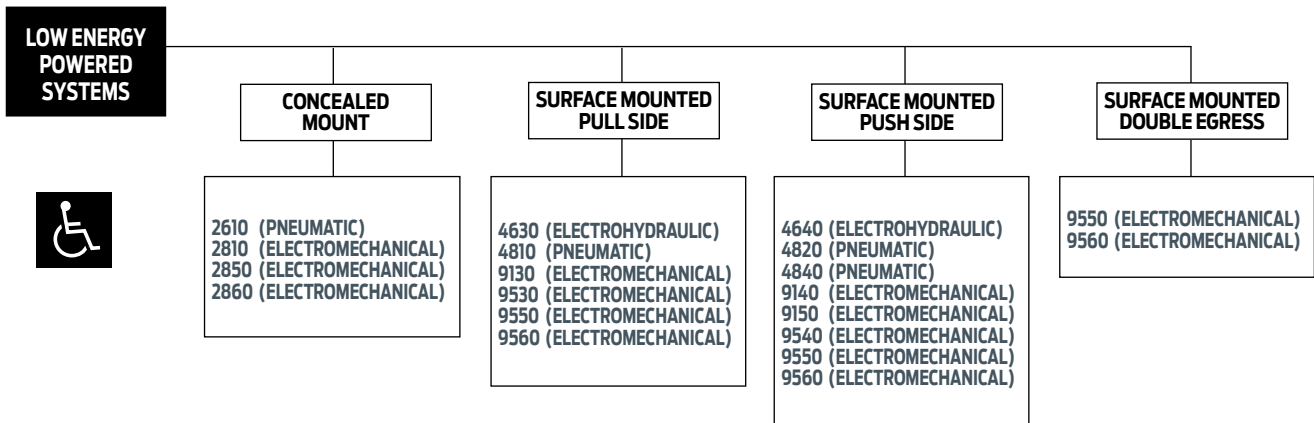
\* Maximum opening force.

	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?

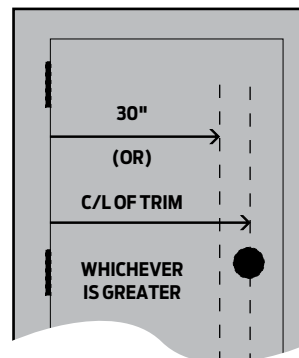
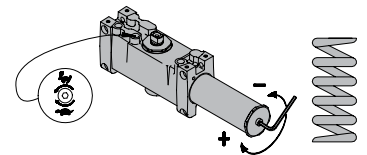
Two ADA criteria affect the door closer selection, adjustments, opening force, and time to close. Since the law does not clearly define the method of measurement, this is LCN's recommendation.

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.

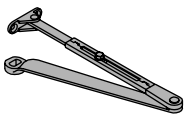
#### 2. SPRING POWER:

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

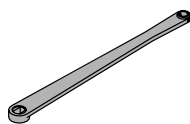
#### 3. ARM SELECTION:

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.

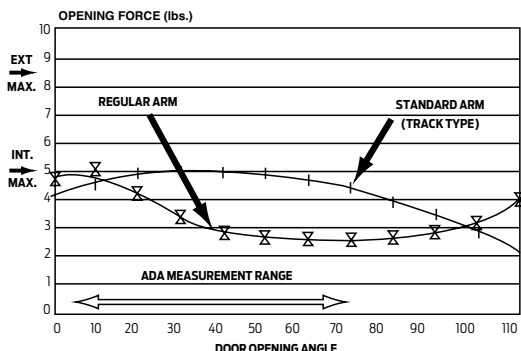
#### REGULAR ARM



#### 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

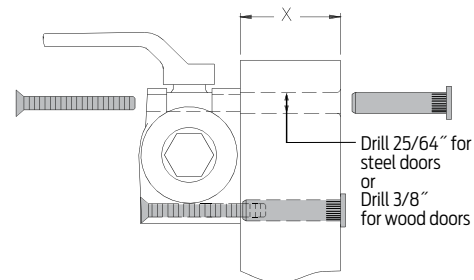
## AMERICAN NATIONAL STANDARDS INSTITUTE

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

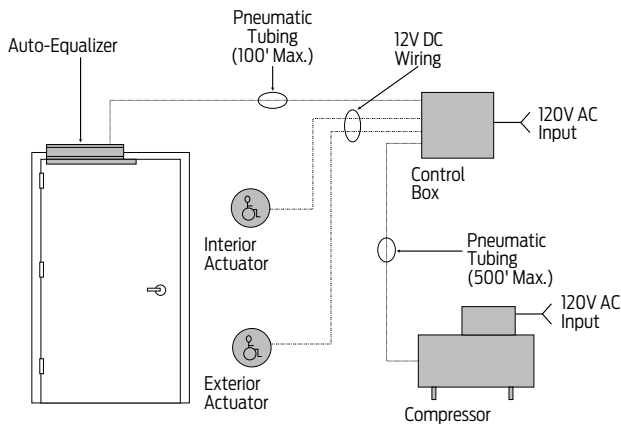
- 2 year limited warranty. See General Information Section for complete details.

### 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)

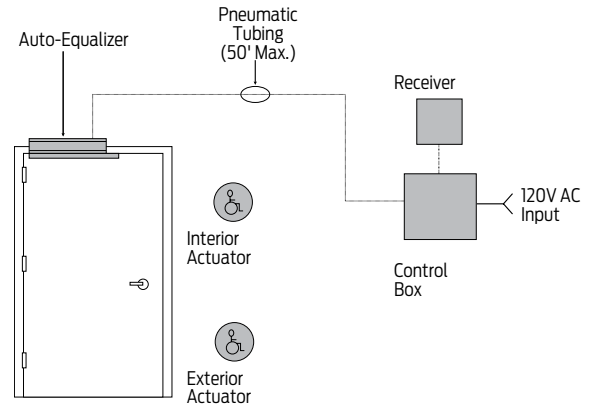
- Slow opening interior door leaf
- System may be expanded to include an additional simultaneous door
- No guide rails or safety devices

### 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)

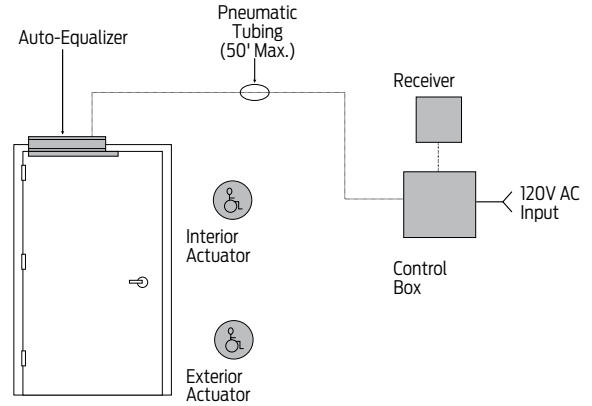
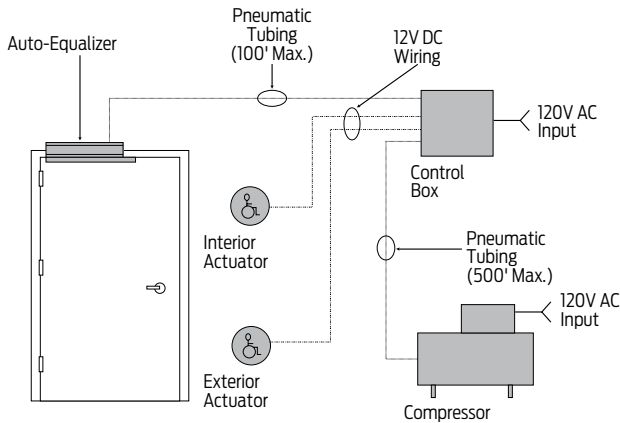
- Slow opening automatic door on door leaf
- Wireless actuators
- Stand alone system, no planned expansion
- No guide rails or safety devices

### 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

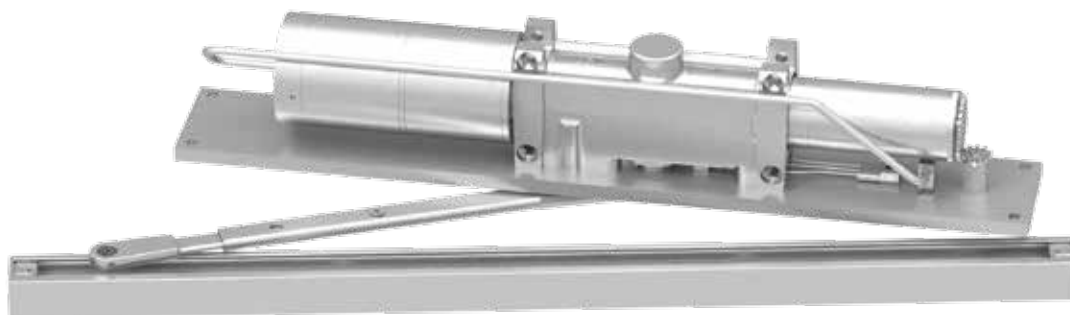
#### How It Works:

- 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.



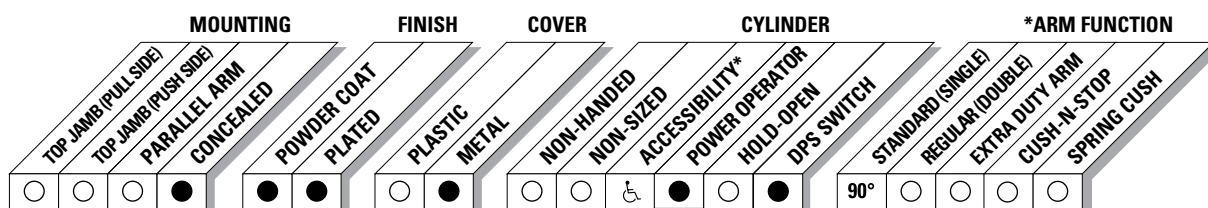


The 2610 AUTO EQUALIZER™ is LCN's pneumatically powered MULTI-DOOR solution. This low-energy power operator provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

<b>Certifications</b>	Grade 1 - ANSI A117.1, A156.19 UL228, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Wood and machine screws
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-1/2" Diameter Piston</li> <li>■ 11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Mounting</b>	Concealed, in frame
<b>Fluid</b>	All Weather Fluid	<b>Arms</b>	Single lever arm, mounting/finish plate, standard track
<b>Handing</b>	Handed	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Aluminum (689)</li> <li>■ Statuary Bronze (690)</li> <li>■ Light Bronze (691)</li> <li>■ Black (693)</li> <li>■ Dark Bronze (695)</li> <li>■ Brass (696)</li> <li>■ Custom colors optional</li> </ul>
<b>Size</b>	Sized 3 and 4		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
<b>Warranty</b>	2 years		

**Special  
Templates**

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



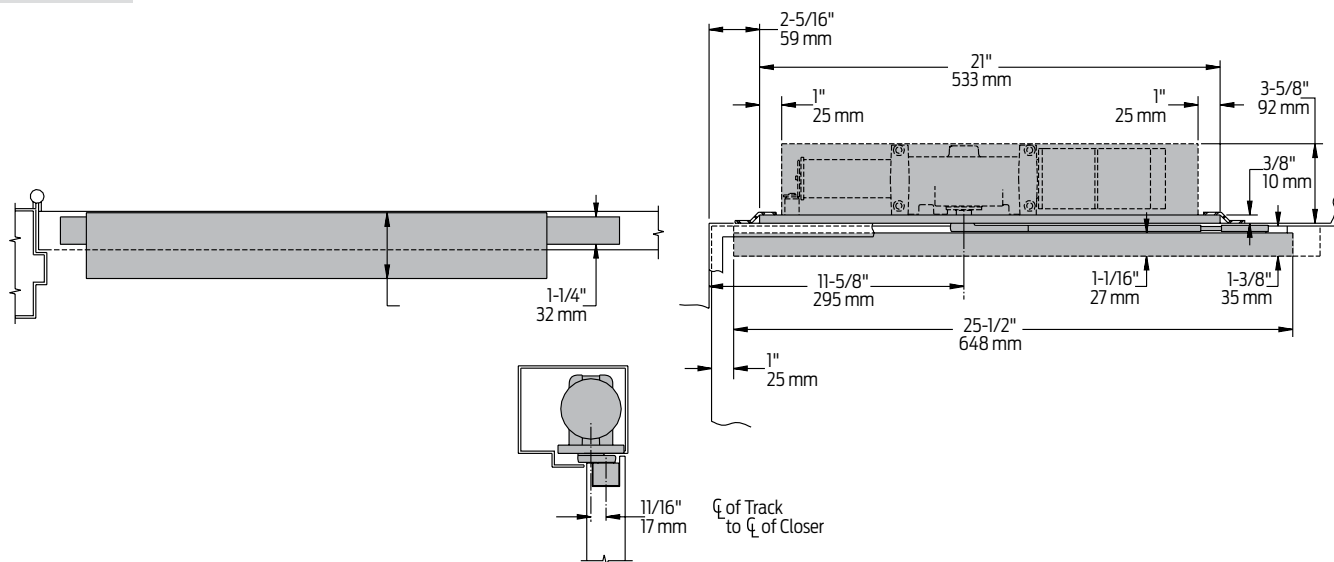
● AVAILABLE  
○ NOT AVAILABLE

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

# 2610 Series Auto Equalizer

## Mounting details

### Concealed Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended
<b>Head Frame</b>	Minimum 4" (102 mm) x 4" for hollow metal or aluminum tube construction
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>1-3/8" (35 mm) mortise required</li> <li>5/16" (8 mm) cutout required at top of the door, push side only</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section pages 8-9 for typical system wiring, and pages 28-29 for electrical and pneumatic data for control boxes
<b>Maximum opening</b>	<ul style="list-style-type: none"> <li>Butt hinge template allows 90° power opening and 160° manual opening</li> <li>Please note that many track style door closers are capable of allowing 180° of door swing</li> <li>Track style closers are at their weakest closing force at 180°</li> <li>Consult factory for applications where exterior or large/heavy door must swing 180°</li> <li>Consult factory for all pivot mounted installations</li> </ul>

#### Notes:

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

## Cylinders



**2610-3971**  
Cast Iron Cylinder Assembly

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



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

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



**2610-3071**  
Cast Iron Cylinder Assembly

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



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

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

## Arm



**2610-3077T**  
Standard Arm

- Handed
- Track roller not included with arm

## Track



**2610-3038**  
Standard Track

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

## Installation Accessories



**2610-3034**  
Track Roller

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

### How-to-order 2610 Series

#### Select cylinder size

- 2613
- 2613 DPS
- 2614
- 2614 DPS

#### Select hand

- RH
- LH

#### Specify finish

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

#### Closer will be shipped with:

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

### Closer options

#### Finishes

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

#### Screw pack

- Wood & Machine Screw (WMS)

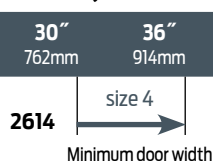
#### Special template

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

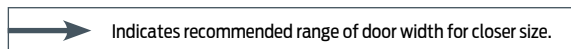
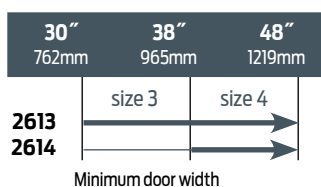
### Table of sizes

- Select closer based on width of door
- Sized 2610 Series cylinders available in size 3 or 4
- Closing power of all 2610 Series closers may be increased 15%

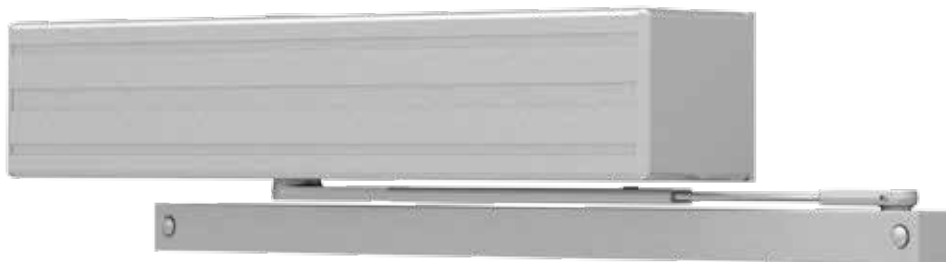
#### Exterior (and Vestibule) door width



#### Interior door width



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

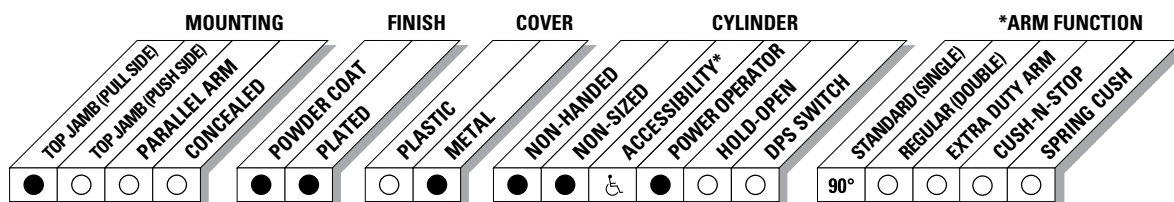


The 4810 AUTO EQUALIZER™ is LCN's pneumatically powered MULTIDOOR solution. This low-energy automatic operator provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

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

**Special  
Templates**

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



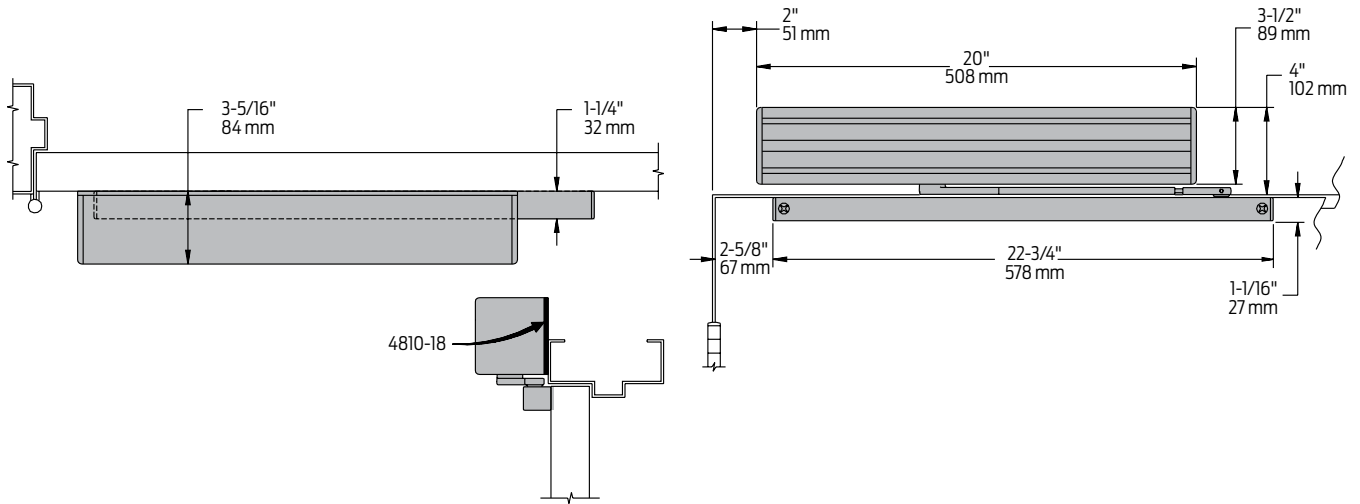
● AVAILABLE  
○ NOT AVAILABLE

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

# 4810 Series Auto Equalizer

## Mounting details

### Top Jamb (Pull Side) Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended
<b>Reveal</b>	Should not exceed 1/8" (3 mm)
<b>Head Frame</b>	Minimum 2" (51 mm)
<b>Top Rail</b>	Minimum 1-1/8" (29 mm)
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section pages 7-8 for typical system wiring, and pages 28-29 for electrical and pneumatic data for control boxes
<b>Maximum opening</b>	<ul style="list-style-type: none"> <li>■ Templating allows 90° power opening and 170° manual opening</li> <li>■ Please note that many track style door closers are capable of allowing 180° of door swing</li> <li>■ Track style closers are at their weakest closing force at 180°</li> <li>■ Consult factory for applications where exterior or large/heavy door must swing 180°</li> </ul>

**Notes:**

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

## Cylinders



**4811-3971**  
Cast Iron Cylinder Assembly

- Non-handed
- Standard



**4811-3071**  
Cast Iron Cylinder Assembly

- Non-handed
- Mounting plate
- Standard

## Cover



**4810-72MC**  
Metal Cover

- Non-handed
- With black end caps
- Standard

## Track



**4810-3038**  
Standard Track

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

## Arm



**4810-3077T**  
Standard Arm

- Non-handed
- Track roller not included with arm

## Installation Accessories



**4810-3034**  
Track Roller

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

# 4810 Series Auto Equalizer

## Ordering Information

### How-to-order 4810 Series

#### Specify finish

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

#### Closer options

##### Finishes

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

##### Screw pack

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

##### Special template

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

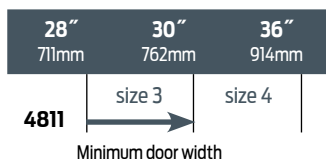
#### Closer will be shipped with:

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

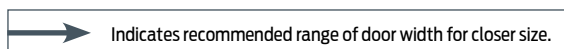
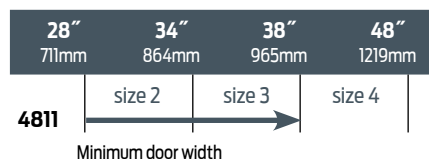
### Table of sizes

- Non-sized 4810 Series cylinder is adjustable from size 1 through size 4 and is shipped set to size 3
- Closing power of 4810 Series closers may be increased 50%

#### Exterior (and Vestibule) door width



#### Interior door width



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

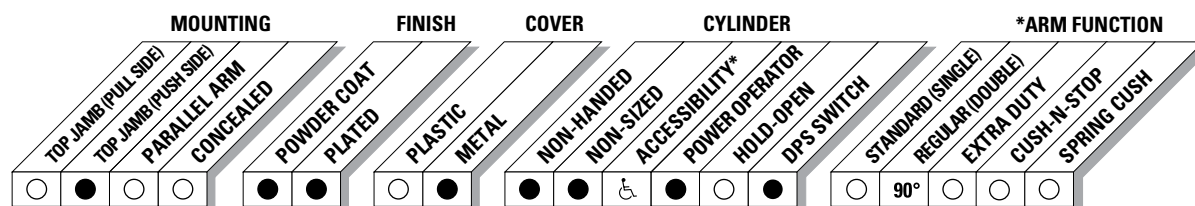


The 4820 AUTO EQUALIZER™ is LCN's pneumatically powered MULTI-DOOR solution. This low-energy automatic operator provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

<b>Certifications</b>	Grade 1 - ANSI A117.1, A156.19, UL 10C 228, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Cover</b>	Metal, standard
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-1/2" Diameter Piston</li> <li>■ 3/4" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Fasteners</b>	Wood and machine screw
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Top Jamb (Push Side)
<b>Handing</b>	Non-Handed	<b>Arms</b>	<ul style="list-style-type: none"> <li>■ Regular arm, standard</li> <li>■ Long arm, optional</li> </ul>
<b>Size</b>	Adjustable Spring Size 2-5	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Aluminum (689)</li> <li>■ Statuary Bronze (690)</li> <li>■ Light Bronze (691)</li> <li>■ Black (693)</li> <li>■ Dark Bronze (695)</li> <li>■ Brass (696)</li> <li>■ Custom colors optional</li> </ul>
<b>Warranty</b>	2 years		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>

**Special  
Templates**

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



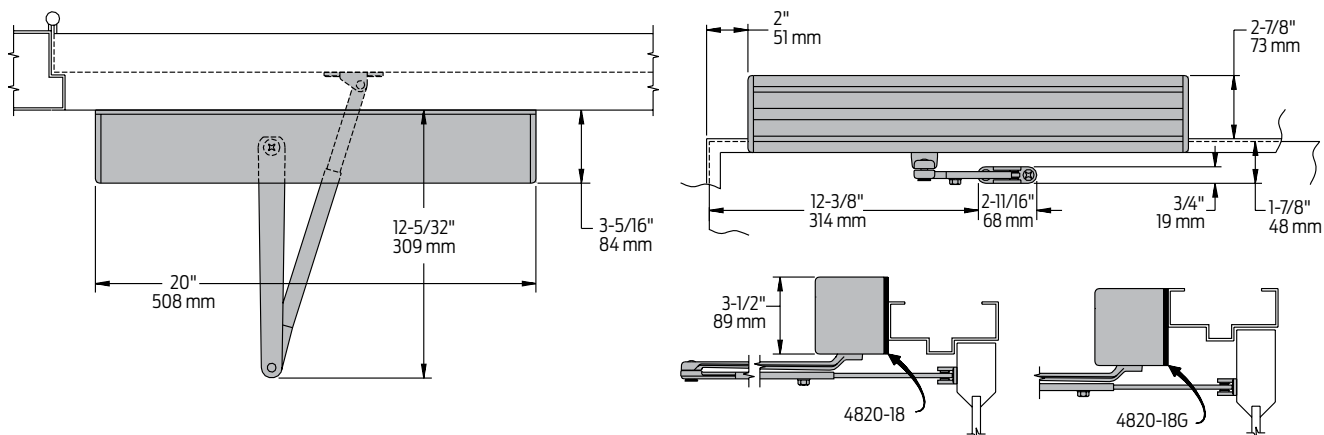
● AVAILABLE  
○ NOT AVAILABLE

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

# 4820 Series Auto Equalizer

## Mounting details

### Top Jamb (Push Side) Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended
<b>Reveal</b>	<ul style="list-style-type: none"> <li>■ 4-1/2" (114 mm) allows up to 90° power opening and 100° manual opening</li> <li>■ 8" (203 mm) allows up to 90° power opening and 100° manual opening with LONG ARM where standard rod and shoe is replaced with optional LONG ROD AND SHOE, 4820-79LR</li> </ul>
<b>Head Frame</b>	<ul style="list-style-type: none"> <li>■ Minimum 1-3/4" (44 mm)</li> <li>■ With flush ceiling use PLATE, 4820-18G substituted for standard plate</li> </ul>
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>■ Minimum 1-3/4" (44 mm)</li> <li>■ Closer on 4820-18G plate requires 3" (76 mm) minimum</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section pages 7-8 for typical system wiring, and pages 28-29 for electrical and pneumatic data for control boxes
<b>Maximum opening</b>	Templating allows 90° power opening and 100° manual opening
<b>Options</b>	Door position switch (DPS) kit that signals when the door has reached the open position

*Notes:*

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

## Cylinders



**4822-3971**  
Cast Iron Cylinder Assembly

- Non-handed
- Standard



**4822-3071**  
Cast Iron Cylinder Assembly

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

## Cover



**4820-72MC**  
Metal Cover

- Non-handed
- With black end caps
- Standard

## Arms



**4820-3077**  
Regular Arm

- Non-handed
- Standard



**4820-3077L**  
Long Arm

- Includes LONG ROD AND SHOE, 4820-79LR for deep reveals
- Optional

## Installation Accessories



**4820-18**  
Plate

- Requires minimum 1-3/4" (44 mm) minimum head frame and 2" (51 mm) top rail
- Standard



**4820-18G**  
Plate

- Requires minimum 1-3/4" (44 mm) minimum head frame and 2" (51 mm) top rail
- Standard



**4820-3377**  
Door Position Switch Kit

- Provides feedback when the door reaches the fully opened position
- Specify RH or LH when ordering

# 4820 Series Auto Equalizer

## Ordering Information

### How-to-order 4820 Series

#### Specify finish

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

#### Closer options

##### Finishes

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

##### Arm

- Long (LONG)

##### Screw pack

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

##### Installation Accessories

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

##### Special template

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

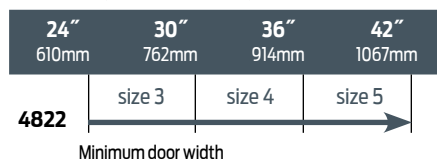
#### Closer will be shipped with:

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

### Table of sizes

- Non-sized 4820 Series cylinder is adjustable from size 2 through size 5 and is shipped set to size 3
- Closing power of 4820 Series closers may be increased 50%

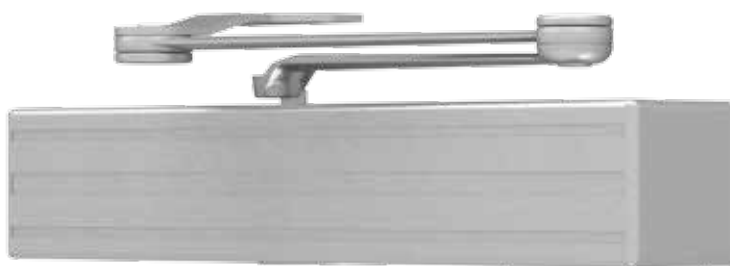
#### Exterior (and Vestibule) door width



#### Interior door width



→ Indicates recommended range of door width for closer size.

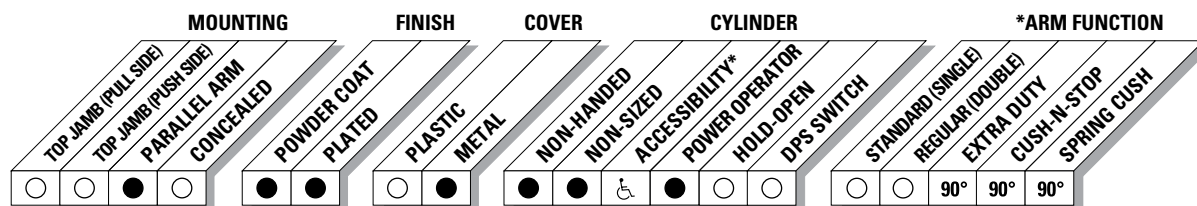


The 4840 AUTO EQUALIZER™ is LCN's pneumatically powered MULTIDOOR solution. This low-energy automatic operator provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

<b>Certifications</b>	Grade 1 - ANSI A117.1, A156.19, UL 10C 228, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Cover</b>	Metal, standard
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-1/2" Diameter Piston</li> <li>■ 3/4" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Fasteners</b>	Wood and machine screws Specify door thickness if over 1-3/4"
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Parallel arm (Push Side)
<b>Handing</b>	Non-Handed	<b>Arms</b>	Extra heavy duty, standard Cush-n-stop and spring cush, optional
<b>Size</b>	Adjustable Spring Size 1-5	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Aluminum (689)</li> <li>■ Statuary Bronze (690)</li> <li>■ Light Bronze (691)</li> <li>■ Black (693)</li> <li>■ Dark Bronze (695)</li> <li>■ Brass (696)</li> <li>■ Custom colors optional</li> </ul>
<b>Warranty</b>	2 years		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes*</li> </ul> <p><i>*End caps are black</i></p>

**Special  
Templates**

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



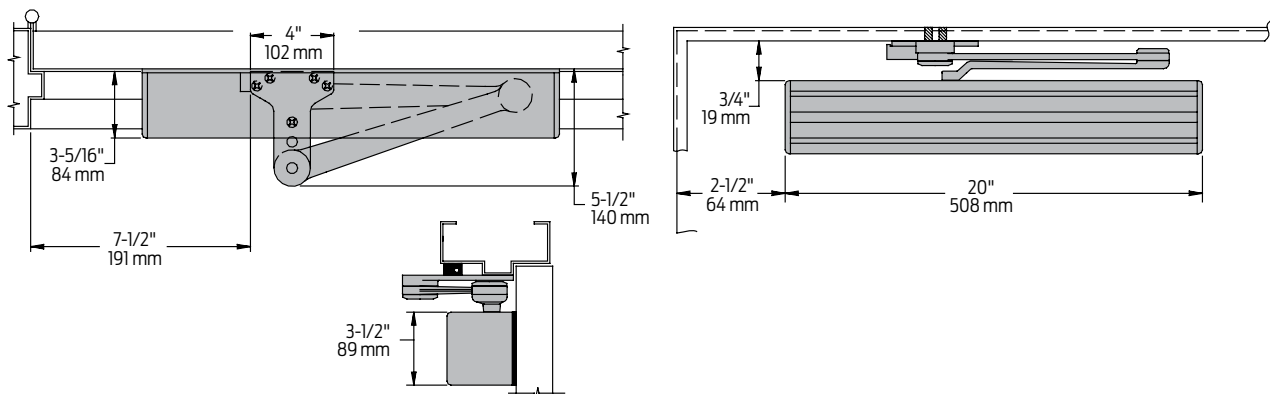
● AVAILABLE  
○ NOT AVAILABLE

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

# 4840 Series Auto Equalizer

## Mounting details

### Parallel Arm (Push Side) Mounting



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

#### Notes:

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

### Cylinders



**4841-3971**  
Cast Iron Cylinder Assembly

- Non-handed
- Standard



**4841-3071**  
Cast Iron Cylinder Assembly

- Non-handed
- Mounting plate
- Standard

### Cover



**4840-72MC**  
Metal Cover

- Non-handed
- With black end caps
- Standard

### Arms



**4840-3077EDA**  
Extra Duty Arm

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



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

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



**4840-3077SCNS**  
Spring CUSH Arm

- Non-handed
- For abusive applications features forged solid steel main arm and forearm with spring loaded stop in soffit shoe
- Optional

**Installation accessories**



**4840-30  
CUSH Shoe Support**

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



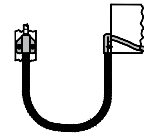
**4840-61  
Blade Stop Spacer**

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



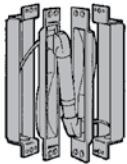
**4840-419  
PA Flush Panel Adapter**

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



**4840-459  
Door Loop Kit**

- Surface mounted, flexible metal loop transfers pressurized air via pneumatic tubing from frame to closer end cap
- Extra caps allow tubing to run on frame surface or concealed in the frame.



**4840-460  
Pneumatic Transfer Hinge**

- Transfers pressurized air via pneumatic tubing from frame to door leaf for fully concealed installations
- Preparation of a raceway is required from the hinge stile of the door to the top rail for concealment of the pneumatic tubing within the door leaf

### How-to-order 4840 Series closers

#### Specify finish

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

### Closer options

#### Finishes

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

#### Arm

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

#### Screw pack

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

#### Installation accessories

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

#### Special template

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

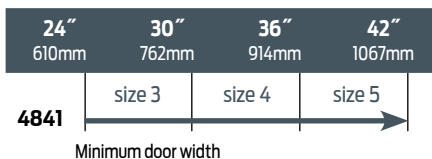
#### Closer will be shipped with:

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

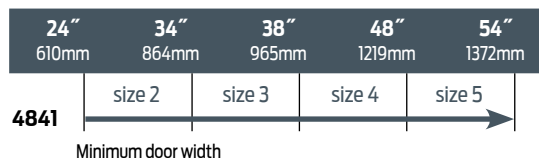
### Table of sizes

- Non-sized 4841 cylinder is adjustable from size 1 through size 5 and is shipped set to size 3
- Closing power of 4841 closers may be increased 50%

#### Exterior (and Vestibule) door width



#### Interior door width

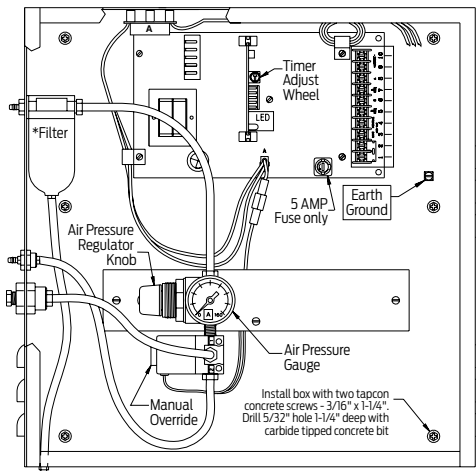


→ Indicates recommended range of door width for closer size.

## CONTROL BOXES

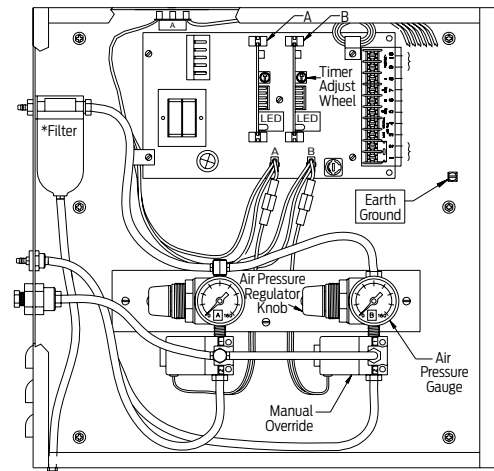
Heavy duty, surface mounted control box contains one or two electrically controlled pneumatic circuits. Air filtration, pneumatic regulation, and system timing is performed by the control box. 7980 Series control boxes also contain a built-in air pump to power the system. Each pneumatic circuit can be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

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



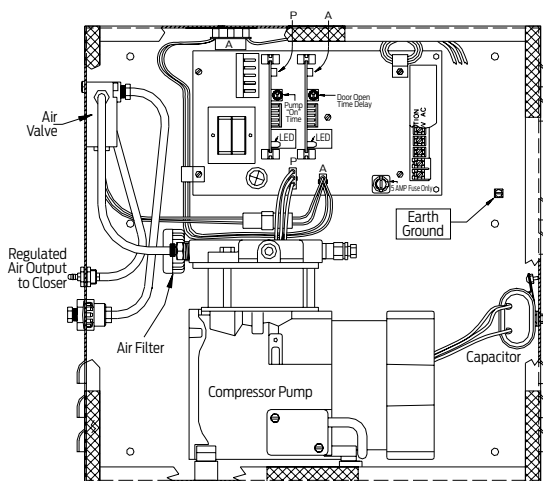
### 7901 AND ES7901 CONTROL BOX

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



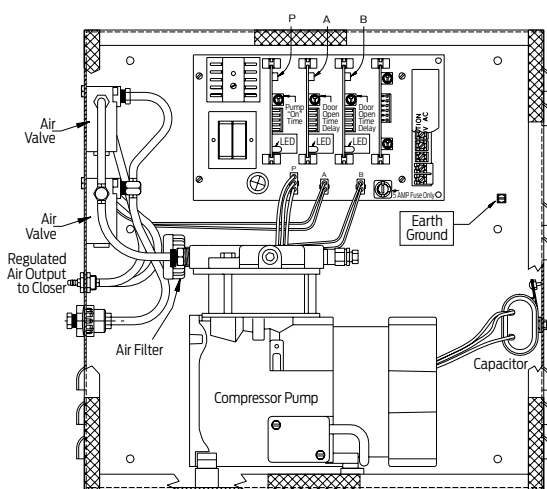
### 7902 AND ES7902 CONTROL BOX

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



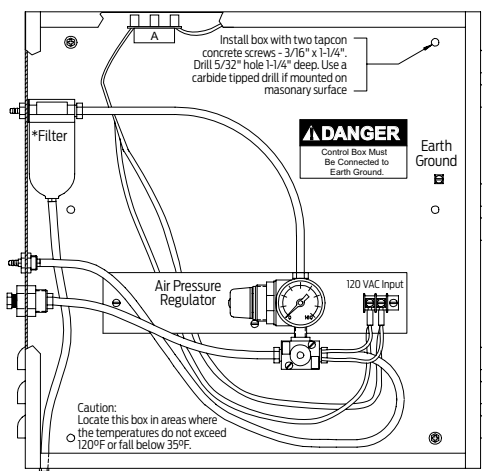
### 7981 AND ES7981 CONTROL BOX

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



## 7982 AND ES7982 CONTROL BOX

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



## 7949 and ES7949 Control Box

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

## Optional "ES" Boxes

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

## Control Box Installation Notes

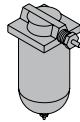
- Locate a 7900 Series control box so no more than 100 linear feet of LCN 925 pneumatic tubing is required between the control box and door. Maximum 50 linear feet for a 7980 and 7949 Series
- Locate a 7900/7980/7949 Series control box where the temperatures do not exceed 120°F or fall below 35°F
- 7901, 7902 and 7949 control box input 120V AC @ 1 amp. 7981 and 7982 control boxes input 120V AC @ 5 amp
- Output voltage is 12V DC @ 0.25 amp. max
- Air pressure input, 80 PSI minimum/100 PSI maximum, required for 7901, 7902 and 7949
- Regulated air output up to 80 PSI for Auto Equalizer
- Auto Equalizers require approximately 0.5 cfm airflow in heavy traffic
- All control boxes are 15" x 15" x 6"

### Accessories



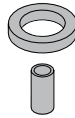
**-329**  
Air Filter

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



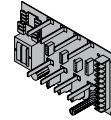
**-329G**  
Air Filter

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



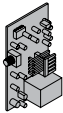
**-929**  
Filter and Seal

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



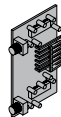
**-900**  
Power Supply Board

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



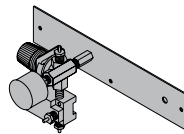
**-903**  
Timer Card

- 0 to 30 second timer module
- Plugs into the power supply board, -900. 7901 (A slot) Series control box requires 1 each.
- 7902 (A/B slots) and 7981 (P/A slots) Series control boxes require 2 each
- 7982 (P/A/B slots) Series control box requires 3 each



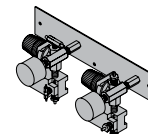
**-3426**  
Sequencer Card

- Dual, 0 to 30-second sequence timer module for 7902 and 7982 Series control boxes
- Can be added to a standard 7902 or 7982 Series control box to convert to a sequential operation.
- Sequencer card, -3426 is included when ordering a 7902S or 7982S Series control box



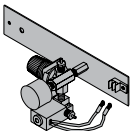
**-941**  
Valve Assembly

- Regulator valve assembly for 7901 Series control box



**-942**  
Valve Assembly

- Regulator valve assembly for 7902 Series control box



**-941C**  
Valve Assembly

- Regulator valve assembly for 7949 Series blow open control box



**-3299A**  
Solenoid Valve Assembly

- Air valve assembly for 7981 Series control box or the 'A' circuit valve assembly for the 7982 Series control box



**-3299B**  
Solenoid valve assembly

- Air valve assembly for the 'B' circuit in the 7982 Series control box

### Accessories



#### -3390A Relay Package "A"

- ES relay assembly for 7901 and 7981 Series control boxes or the 'A' circuit ES relay assembly in a 7902 or 7982 Series control boxes
- Includes 390 relay, base, and wires
- Can be added to standard 7901, 7902, 7981, or 7982 Series control boxes to convert to ES operation
- Relay package, -3390A is included when ordering a 7901ES, 7902ES, 7981ES, or 7982ES Series control box



#### -3390B Relay Package "B"

- ES relay assembly for 'B' circuit in 7902 or 7982 Series control boxes
- Includes -390 relay, base, and wires
- Can be added to standard 7902 or 7982 Series control boxes to convert to ES operation
- Relay package, -3390B is included when ordering a 7902ES or 7982ES Series control box



#### -3390C Relay Package "C"

- ES relay assembly in 7949 Series blow open control box
- Includes -390C relay, base, and wires
- Can be added to standard 7949 Series blow open control box to convert to ES operation
- Relay package, -3390C is included when ordering a 7949ES Series control box



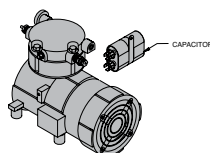
#### -962 Isolator

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



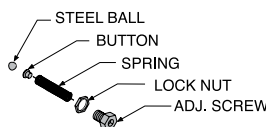
#### -293G Muffler

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



#### -3960 Compressor Assembly

- Internal air pump assembly for 7981 or 7982 Series control box
- Includes starter capacitor, -962 Isolators, and -329 air filter



#### -3592 Compressor Service Kit

- Internal components for pressure release valve on -3960 Compressor Assembly



#### 925 Pneumatic Tubing

- 1/8" (3mm) I.D. flexible pneumatic tubing for use with standard barbed fittings provided on pneumatic control boxes and operators
- Order by linear footage required
- 925 tubing is not fire-rated
- Contact LCN for applications where tubing must run through rated plenums

## ELECTRIC AUTO EQUALIZERS

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

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

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

## UNIQUE FEATURES

### ■ Digital Control Box

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

### ■ Dual Independent Program Memories

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

### ■ On-Board Diagnostics

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

### ■ On-Board Power Supply

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

### ■ "No Destruct" Drive System

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

### ■ Electronic Circuit Protection

The high voltage input circuit is protected by a one amp slow blow fuse. The low voltage output circuits by self-resetting fuses.

### ■ Visual Function Indicators

LED's allow direct observation of these inputs:

- input power
- fire alarm input
- normal trigger (actuator) input
- sequential trigger (actuator) input
- hold open/alternate action (actuator) input
- lockout timer
- safety sensor (clear) input
- safety sensor (active) input

### ■ Programming Mode

Allows tailoring the following functions to meet specific site conditions:

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

## ELECTRIC AUTO EQUALIZER SYSTEMS

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

## STANDARDS, LISTINGS & APPROVALS

- UL listed for Fire Door Operator (GUJY) and Door Operator System (+DDR) file R18222.
- Tested and certified under ANSI Standard A156.19. Refer to Section 2.1 and consult factory for details.
- ANSI Standard A117.1, Section 4.13.13.
- ADA law, Section 4.13.12.
- Listed for positive pressure plus UL 10B and UL 10C.
- Wiring is compliant with both UL 325 and the NEC. Separation of high and low voltage.
- Consult the factory for other listings such as; State and Local Government regulations.
- UL 10 C Listed for Fire Rated Door Operators with Automatic Closers, File No. (GUJY).

## WARRANTY

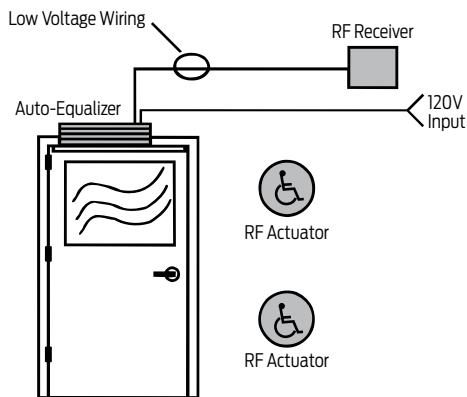
- 2 year limited warranty. See General Information Section for complete details.

## MAINTENANCE

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

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

## SINGLE DOOR SYSTEMS



### SINGLE DOOR SYSTEM (WIRELESS)

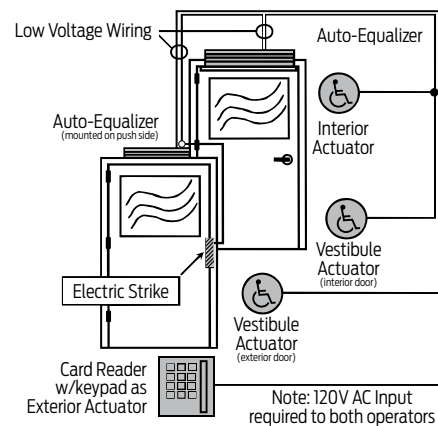
- An Interior Door
- No guide rails or safety devices
- Free Swinging (or Dogged) Door

#### How It Works:

- Wireless RF actuators and receiver, powered by the Auto Equalizer simplify installation and minimize installation costs
- For automatic door operation, touching either actuator signals the receiver and controller module to open the door to 90°
- The door is held there until the system times out, then full spring power is applied to reliably close and latch the door.
- Door opening speed and hold open time are adjustable on the controller
- Closing power and speed are adjustable on the cylinder assembly
- If not actuated, the Auto Equalizer functions as a full featured door closer

Bill of Materials:	Qty.	Part No.	Description
	1	4631	Auto Equalizer
	2	8310-3856WS	Wireless Actuators
	1	8310-865	Wireless Receiver

## VESTIBULE ENTRY OPERATION



### VESTIBULE ENTRY SYSTEM (WIRED)

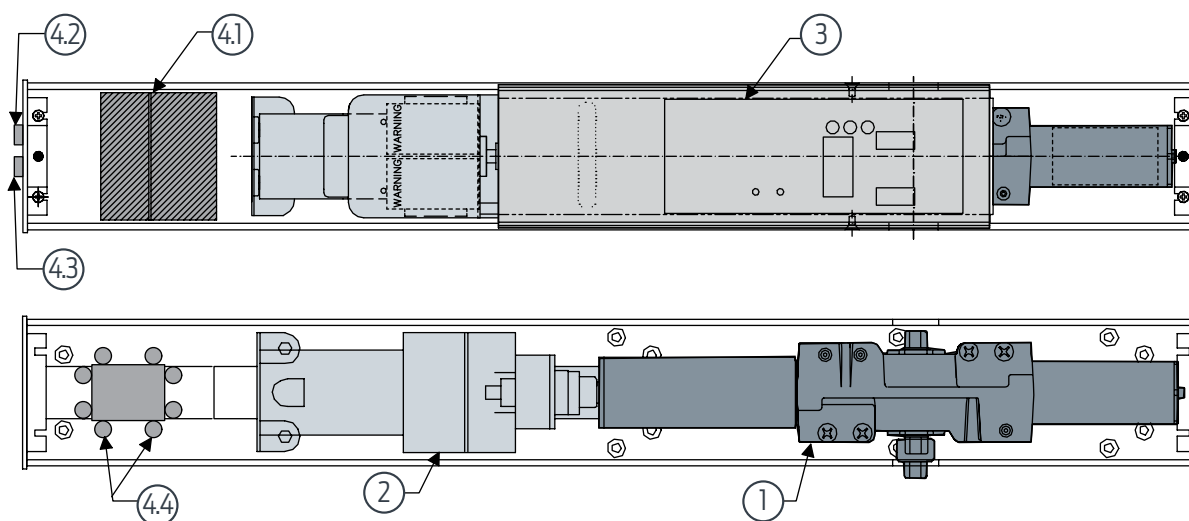
- Exterior & Vestibule doors
- Sequential Operation
- No guide rails or safety devices
- Controlled Access, Free Egress

#### How It Works:

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

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

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



### 1 - DOOR CLOSER ASSEMBLY

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

### 2 - ELECTRIC MOTOR/CLUTCH ASSEMBLY

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

### 3 - DIGITAL CONTROLLER MODULE

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

### 4.X - FIELD WIRING

#### 4.1

- Input power; 120V AC @ 1.5 amperes
- On-board, low voltage power supply provides both 12V and 24V DC @ 1.0 ampere (maximum combined load) for LCN actuators, RF receivers, and electric strikes or magnetic locks
- Slow blow and self-resetting fuses protect input and output power from voltage spikes
- Terminal strips simplify field wiring

#### 4.2

- On/Off Switch

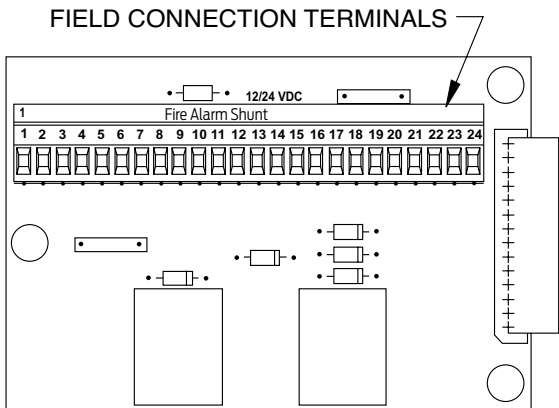
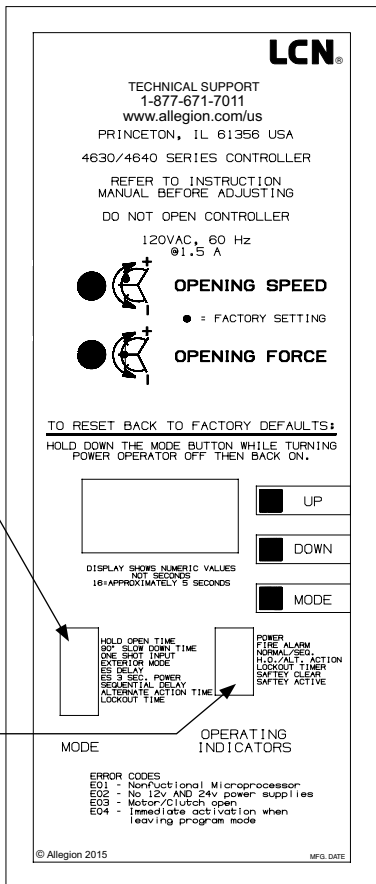
#### 4.3

- Hold Open Switch

#### 4.4

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

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



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

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

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

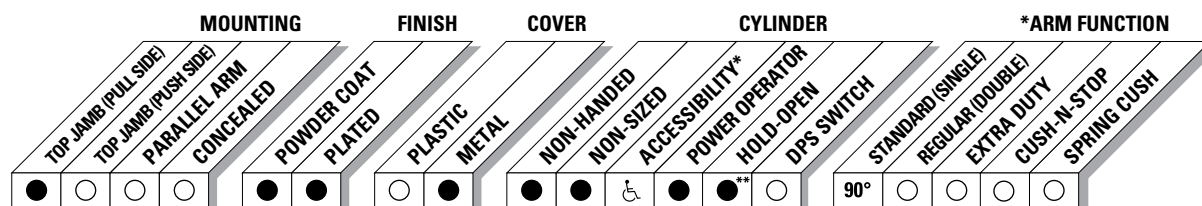


The 4630 AUTO EQUALIZER™ is LCN's SMART & RELIABLE electrically powered low-energy power operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally required automatic opening.

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

**Special  
Templates**

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



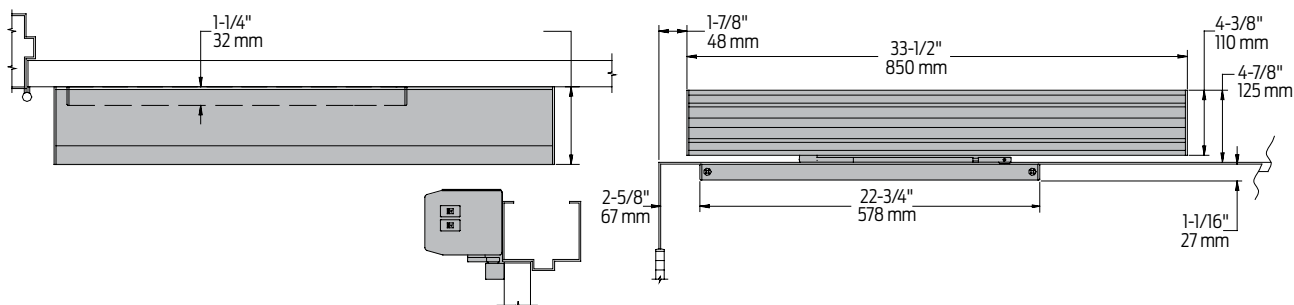
● AVAILABLE  
○ NOT AVAILABLE

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

# 4630 Series Auto Equalizer

## Mounting details

### Top Jamb (Pull Side) Mounting



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

#### Notes:

- Actuators are sold separately, see pages 115-131
- Comes with a digital control box utilizing a 4040 heavy duty door closer with on-board diagnostics and power supply
- Has a factory default memory that include "No Destruct" drive system
- Guard rails or safety mats not required
- 4630 has easily accessible switches to provide on/off and continuous hold open functions
- CS options provides concealed on/off power switch
- Control module provides timing and sequential door functions, electric strike controls and adjustments for opening speed and force

## Cylinders



**4631-3971**  
Cast Iron Cylinder Assembly

- Non-handed
- Standard



**4631-3071**  
Cast Iron Cylinder Assembly

- Non-handed
- Mounting plate
- Includes 4630-3454 Motor Clutch, 4630-3180 I/O Board Assembly and 4630-3462 Controller
- Standard



**4631-3071CS**  
Cast Iron Cylinder Assembly

- Non-handed
- Mounting plate
- Includes 4630-3454 Motor Clutch, 4630-3180 I/O Board Assembly and 4630-3462 Controller
- Same as a 4630-3071 assembly except on/ off switch is concealed in endcap and no hold open switch is included (Separate key switches suggested)
- Standard

## Cover



**4630-72MC**  
Metal Cover

- Non-handed
- Standard

## Track



**4630-3038**  
Standard Track

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

## Arm



**4630-3077T**  
Standard Arm

- Non-handed
- Track roller not included with arm

## Installation Accessories



**4630-3034**  
Track Roller

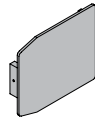
- Quiet low friction roller assembly
- Shoulder dimension "X" = 1/8" (3mm)

### Installation Accessories



**4630-334**  
Switch End Cap

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



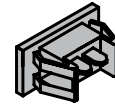
**4630-334-2**  
Blank End Cap

- Black powder coat only



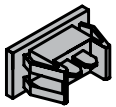
**4630-334CS**  
Switch End Cap

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



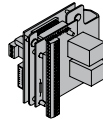
**4630-3179-1**  
On/Off Switch Assembly

- Black rocker switch. Plugs into high voltage PC board



**4630-3179-2**  
Hold Open Switch Assembly

- Black rocker switch
- Field wired to low voltage PC board



**4630-3180**  
PC Board Assembly

- High and low voltage PC boards connected to mounting bracket



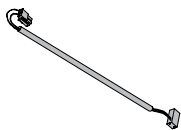
**4630-3454**  
Motor/Clutch Assembly

- A geared assembly in an LCN power operator that incorporates a "no destruct" feature



**4630-3462**  
Control Box Assembly

- Digital controller with built-in 12/24 VDC power supply
- Programming and timing functions are adjusted on controller



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

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



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

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

### How-to-order 4630 Series closers

#### Specify finish

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

### Closer options

#### Cylinder Assembly

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

#### Finishes

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

#### Screw pack

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

#### Special template

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

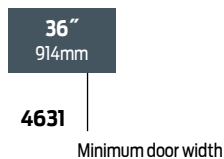
#### Closer will be shipped with:

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

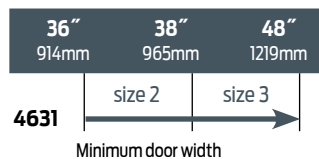
### Table of sizes

- Non-Sized 4630 series cylinder is adjustable from size 1 through size 4 and is shipped set to size 3
- Closing power of 4630 Series closers may be increased 50%

#### Exterior (and Vestibule) door width



#### Interior door width



→ Indicates recommended range of door width for closer size.

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



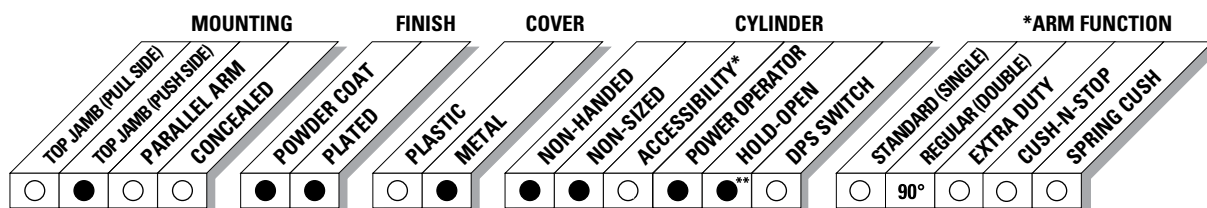


The 4640 AUTO EQUALIZER™ is LCN's SMART & RELIABLE electrically powered low-energy power operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

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

**Special  
Templates**

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



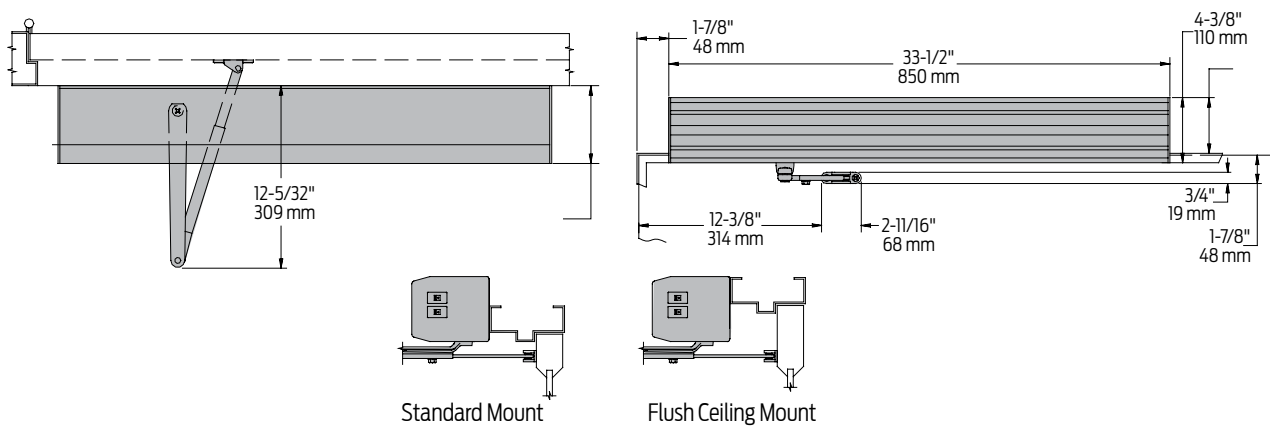
● AVAILABLE  
○ NOT AVAILABLE

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

# 4640 Series Auto Equalizer

## Mounting details

### Top Jamb (Push Side) Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended
<b>Reveal</b>	<ul style="list-style-type: none"> <li>4-1/2" (114 mm) allows up to 90° power opening and 100° manual opening</li> <li>8" (203 mm) allows up to 90° power opening and 100° manual opening with LONG ARM where standard rod and shoe is replaced with optional LONG ROD AND SHOE, 4640-79LR</li> </ul>
<b>Head Frame</b>	Minimum 1-3/4" (44 mm). The standard mounting plate is also used to meet flush ceiling conditions
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Minimum 1-3/4" (44 mm)</li> <li>Flush ceiling installation requires 3-3/4" (95 mm) minimum</li> </ul>
<b>Opening Time and Force</b>	<ul style="list-style-type: none"> <li>Variable by adjustments to the electronic control module located on the operator assembly</li> <li>Maximum hold open time adjustable up to approximately five minutes</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 35 for typical system wiring and pages 37-38 for electrical data
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>Templating allows 90° power opening and 100° manual opening</li> <li>Consult factory for all pivot mounted installations</li> </ul>

#### Notes:

- Actuators are sold separately, see pages 115-131
- Comes with a digital control box utilizing a 4040 heavy duty door closer with on-board diagnostics and power supply
- Has a factory default memory that include "No Destruct" drive system
- Guard rails or safety mats not required
- 4030 has easily accessible switches to provide on/off and continuous hold open functions
- CS options provides concealed on/off power switch
- Control module provides timing and sequential door functions, electric strike controls and adjustments for opening speed and force.

**Cylinders**



**4642-3971  
Cast Iron Cylinder Assembly**

- Non-handed
- Standard



**4642-3071  
Cast Iron Cylinder Assembly**

- Non-handed
- Mounting plate
- Includes; 4640-3454 Motor Clutch, 4640-3180 I/O Board Assembly and 4640-3462 Controller
- Standard



**4642-3071CS  
Cast Iron Cylinder Assembly**

- Non-handed
- Mounting plate.
- Includes; 4640-3454 Motor Clutch, 4640-3180 I/O Board Assembly and 4640-3462 Controller
- Same as a 4640-3071 assembly except on/ off switch is concealed in endcap and no hold open switch is included. (Separate key switches suggested)
- Standard

**Cover**



**4640-72MC  
Metal Cover**

- Non-handed
- Standard

**Arms**



**4640-3077  
Regular Arm**

- Non-handed



**4640-3077L  
Long Arm**

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



**4640-79  
Rod & Shoe**

- For use with regular arm



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

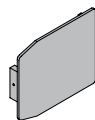
- Used for long arm with deep reveals

### Installation Accessories



**4640-334**  
Switch End Cap

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



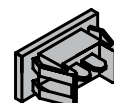
**4640-334-2**  
Blank End Cap

- Black powder coat only



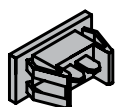
**4640-334CS**  
Switch End Cap

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



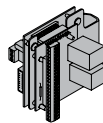
**4640-3179-1**  
On/Off Switch Assembly

- Black rocker switch
- Plugs into high voltage PC board



**4640-3179-2**  
Hold Open Switch Assembly

- Black rocker switch
- field wired to low voltage PC board



**4640-3180**  
PC Board Assembly

- High and low voltage PC boards connected to mounting bracket



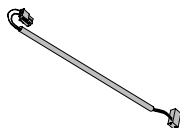
**4640-3454**  
Motor/Clutch Assembly

- A geared assembly in an LCN power operator that incorporates a "no destruct" feature



**4640-3462**  
Control Box Assembly

- Digital controller with built-in 12/24 VDC power supply
- Programming and timing functions are adjusted on controller



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

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



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

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

### How-to-order 4640 Series closers

#### Specify finish

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

### Closer options

#### Cylinder Assembly

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

#### Finishes

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

#### Arm

- Long (LONG)

#### Screw pack

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

#### Special template

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

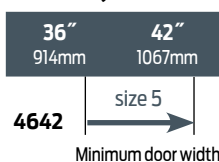
#### Closer will be shipped with:

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

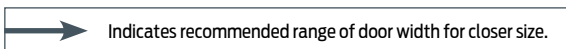
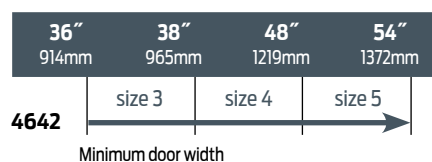
### Table of sizes

- Non-sized 4640 series cylinder is adjustable from size 2 through size 5 and is shipped set to size 3
- Closing power of 4640 Series closers may be increased 50%

#### Exterior (and Vestibule) door width



#### Interior door width



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



### **ELECTROMECHANICAL AUTOMATIC OPERATORS**

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

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

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

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

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

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

### **WARRANTY**

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

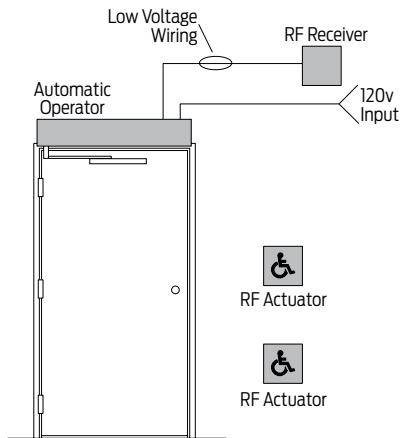
### **MAINTENANCE**

Low Energy Electromechanical Power Operators

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

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

## SINGLE DOOR SYSTEMS



### SINGLE DOOR SYSTEM (WIRELESS)

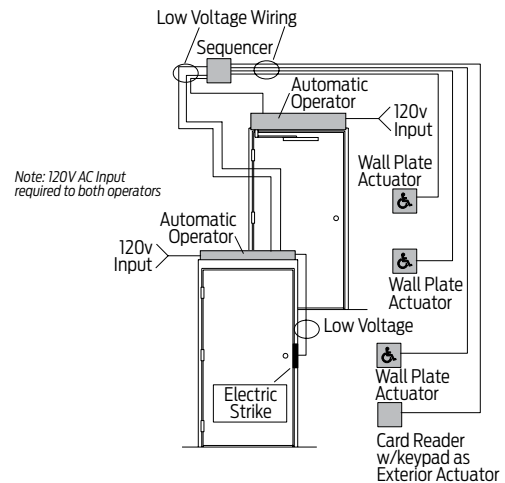
- An interior door
- Guide rails or safety devices not required
- Free swinging (or dogged) door

#### How It Works:

- Wireless actuators with receiver, powered by the transformer allows for easy installation
- For automatic door operation, touching either actuator signals the receiver and power operator to open the door to 90 degrees
- The door is held there until the system times out
- Door closes via spring return
- Door opening speed, closing speed and hold open time is adjustable on the control box
- If not actuated, the power operator functions as a manual door

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

## VESTIBULE ENTRY OPERATION



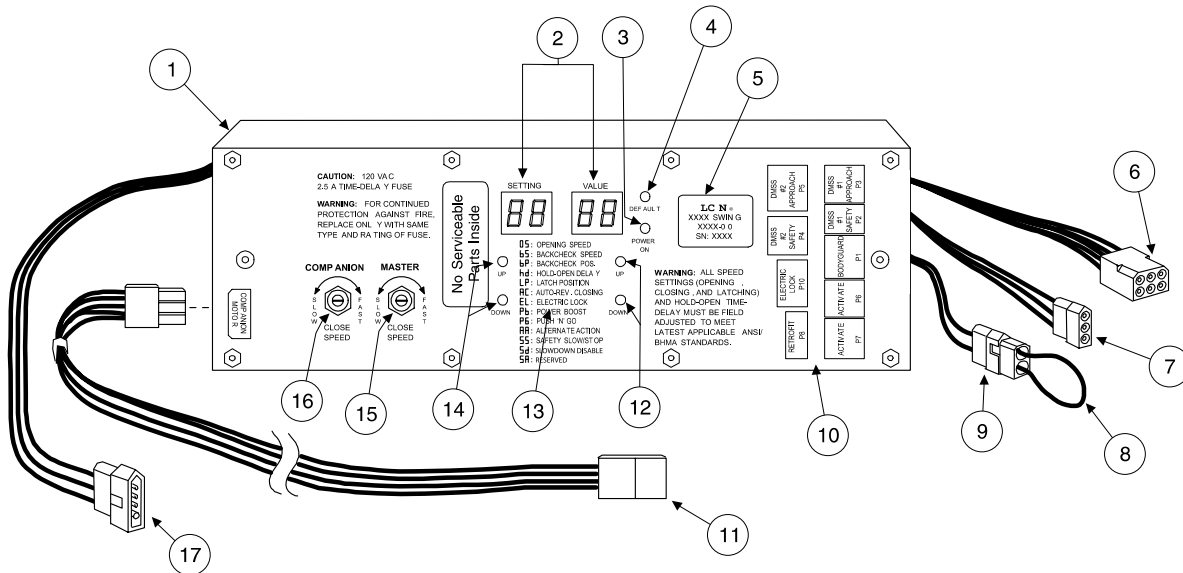
### VESTIBULE ENTRY SYSTEM (WIRED)

- Exterior & vestibule doors
- Sequential operation
- Guide rails or safety devices not required
- Controlled access, free egress

#### How It Works:

- This installation provides both accessibility and security for building occupants
- It allows for the integration of multiple automatic operators, a card reader and electric strike
- A sequencer allows sequential operation of the two automatic operators
- Vestibule actuators allow single door ingress/ egress from the vestibule as needed
- If not actuated the power operator functions as a manual door

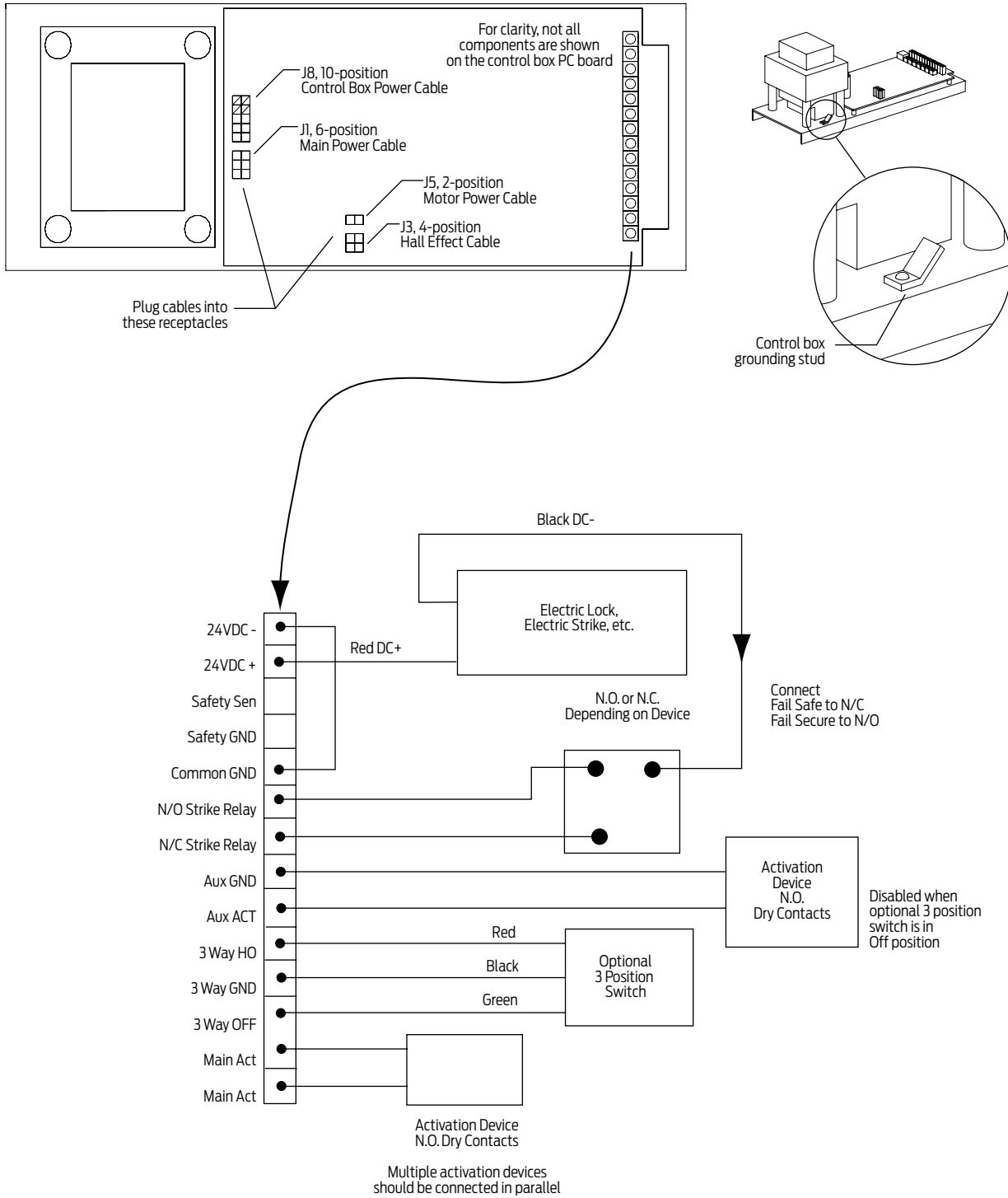
Bill Of Materials:	Qty.	Part No.	Description
	1	9542	Automatic operator (RH)
	1	9531	Automatic operator (RH)
	3	8310-853	Wall Plate Actuators
	1	8310-849	Sequencer
	Other products from Von Duprin and Schlage Electronics		



### CONTROL BOX - 2800, 9500 SERIES

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

**STANDARD CONTROL BOX - 9100 SERIES**



### **GENERAL ELECTRICAL DATA**

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

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

#### **Electrical Data**

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

### **9100, SERIES**

#### **Electrical Data**

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

## Benchmark Unique Features

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

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

### **Electronic Circuit Protection**

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

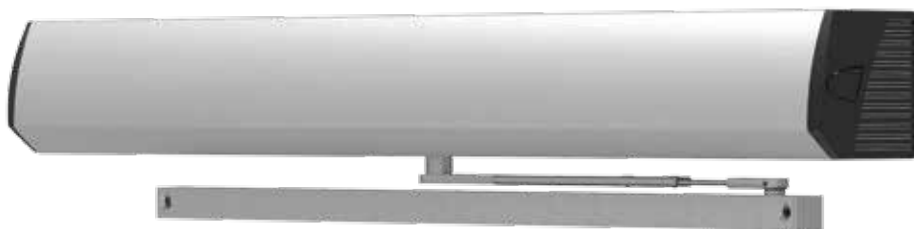
### **Visual Function Indicators**

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

### **Programming Mode**

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

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



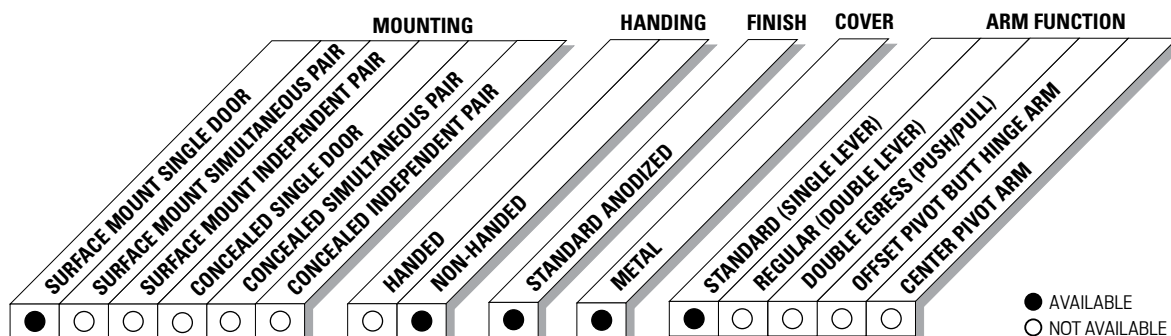
The 9130 BENCHMARK by LCN is an electrically powered low-energy operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for automatic opening applications that occasionally require manual opening. The BENCHMARK is a cost-effective solution for retrofitting an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

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

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

**Special  
Templates**

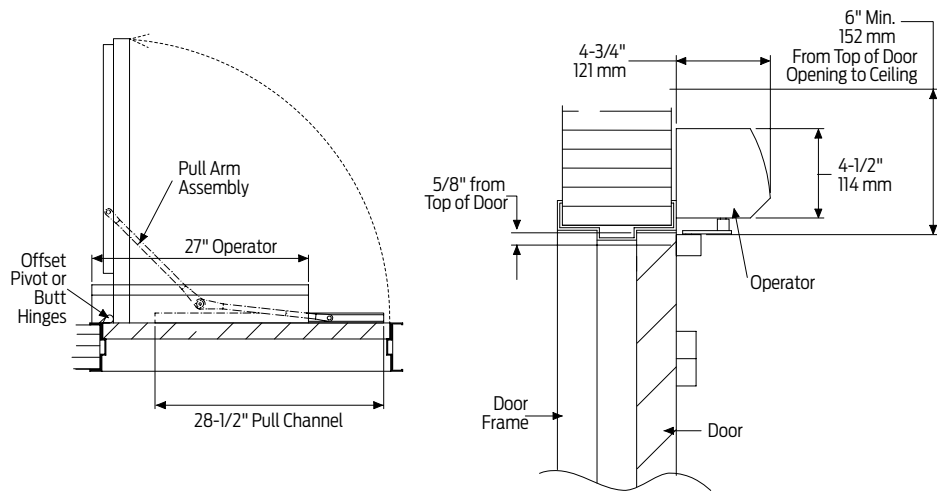
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



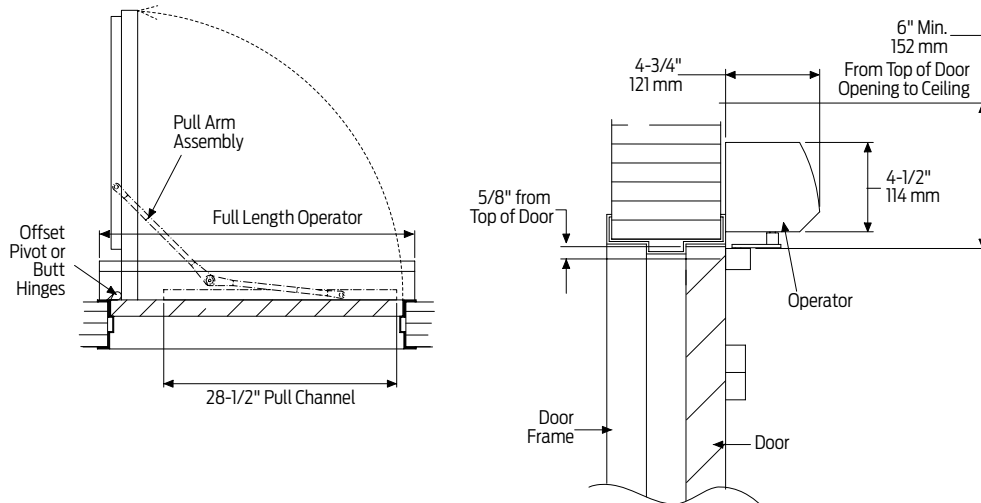
# 9130 Series Benchmark

## Mounting details

### Top Jamb Single Door Mounting



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



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

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Reveal</b>	Should not exceed 1/8" (3 mm)
<b>Head Frame</b>	Minimum 2" (51 mm)
<b>Top Rail</b>	Minimum 2" (51 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>■ Variable by adjustments to the electronic control module located on the operator assembly</li> <li>■ Maximum hold open time adjustable up to approximately 30 seconds</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

**Notes:**

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

**Motor Gearbox**



**9130-3454S**  
Motor Gearbox Assembly

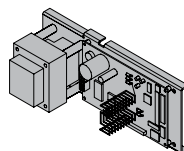
- Driving mechanism for operator (switch included)
- For 27" unit



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

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

**Control Box**



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

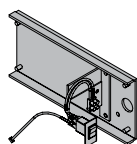
- Electronic controlling device with power supply output and power boost feature for Benchmark

**Brackets**



**9130-3018**  
Mounting Bracket

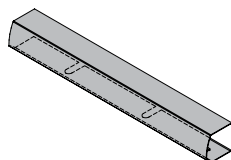
- Standard



**9130-3351-2**  
Switch Bracket

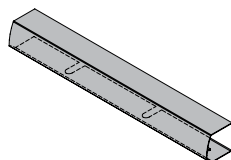
- 41" cable
- Bracket used to locate switch at end of cover on full length unit

**Covers**



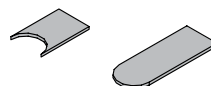
**9130-72MC**  
Metal Cover

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



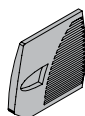
**9130-72FC**  
Full Metal Cover

- Non-handed
- 36"
- Extruded aluminum



**9130-163**  
Cover Insert

- Used to cover operator shaft opening (includes 2 pieces)



**9130-163-1**  
Cover End Cap Insert

- Used to cover switch hole opening



**9130-334**  
Cover End Cap

- Black plastic
- Includes 9130-163-1 cover and cap insert

# 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**

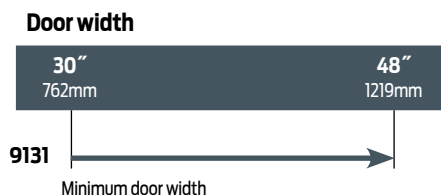
**Cover**

- 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.*

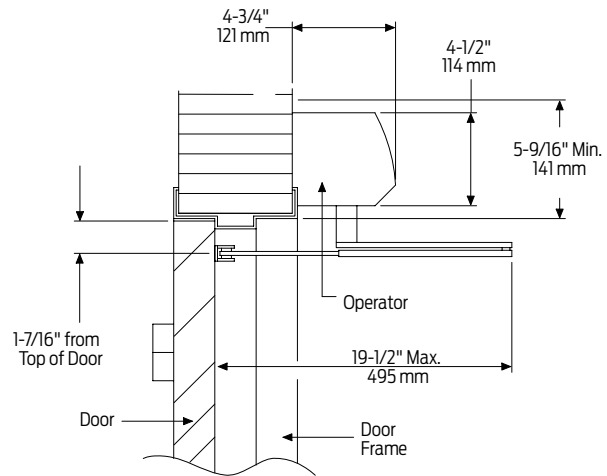
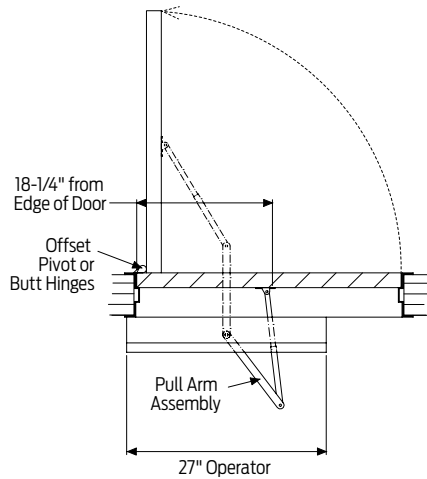




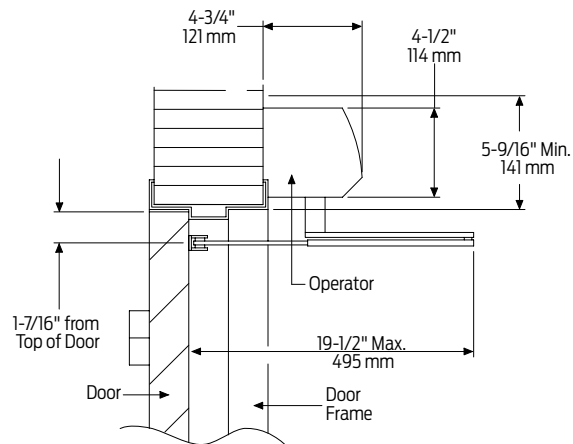
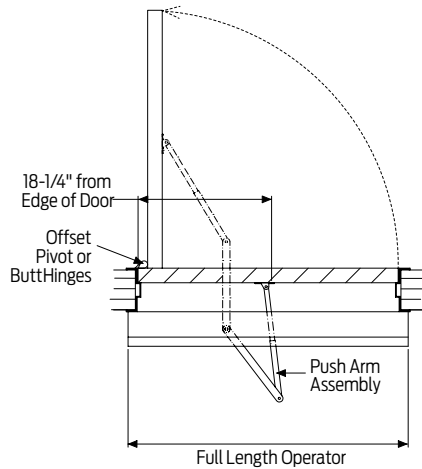
# 9140 Series Benchmark

## Mounting details

### Top Jamb Single Door Mounting



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



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

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Reveal</b>	Push installations should not exceed 6" (152 mm) for REGULAR ARM and 9-3/4" (248 mm) for LONG ARM
<b>Head Frame</b>	Minimum 2" (51 mm)
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Minimum 2" (51 mm)</li> <li>Flush ceiling installation requires 5-1/4" (133 mm) minimum</li> </ul>
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>Variable by adjustments to the electronic control module located on the operator assembly</li> <li>Maximum hold open time adjustable up to approximately 30 seconds</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section pages 54 for typical system wiring and page 55 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

**Notes:**

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

### Motor Gearbox



**9140-3454S**  
Motor Gearbox Assembly

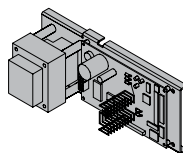
- Driving mechanism for operator (switch included)
- For 27" unit



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

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

### Control Box



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

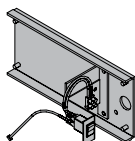
- Electronic controlling device with power supply output and power boost feature for Benchmark

### Brackets



**9140-3018**  
Mounting bracket

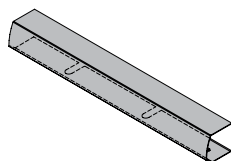
- Standard



**9140-3351-1**  
Switch Bracket

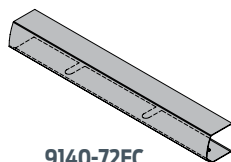
- 29" cable
- Used with a 36" door
- Used to locate switch at end of cover on full length unit

### Covers



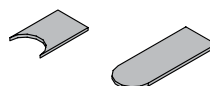
**9140-72MC**  
Metal Cover

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



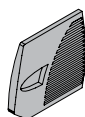
**9140-72FC**  
Full Metal Cover

- Non-handed
- 36"
- Extruded aluminum cover



**9140-163**  
Cover Insert

- Used to cover operator shaft opening (includes 2 pieces)



**9140-163-1**  
Cover End Cap Insert

- Used to cover switch hole opening



**9140-334**  
Cover End Cap

- Black plastic
- Includes 9130-163-1 cover and cap insert

**Arms**



**9140-3077**  
Regular arm

- Non-handed



**9140-3077L**  
Long push arm

- Non-handed



**9140-79**  
Rod and shoe

- For use with regular arm



**9140-79LR**  
Long rod and shoe

- Used with long arm, for deep reveals

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

**Specify Finish**

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

**Operator options**

**Cover**

- 36" Full Cover

**Arm**

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

**Operator will be shipped with:**

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

**Table of sizes**



→ Indicates recommended range of door width for operator.

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





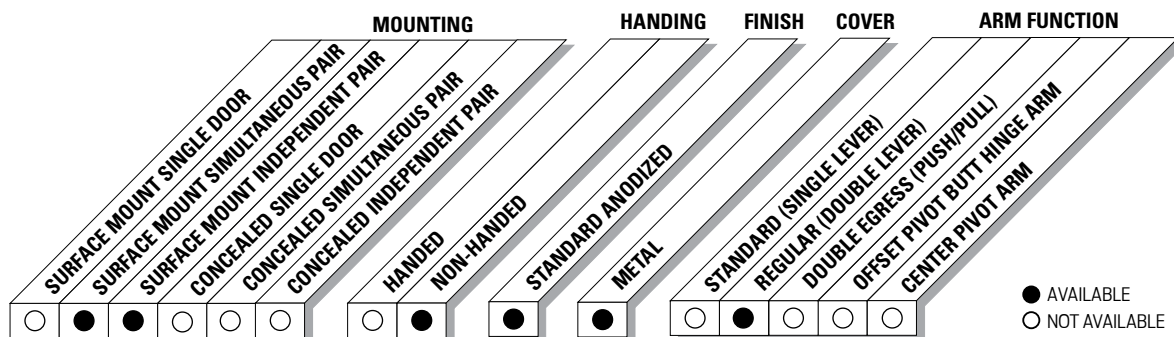
The 9150 BENCHMARK by LCN is an electrically powered low-energy operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for automatic opening applications that occasionally require manual opening. The BENCHMARK is a cost-effective solution for retrofitting an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

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

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

**Special  
Templates**

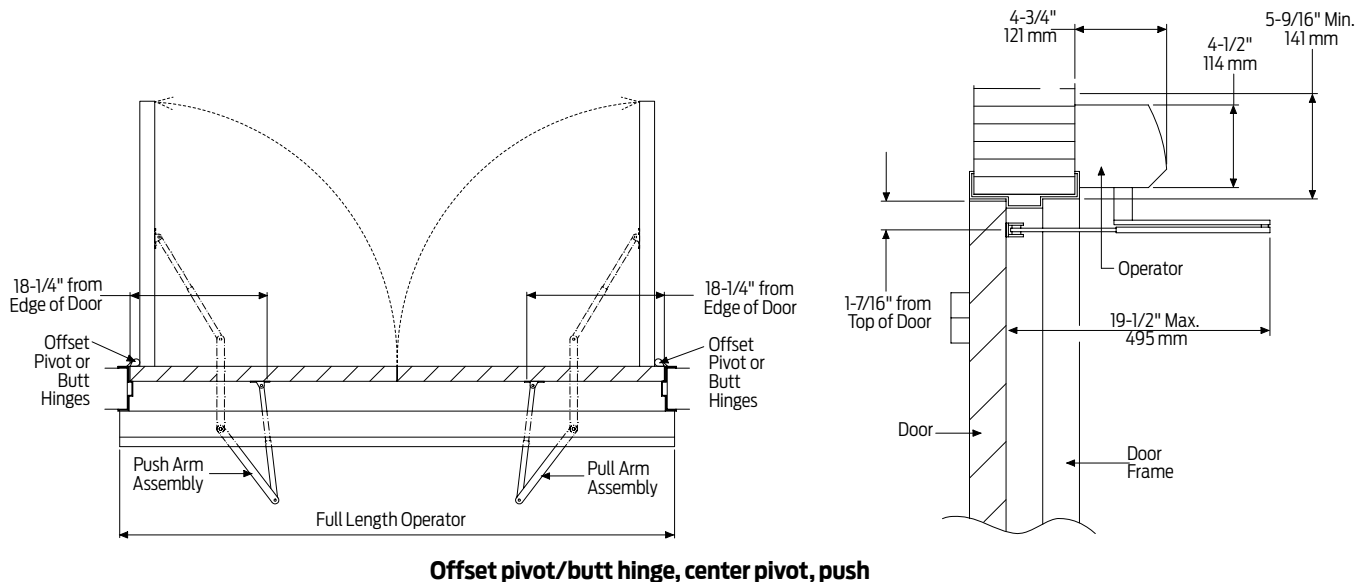
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



# 9150 Series Benchmark

## Mounting details

Top jamb, Independent/  
Simultaneous Pair  
Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Reveal</b>	Push installations should not exceed 6" (152 mm) for REGULAR ARM and 9-3/4" (248 mm) for LONG ARM
<b>Head Frame</b>	Minimum 2" (51 mm)
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>■ Minimum 2" (51 mm)</li> <li>■ Flush ceiling installation requires 5-1/4" (133 mm) minimum</li> </ul>
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>■ Variable by adjustments to the electronic control module located on the operator assembly</li> <li>■ Maximum hold open time adjustable up to approximately 32 seconds</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section pages 54 for typical system wiring and page 55 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

**Notes:**

- Determined by wiring
- Push N' Go permits non-switch activation with a microprocessor control box that ensures reliability and maintains customer settings
- Power boost allows for increased closing force near latch
- All potentiometers clearly labeled with their functions
- LED lights indicate power to control box and motor gearbox

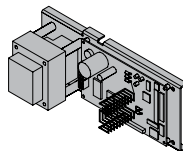
## Motor Gearbox



**9150-3454S**  
Motor Gearbox Assembly

- Driving mechanism for operator (switch included)

## Control Box



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

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

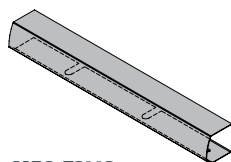
## Brackets



**9150-3018**  
Mounting Bracket

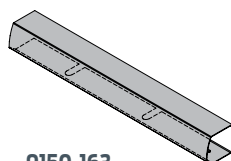
- Standard

## Covers



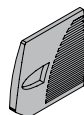
**9150-72MC**  
Metal Cover

- Non-handed
- 72"
- Extruded aluminum cover
- Standard



**9150-163**  
Cover Insert

- Used to cover operator shaft opening (includes 2 pieces)



**9150-163-1**  
Cover End Cap Insert

- Used to cover switch hole opening



**9150-334**  
Cover End Cap

- Black plastic
- Includes 9130-163-1 cover and cap insert

## Arms



**9150-3077**  
Regular arm

- Non-handed



**9150-3077L**  
Long arm

- Non-handed



**9150-79**  
Rod and shoe

- For use with regular arm



**9150-79LR**  
Long rod and shoe

- Used with long arm, for deep reveals

# 9150 Series Benchmark

Ordering Information

## How-to-order 9150 Series closers

### Specify Finish

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

### Operator options

#### Arm

- Long Arm (3077L) (Reveals 6" to 9-3/4")

### Operator will be shipped with:

- Standard motor gearbox (2 ea)
  - Standard control box (2 ea)
  - Mounting bracket (2 ea)
  - 72" metal cover
  - Standard arm (2 ea)
  - Wood and machine screw pack
- unless options listed below are selected

## Table of sizes

Notes:

- For 9150 Benchmark Series
- 72" door width only for full length push double door operator.

### Digital Control Suite

Provides exceptionally precise control of a large range of built-in functions combined with superior durability and performance. Visual indications and digital readouts of all control function settings and activity make adjustments easy, fast and accurate.

### Dual Independent Program Memories

Each unit is pre-programmed to factory default settings. The installer can adjust the unit to meet the job site requirements. These field settings are locked into the computer's memory. Any subsequent field adjustments replace the original field adjustments. The factory settings are always retained in memory and can be recalled to replace the field settings in just seconds, restoring the unit to its original programming.

### On-Board Diagnostics

Sophisticated built-in diagnostics program monitors the system microprocessor, power supplies, drive systems, actuators and safety circuits. Reduces the time required to make sure the installation is complete and correct.

### On-Board Power Supply

Provides 24V AC output or 24V DC output with rectifier to power card readers, manual actuators and other peripherals.

### Plug and Play Sensors

Motion sensors and safety sensors feature a "plug and play" concept allowing fast and accurate wiring connections in only seconds.

### Electronic Circuit Protection

High voltage (primary AC input) is protected by replaceable fuse. Low voltage (secondary AC output) is protected by self-resetting fuses.

### Visual Function Indicators

LED Display allows direct observation of these inputs while in visual function indicator mode:

- Key switch- set to Auto, OFF or HOLD
- Activate
- DMSS approach
- DMSS safety
- Bodyguard
- Power Boost Disable

### Programming Mode

Allows tailoring the following functions to meet specific site conditions

- Opening Speed
- Backcheck Speed
- Backcheck Position
- Hold Open Delay
- Latch Position
- Auto Reverse - Closing
- Electric Lock Delay
- Power Boost
- Push 'N' Go
- Alternate Action
- Safety Slow/Stop
- Slow Down Disable

### Push 'N Go

Allows pedestrians to walk up to the door and push it open as if it were a manual door. After the door is manually opened approximately 5 degrees, the Push 'N Go feature takes over and continues to open the door – slowly and automatically to the full open position. With Push 'N Go, the door will stay fully open from one to 30 seconds, depending on the time delay chosen.

### Auto Reverse

A safety feature that reverses the direction of the door when it comes into contact with an object during either opening or closing.

### Safety Slow/Stops Function

Once the door starts opening, any person or object entering the swing area will cause the door to go into a safety slow speed. This function can be set to allow for a short stop once a person or object is sensed.

### Power Boost

Adds an additional latching force to ensure secure latching in severe wind or stack conditions. Power Boost is also ideal for overcoming slowing obstacles such as electric strikes. Provides approximately 25 lbs. of total closing force.

### Microprocessor

Control unit allows for quiet efficiency in operation. Combined with the all electromechanical unit, it eliminates unnecessary wear and prolongs the life of the unit.

### Electric Lock Delay

Causes a 1 second delay between activate signal and door opening to allow time for most electric locks to disengage before operator opens door.

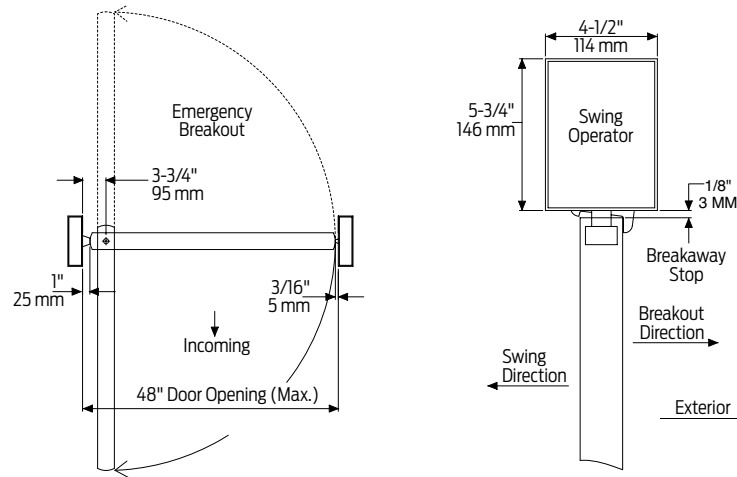




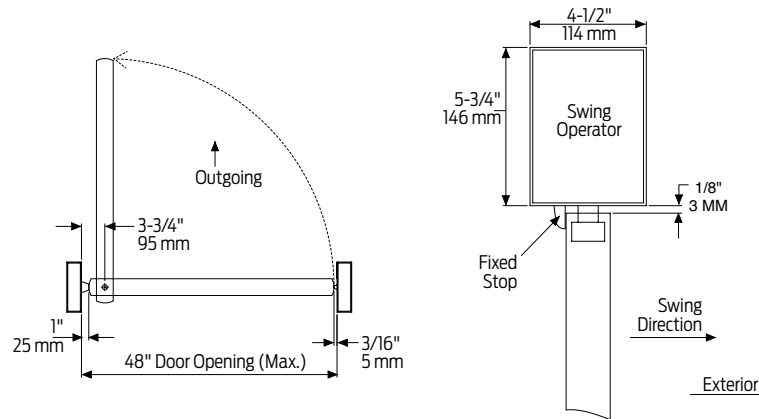
# 2810 Series Senior Swing

## Mounting details

### Concealed Single Door Mounting



**Center pivot, emergency breakaway, pull**  
Shown w/ 3-3/4" pivot and finger guard

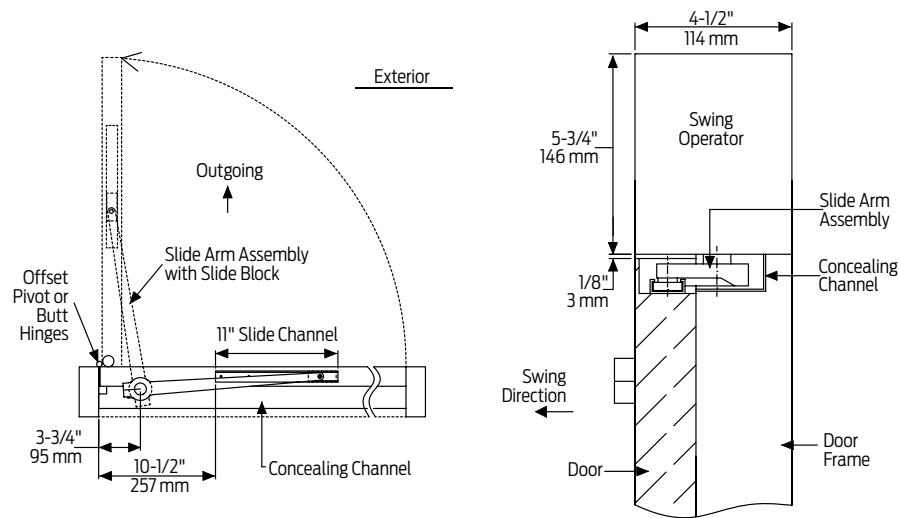


**Center pivot, fixed stop, push**  
Shown w/ 3-3/4" pivot and finger guard

<b>Head Frame</b>	Minimum 36" (L) x 5-3/4" (H) x 4-1/2" (W) (914 mm x 146 mm x 114 mm)
<b>Top Rail</b>	Minimum 2" (51 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>Variable by adjustments to the electronic control box</li> <li>Maximum hold open time adjustable up to approximately 32 seconds</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening <ul style="list-style-type: none"> <li>Minimum header length 33" with applied stop by others and 36" with LCN fixed or breakaway stop</li> </ul>

**Notes:**

- Push N' Go permits non-switch activation
- Power boost provides additional latch forcing for electromechanical unit with microprocessor control
- Double door header available up to 98", specify length 49" to 98" maximum (Consult factory regarding this option)
- Fixed (positive) or breakaway stop available with center pivot arm
- Adjustable hold open time of 1-32 seconds



**Offset pivot or butt hinge, slide arm, push**  
Shown w/ 3-3/4" pivot

<b>Head Frame</b>	Minimum 33" (L) x 5-3/4" (H) x 4-1/2" (W) (838 mm x 146 mm x 114 mm)
<b>Top Rail</b>	Minimum 2" (51 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>■ Variable by adjustments to the electronic control box</li> <li>■ Maximum hold open time adjustable up to approximately 32 seconds</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening
	<ul style="list-style-type: none"> <li>■ Minimum header length 33"</li> <li>■ Installations require bottom pivot and two intermediate pivots</li> </ul>

*Notes:*

- Push N' Go permits non-switch activation
- Power boost provides additional latch forcing for electromechanical unit with microprocessor control
- Double door header available up to 98", specify length 49" to 98" maximum (Consult factory regarding this option)
- Fixed (positive) or breakaway stop available with center pivot arm
- Adjustable hold open time of 1-32 seconds

# 2810 Series Senior Swing

## Accessories

### Motor Gearbox



**2810-3454**  
Motor Gearbox

- Senior swing
- Handed
- Driving mechanism for operator
- Provides maximum 15 lbs opening force

### Mount Brackets



**2810-375**  
Mounting Bracket

- Motor gearbox mounting bracket for 3-3/4" offset pivot, butt hinge or center pivot with finger guard installations
- Front bracket



**2810-275**  
Mounting Bracket

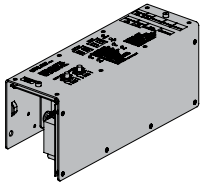
- Motor gearbox mounting bracket for 2-3/4" center pivot installations
- Front bracket



**2810-3018**  
Rear Mounting Bracket

- Motor gearbox mounting bracket
- Rear bracket

### Control Box



**2810-3462**  
Control Box

- Senior swing
- Electronic controlling device for Senior Swing

### Headers



**2810-3572HL**  
Header

- Standard
- Single door, single operator
- Specify length 33" to 49" maximum



**2810-3572DD**  
Header

- Standard
- Double door, single operator
- Specify length 49" to 98" maximum

### End Cap



**2810-334**  
Header End Caps

- With openings for wiring

### Arms



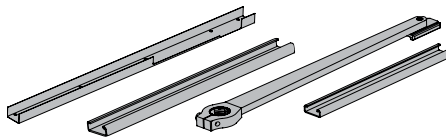
**2810-3077CP**  
Center Pivot Arm

- Center pivot installations only
- Used with overhead concealed operators and center pivoted doors



**2810-3077OP**  
Offset Pivot Arm

- Offset pivot or butt hung installations only
- Used with overhead concealed operators



**2810-3077 OPCM**  
Offset Pivot Arm Assembly

- Offset arm with track and concealing channel (includes 3072 concealing channel, 168 slide channel and 3077OP offset pivot arm)

## Channels



**2810-3072**  
Concealing Channel

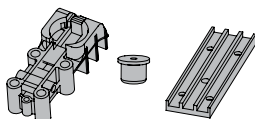
- Used to conceal arm in overhead concealed applications
- For offset pivot installations only
- If ordering separately specify length and hand



**2810-168**  
Slide channel

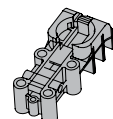
- Offset pivot or butt hinge installations only
- Mounts in top rail of door
- Allows arm to slide

## Pivots



**2810-3107**  
Bottom Pivot Assembly

- Includes pivot body, pivot post and bottom pivot plate
- For overhead concealed, center pivoted installations
- Includes: 2810-107, 2810-110 and 2810-117



**2810-107**  
Bottom Pivot Body

- For center pivoted installations



**2810-110**  
Pivot Post

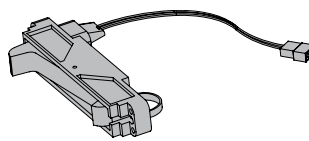
- Connects pivot body to bottom pivot plate for center pivoted installations



**2810-117**  
Bottom Pivot Plate

- Applied to floor for center pivoted installations

## Installation Accessories



**2810-384B**  
Door Stop Breakaway

- Allows in-swinging door to swing out in case of emergency
- Disables operator in breakaway mode.
- For center pivoted installations only



**2810-384F**  
Door Stop Fixed

- Prevents out-swinging door from swinging in
- For center pivoted installations only



**2810-12**  
Filler Plate Blank

- Completes length of header box



**2810-11A**  
Spindle Plate

- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 2-3/4" center pivot installations



**2810-11B**  
Spindle Plate

- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 3-3/4" offset pivot, butt hinge or center pivot with finger guard installations

# 2810 Series Senior Swing

## Ordering Information

### How-to-order 2810 Series

#### Select installation type

- 2811

#### Specify arm

- 3-3/4" (Offset pivoted) Arm (3077OP)
- 2-3/4" (Center pivoted) Arm (3077CP)
- 3-3/4" (Center pivoted) Arm (3077CP)

#### Specify hand

- RH
- LH

#### Specify header/length

- HL\_ (Specify length 33" to 49" offset pivot)
- HL\_ (Specify length 36" to 49" center pivot)
- DD\_ (Specify length 49" to 98")

#### Specify finish

- Standard Anodized Finish \_\_\_\_\_  
Aluminum or Dark Bronze

#### Operator will be shipped with:

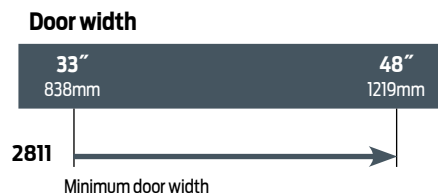
- Motor gearbox,
- Control box,
- Header (at specified length, 36" standard),
- Wood and machine screw pack  
unless options listed below are selected.

### Operator options

#### Stops

- Positive Mechanical Stop (POS)
- Panic Breakaway Stop (BKY)  
*\*Available with Center Pivoted installations only*

### Table of sizes



→ Indicates recommended range of door width for operator.

*NOTE: For all Senior Swing Series  
Single Door - Width per leaf 33" minimum, 48" maximum*

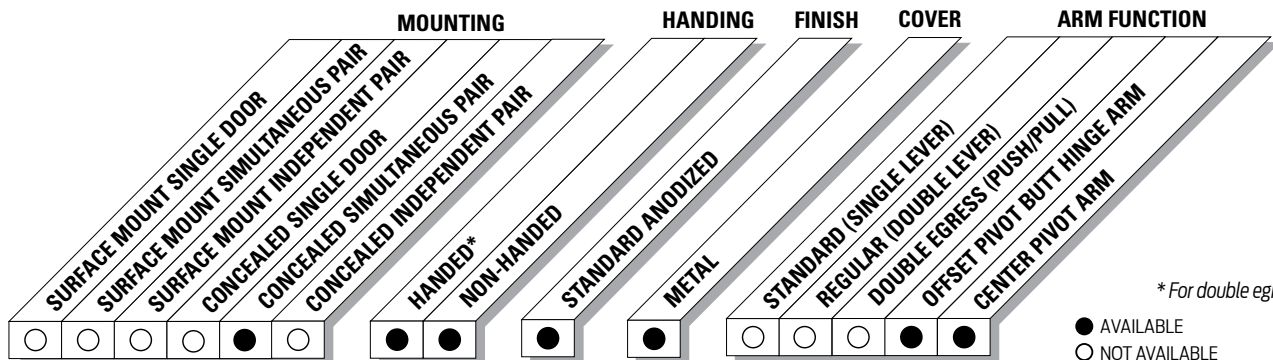


The 2850 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operator when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

<b>Certifications</b>	Grade 1 - ANSI A156.19, UL325, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Wood and machine screw pack
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Double door, overhead concealed, center pivot, offset pivot, butt hinge
<b>Handing</b>	Handed	<b>Arms</b>	Offset Pivot Arm or Center Pivot Arm
<b>Door Width</b>	<ul style="list-style-type: none"> <li>■ Combined width min 52" - 96"</li> <li>■ Simultaneous pair - width per leaf 26" minimum to 48" maximum</li> </ul>	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Anodized Aluminum</li> <li>■ Anodized Dark Bronze</li> </ul>
<b>Warranty</b>	2 years		

**Special  
Templates**

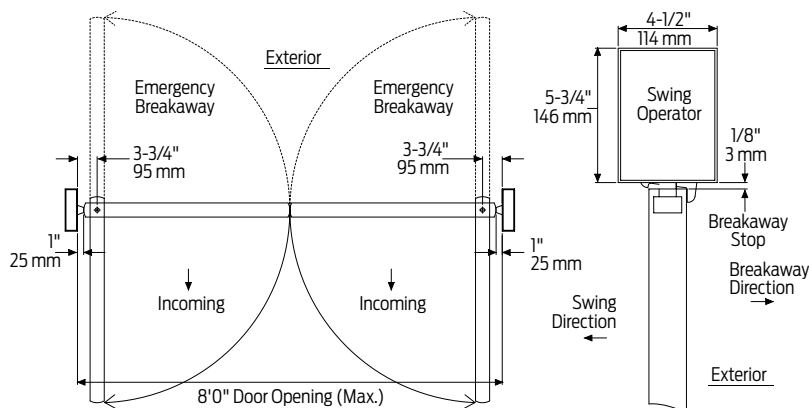
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



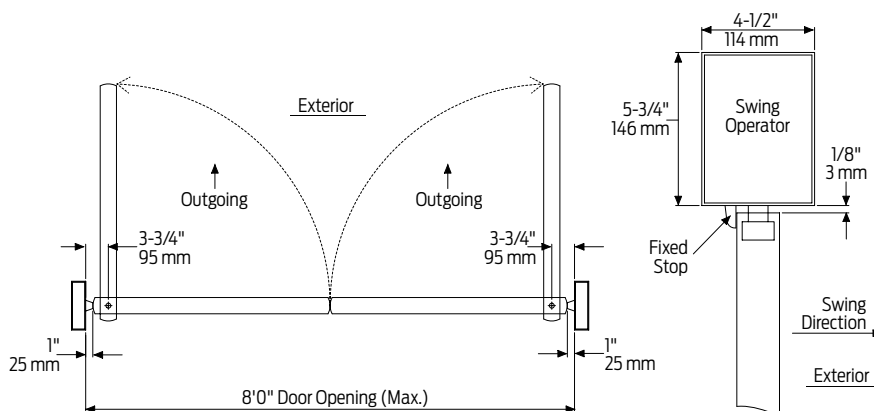
# 2850 Series Senior Swing

Mounting details

Concealed Simultaneous Pair



**Center pivot, emergency breakaway, pull**  
Shown w/ 3-3/4" pivot

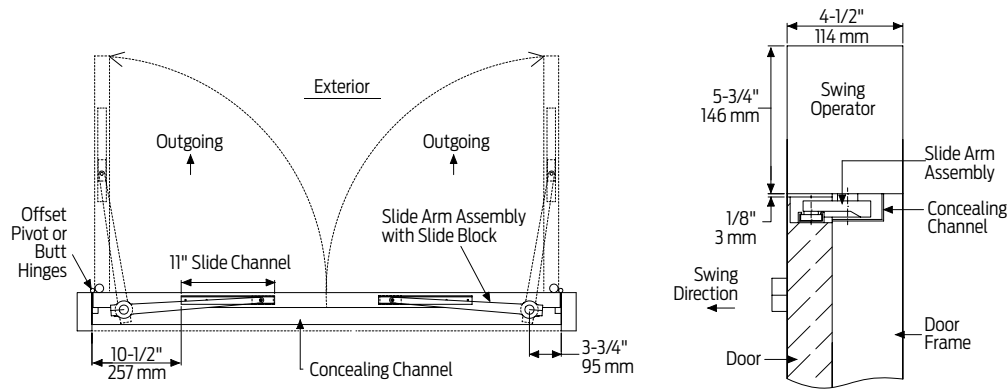


**Center pivot, fixed stop, push**  
Shown w/ 3-3/4" pivot

<b>Head Frame</b>	Minimum 52" (L) x 5-3/4" (H) x 4-1/2" (W) (1524 mm x 146 mm x 114 mm)
<b>Top Rail</b>	Minimum 2" (51 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>■ Variable by adjustments to the electronic control box</li> <li>■ Maximum hold open time adjustable up to approximately 32 seconds.</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

**Notes:**

- Push N' Go permits non-switch activation with power boost providing additional latching force
- Electromechanical unit with microprocessor control
- 36" header length is standard, specify length 33" - 49" max
- Double header available 98", specify length 49" - 98" max
- Fixed (positive) or breakaway stop available with center pivot arm
- Adjustable hold open time of 1-32 seconds
- Actuators available separately, see pages 115-131



**Offset pivot or butt hinge, slide arm, push**  
Shown w/ 3-3/4" pivot

<b>Head Frame</b>	Minimum 52" (L) x 5-3/4" (H) x 4-1/2" (W) (1524 mm x 146 mm x 114 mm)
<b>Top Rail</b>	Minimum 2" (51 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>■ Variable by adjustments to the electronic control box</li> <li>■ Maximum hold open time adjustable up to approximately 32 seconds</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

*Notes:*

- Push N' Go permits non-switch activation with power boost providing additional latching force
- Electromechanical unit with microprocessor control
- 36" header length is standard, specify length 33" - 49" max
- Double header available 98", specify length 49" - 98" max
- Fixed (positive) or breakaway stop available with center pivot arm
- Adjustable hold open time of 1-32 seconds
- Actuators available separately, see pages 115-131

# 2850 Series Senior Swing

## Accessories

### Motor Gearbox



**2850-3454**  
Motor Gearbox

- Senior swing
- Driving mechanism for operator
- Provides maximum 15 lbs opening force
- Handed

### Mount Brackets



**2850-375**  
Mounting Bracket

- Motor gearbox mounting bracket for 3-3/4" offset pivot, butt hinge or center pivot with finger guard installations
- Front bracket



**2850-275**  
Mounting Bracket

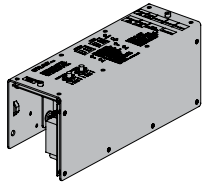
- Motor gearbox mounting bracket for 2-3/4" center pivot installations
- Front bracket



**2850-3018**  
Rear Mounting Bracket

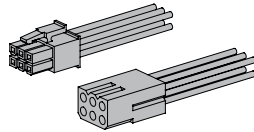
- Motor gearbox mounting bracket
- Rear bracket

### Control Box



**2850-3462**  
Control box

- Senior swing
- Electronic controlling device for Senior Swing



**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



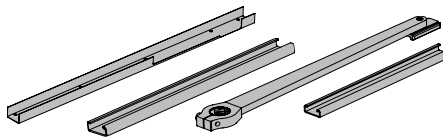
**2850-3077CP**  
Center pivot arm

- 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

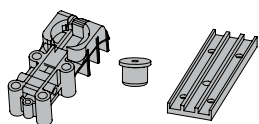
- Used to conceal arm in overhead concealed applications
- For offset pivot installations only
- If ordering separately specify length and hand



**2850-168**  
Slide Channel

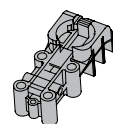
- Offset pivot or butt hinge installations only
- Mounts in top rail of door
- Allows arm to slide

## 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

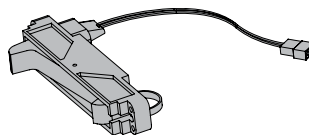
- Connects pivot body to bottom pivot plate for center pivoted installations



**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.

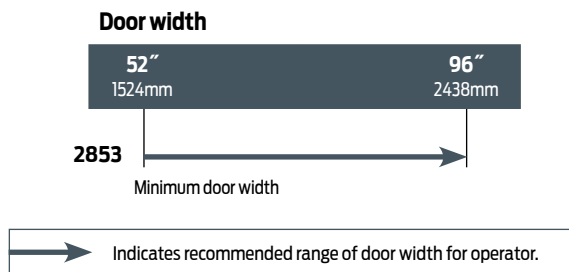
### Operator options

#### 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.

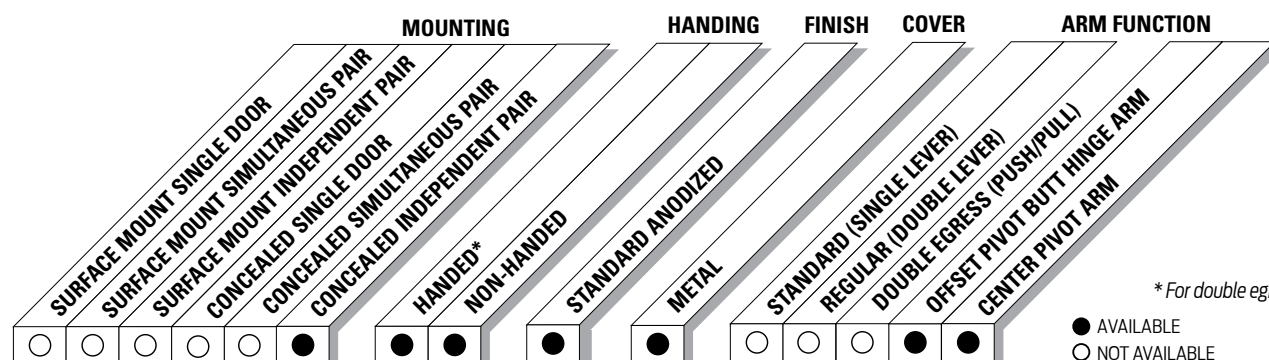


The 2860 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operator when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

<b>Certifications</b>	Grade 1 - ANSI A156.19, UL325/228, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Wood and machine screw packs
<b>Handing</b>	Handed	<b>Mounting</b>	Independent pair, overhead concealed, center pivot, offset pivot, butt hinge
<b>Door Width</b>	<ul style="list-style-type: none"> <li>■ Minimum combined door with 52" - 96"</li> <li>■ Simultaneous pair - width per leaf 26" minimum to 48" maximum</li> </ul>	<b>Arms</b>	Offset Pivot Arm or Center Pivot Arm
<b>Warranty</b>	2 years	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Anodized Aluminum</li> <li>■ Anodized Dark Bronze</li> </ul>

**Special  
Templates**

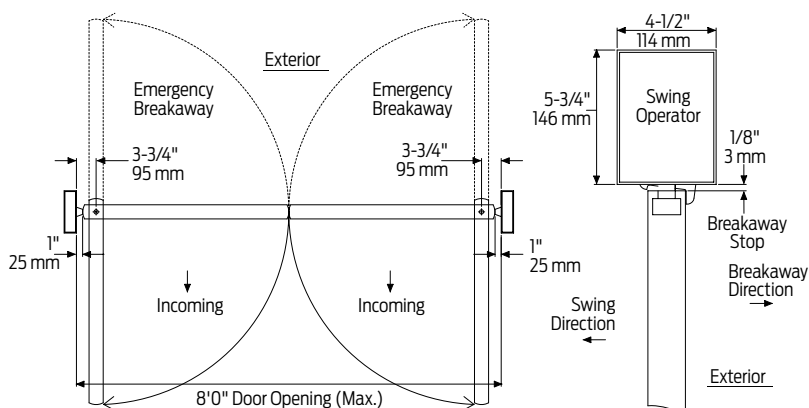
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



# 2860 Series Senior Swing

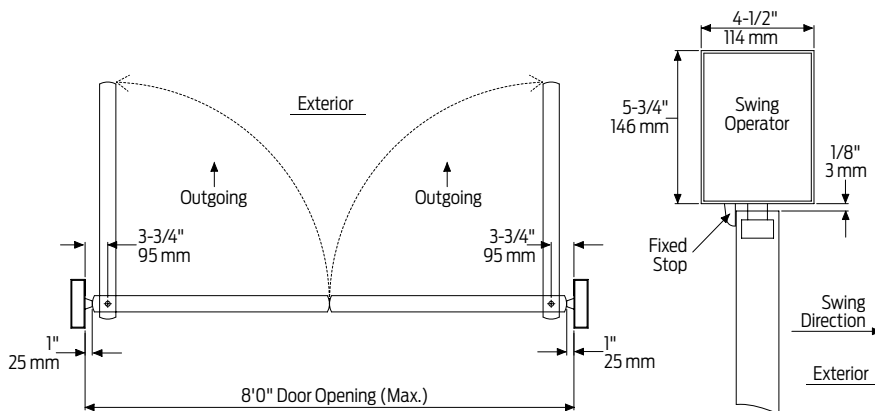
## Mounting details

Concealed Independent Pair



**Center pivot, emergency breakaway, pull**

*Shown w/ 3-3/4" pivot*



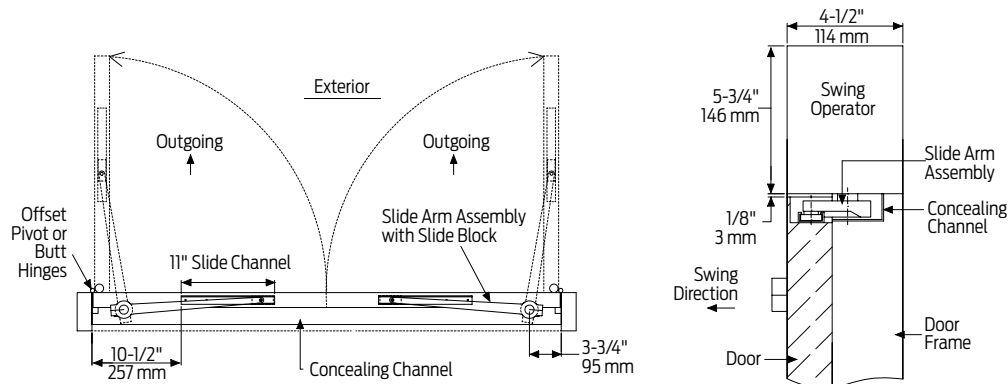
**Center pivot, fixed stop, push**

*Shown w/ 3-3/4" pivot*

<b>Head Frame</b>	Minimum 65" (L) x 5 3/4" (H) x 4 1/2" (W) (1651 mm x 146 mm x 114 mm)
<b>Top Rail</b>	Minimum 2" (51 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>■ Variable by adjustments to the electronic control box</li> <li>■ Maximum hold open time adjustable up to approximately 32 seconds.</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

*Note:*

- Push N' Go permits non-switch activation with power boosts providing additional latching force
- Electromechanical unit with microprocessor control
- Digital keypad for easy setup
- 72" header length is standard. Specify other length 65" - 98" max. Consult factory with this option
- Adjustable hold time of 1-32 seconds
- Actuators available separately, see pages 115-131



**Offset pivot/butt hinge, push**

<b>Head Frame</b>	Minimum 65" (L) x 5-3/4" (H) x 4-1/2" (W) (1651 mm x 146 mm x 114 mm)
<b>Top Rail</b>	Minimum 2" (51 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>■ Variable by adjustments to the electronic control box</li> <li>■ Maximum hold open time adjustable up to approximately 32 seconds</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

*Notes:*

- Offset pivot installations require a bottom pivot and two intermediate pivots
- Push N' Go permits non-switch activation with power boosts providing additional latching force
- Electromechanical unit with microprocessor control
- Digital keypad for easy setup
- 72" header length is standard. Specify other length 65" - 98" max. Consult factory with this option
- Optional fixed (POS) or breakaway stop (BKY) available (center pivot arm)
- Header lengths 70" - 98" max with either POS or BKY
- Adjustable hold time of 1-32 seconds
- Actuators available separately, see pages 115-131

# 2860 Series Senior Swing

## Accessories

### Motor Gearbox



**2860-3454**  
Motor gearbox

- Senior swing
- Handed
- Driving mechanism for operator
- Provides maximum 15 lbs opening force

### Mount Brackets



**2860-375**  
Mounting Bracket

- Motor gearbox mounting bracket for 3-3/4" offset pivot, butt hinge or center pivot with finger guard installations
- Front bracket



**2860-275**  
Mounting Bracket

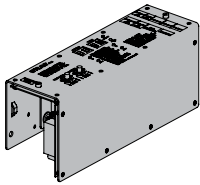
- Motor gearbox mounting bracket for 2-3/4" center pivot installations
- Front bracket



**2860-3018**  
Rear Mounting Bracket

- Motor gearbox mounting bracket
- Rear bracket

### Control Box



**2860-3462**  
Control box

- Electronic controlling device for Senior Swing

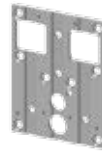
### Header



**2860-3572HL**  
Mounting Header

- Pair door, two operators
- Specify length 65" to 98" maximum
- Standard

### End Cap



**2860-334**  
Header End Caps

- With openings for wiring

### Arms



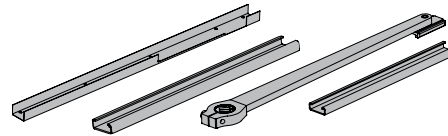
**2860-3077CP**  
Center Pivot Arm

- Center pivot installations only
- Used with overhead concealed operators and center pivoted doors



**2860-3077OP**  
Offset Pivot Arm

- Offset pivot or butt hung installations only
- Used with overhead concealed operators



**2860-3077OPCM**  
Offset Pivot Arm Assembly

- Offset arm with track and concealing channel
- Includes 3072 Concealing Channel, 168 Slide Channel and 3077OP offset pivot arm

## Channels



**2860-3072**  
Concealing Channel

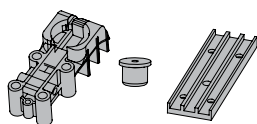
- Used to conceal arm in overhead concealed applications
- For offset pivot installations only
- If ordering separately specify length and hand



**2860-168**  
Slide Channel

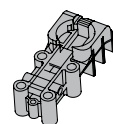
- Offset pivot or butt hinge installations only
- Mounts in top rail of door
- Allows arm to slide

## Pivots



**2860-3107**  
Bottom Pivot Assembly

- Includes pivot body, pivot post and bottom pivot plate
- For overhead concealed, center pivoted installations
- Includes: 2860-107, 2860-110 and 2860-117



**2860-107**  
Bottom Pivot Body

- Pivot body for center pivoted installations



**2860-110**  
Pivot Post

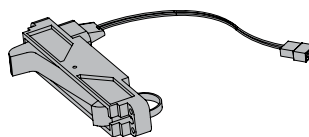
- Connects pivot body to bottom pivot plate for center pivoted installations



**2860-117**  
Bottom Pivot Plate

- Applied to floor for center pivoted installations

## Installation Accessories



**2860-384B**  
Door Stop Breakaway

- Allows in-swinging door to swing out in case of emergency
- For center pivoted installations only



**2860-384F**  
Door Stop Fixed

- Prevents out-swinging door from swinging in
- For center pivoted installations only



**2860-12**  
Filler Plate Blank

- Completes length of header box



**2860-11A**  
Spindle Plate

- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 2-3/4" center pivot installations



**2860-11B**  
Spindle Plate

- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 3-3/4" offset pivot, butt hinge or center pivot with finger guard installations

# 2860 Series Senior Swing

## Ordering Information

### How-to-order 2860 Series

#### Select installation type

- 2863

#### Specify arm

- 3-3/4" (Offset pivoted) Arm (3077OP)
- 2-3/4" (Center pivoted) Arm (3077CP)
- 3-3/4" (Center pivoted) Arm (3077CP)

#### Specify hand

- RH
- LH

#### Specify header/length

- HL\_ (Specify length 65" to 98")

#### Specify finish

- Standard Anodized Finish \_\_\_\_\_  
Aluminum or Dark Bronze

#### Operator will be shipped with:

- Standard motor gearbox (1 LH & 1 RH)
- Standard control box (2 ea)
- Header (at specified length - 72" standard)
- 2-3/4" pivot point
- Wood and machine screw pack  
unless options listed below are selected.

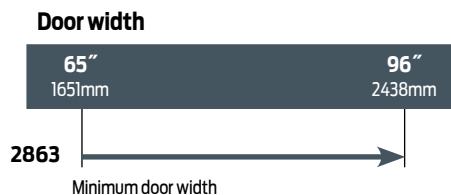
### Operator options


#### Stops\*

- Pair Positive Mechanical Stop (POS)
- Pair Panic Breakaway Stop (BKY)

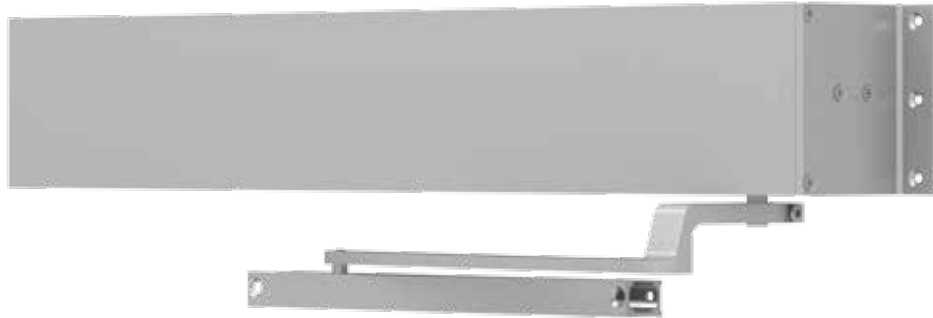
\*Available with Center Pivoted installations only

### Table of sizes



 Indicates recommended range of door width for operator.

NOTE: For all Senior Swing Series  
Independent Pair – Width per leaf 32-1/2" minimum to 48" maximum

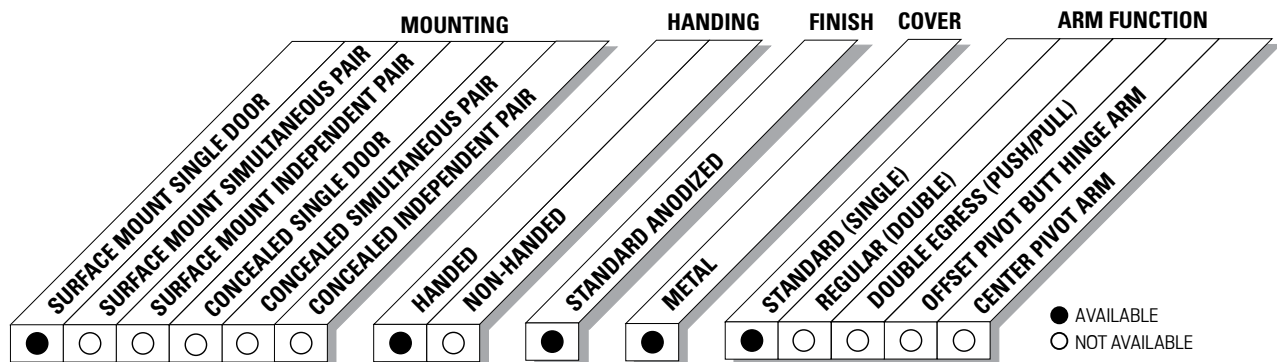


The 9530 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

<b>Certifications</b>	Grade 1 - ANSI A156.19, UL325/228, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Machine screw pack
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Single door, surface mount, offset pivot. butt hinge, pull side
<b>Handing</b>	Handed	<b>Arms</b>	Standard arm (3077T)
<b>Door Width</b>	<ul style="list-style-type: none"> <li>■ Minimum 33" - 48"</li> <li>■ Single door - width per leaf 33" minimum, 48" maximum</li> </ul>	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Anodized Aluminum</li> <li>■ Anodized Dark Bronze</li> </ul>
<b>Warranty</b>	2 years		

**Special  
Templates**

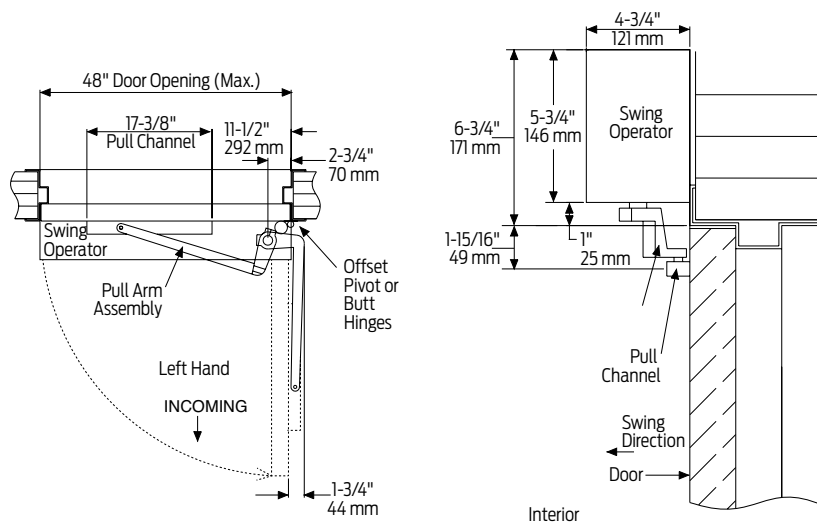
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



# 9530 Series Senior Swing

## Mounting details

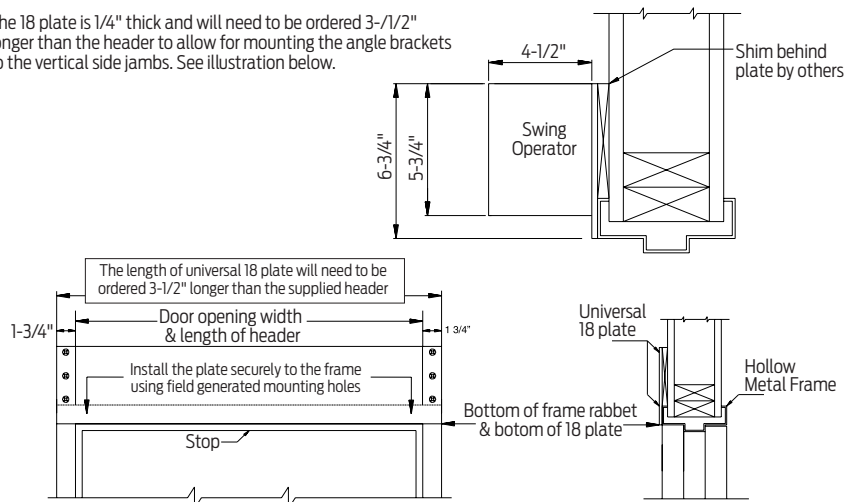
### Top Jamb Single Door Mounting



### Offset pivot/butt hinge, center pivot, pull

NOTE: Cannot be used with swing clear hinges, pocket pivots or balanced doors.

The 18 plate is 1/4" thick and will need to be ordered 3-1/2" longer than the header to allow for mounting the angle brackets to the vertical side jambs. See illustration below.



### Hollow metal frame

Suggested Installation.

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Reveal</b>	Should not exceed 4" (102 mm)
<b>Head Frame</b>	Minimum 1-3/4" (44 mm). Face frame 6-3/4" (171 mm) total operator clearance
<b>Top Rail</b>	Minimum 2-3/4" (70 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>Variable by adjustments to the electronic control box</li> <li>Maximum hold open time adjustable up to approximately 32 seconds</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

#### Notes:

- Push N' Go permits non-switch activation with a power boost providing additional latching force
- Electromechanical unit with microprocessor control
- Digital keypad for easy setup
- 36" header length is standard. Specify 33" - 48" max
- Double door header available up to 98", specify other length 49" - 98" max
- Consult factory regarding this option
- Adjustable hold open period of 2 - 32 seconds in automatic or manual mode
- Actuators available separately, see pages 115-131

**Motor Gearbox**



**9530-3454  
Motor Gearbox**

- Senior swing
- Handed
- Driving mechanism for operator
- Provides maximum 15 lbs opening force

**Mount Brackets**



**9530-275  
Mounting Bracket**

- Motor gearbox mounting bracket for 2-3/4" offset pivot or butt hinge installations
- Front bracket



**9530-3018  
Rear Mounting Bracket**

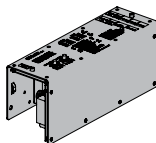
- Motor gearbox mounting bracket
- Rear bracket



**9530-334-1  
Angled Bracket**

- Mounting bracket for surface applications (includes 2 mounting brackets)

**Control Box**



**9530-3462  
Control Box**

- Electronic controlling device for Senior Swing

**Headers**



**9530-3572HL  
Header**

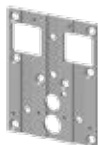
- Standard
- Single door, single operator
- Specify length 33" to 48" maximum



**9530-3572DD  
Header**

- Standard
- Double door, single operator
- Specify length 49" to 98" maximum

**End Caps**



**9530-334  
Header End Caps**

- With openings for wiring



**9530-334-2  
End Dress Plate**

- Metal finish end cap

# 9530 Series Senior Swing

## Accessories

### Arms



**9530-3077PLCM**  
Standard Arm Assembly

- Handed
- Track roller included (includes 3038, 3077T, 3034 & 73)



**9530-3077T**  
Standard Arm

- Handed
- Track roller not included

### Tracks



**9530-3038**  
Track

- Non-handed
- Includes 3034 & 73



**9530-73**  
Track End Cap

- Black plastic end caps



**9530-3034**  
Roller

- Quiet low friction roller assembly

### Installation Assembly



**9530-11A**  
Spindle Plate

- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 2-3/4" offset pivot or butt hinge installations



**9530-12**  
Filler

- Plate blank
- Completes length of header box (specify Length)



**9530-18**  
Mounting Plate

- Optional mounting plate for standard hollow metal door frames
- Specify length 36-1/2" to 101-1/2" maximum, when angle brackets
- Specify length 33" to 98" maximum when using end dress plates

*NOTE: The length of a universal 18 plate will need to be ordered 3-1/2" longer than the supplied header when using angle brackets*

**How-to-order 9530 Series closers**

**Specify hand**

- RH
- LH

**Specify header/length**

- HL\_\_ (Specify length 33" to 48")
- DD\_\_ (Specify length 49" to 98")

**Specify finish**

- Standard Anodized Finish \_\_\_\_\_  
Aluminum or Dark Bronze

**Operator will be shipped with:**

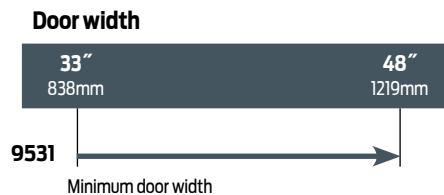
- Standard motor gearbox
- Standard control box
- Header (at specified length, 36" standard)
- Standard arm (3077T)
- 2-3/4" pivot point
- Standard track w/track roller
- Machine screw pack
- unless options listed below are selected

**Operator options**

**Mounting plate**

- Plate, \_\_\_ (Specify Length 33" to 101-1/2")

**Table of sizes**

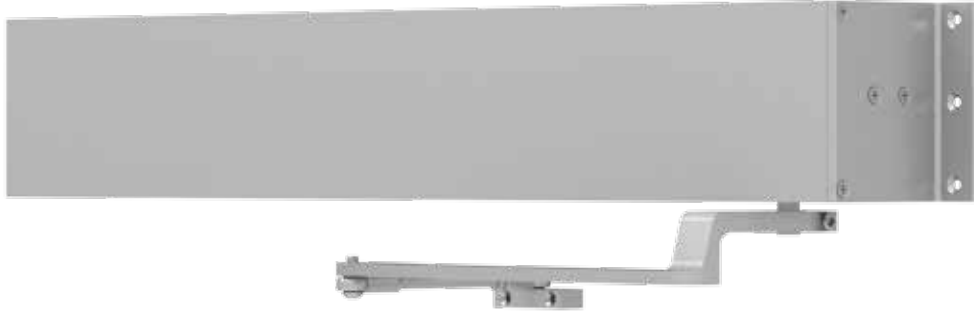


Indicates recommended range of door width for operator.

*NOTE: For all Senior Swing Series.*

*Single Door - Width per leaf 33" minimum, 48" maximum.*



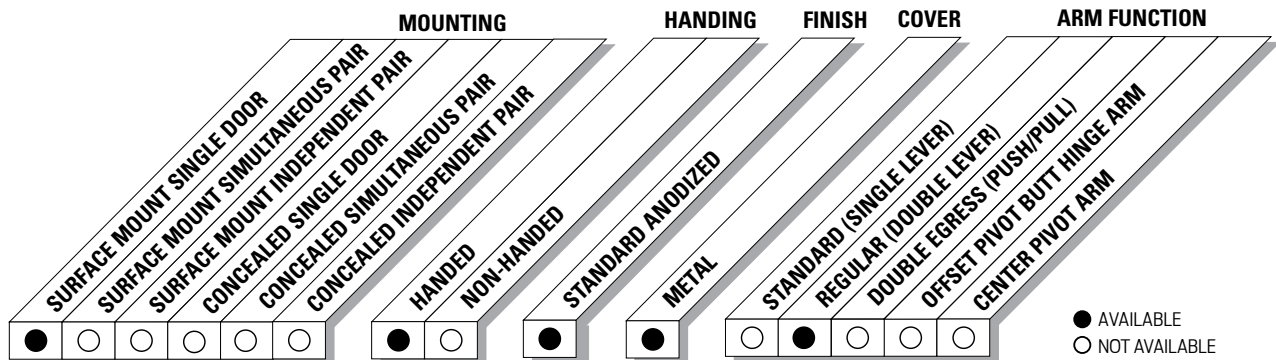


The 9540 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

<b>Certifications</b>	Grade 1 - ANSI A156.19, UL325/228, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Machine screw pack
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Single door, surface mount, offset pivot, butt hinge (Push Side)
<b>Handing</b>	Handed	<b>Arms</b>	Regular Arm (3077)
<b>Door Width</b>	<ul style="list-style-type: none"> <li>■ Minimum door width 33" - 48"</li> <li>■ Single door - width per leaf 33" minimum, 48" maximum</li> </ul>	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Anodized Aluminum</li> <li>■ Anodized Dark Bronze</li> </ul>
<b>Warranty</b>	2 years		

**Special  
Templates**

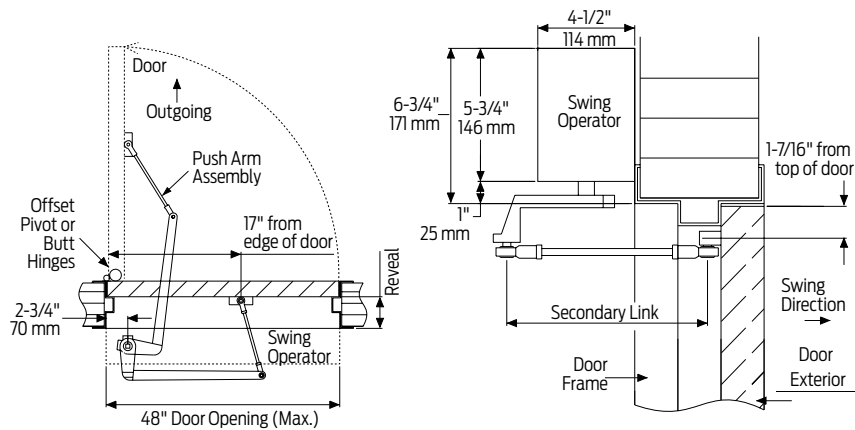
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



# 9540 Series Senior Swing

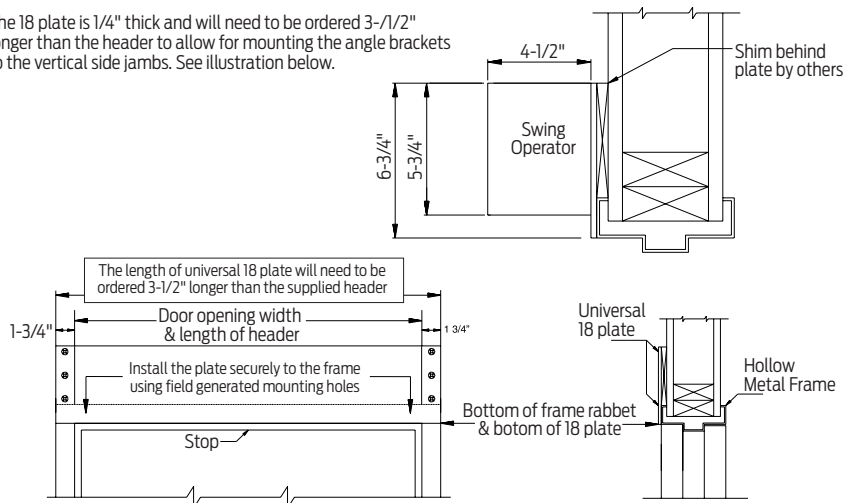
## Mounting details

### Top Jamb Single Door Mounting



**Offset pivot/butt hinge, center pivot, push**  
*Consult factory for all balance door installations.*

The 18 plate is 1/4" thick and will need to be ordered 3-1/2" longer than the header to allow for mounting the angle brackets to the vertical side jambs. See illustration below.



**Hollow metal frame**  
*Suggested Installation.*

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Reveal</b>	push installations should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM
<b>Head Frame</b>	Minimum 1-3/4" (44 mm). Face frame 6-3/4" (171 mm) total operator clearance
<b>Top Rail</b>	Minimum 2-3/4" (70 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>■ Variable by adjustments to the electronic control box</li> <li>■ Maximum hold open time adjustable up to approximately 32 seconds</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

**Notes:**

- Push N' Go permits non-switch activation with a power boost providing additional latching force
- Electromechanical unit with microprocessor control
- Digital keypad for easy setup
- 36" header length is standard. Specify 33" - 48" max
- Double door header available up to 98", specify other length 49" - 98" max
- Adjustable hold open period of 2 - 32 seconds in automatic or manual mode
- Actuators available separately, see pages 115-131

**Motor Gearbox**



**9540-3454  
Motor Gearbox**

- Senior swing
- Handed
- Driving mechanism for operator
- Provides maximum 15 lbs opening force

**Mount Brackets**



**9540-275  
Mounting Bracket**

- Motor gearbox mounting bracket for 2-3/4" offset pivot or butt hinge installations
- Front bracket



**9540-3018  
Rear Mounting Bracket**

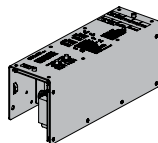
- Motor gearbox mounting bracket
- Rear bracket



**9540-334-1  
Angled Bracket**

- Mounting bracket for surface applications (includes 2 mounting brackets)

**Control Box**



**9540-3462  
Control Box**

- Electronic controlling device for Senior Swing

**Headers**



**9540-3572HL  
Header**

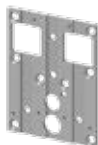
- Single door, single operator
- Specify length 33" to 48" maximum
- Standard



**9540-3572DD  
Header**

- Double door, single operator
- Specify length 49" to 98" maximum
- Standard

**End Caps**



**9540-334  
Header End Caps**

- With openings for wiring



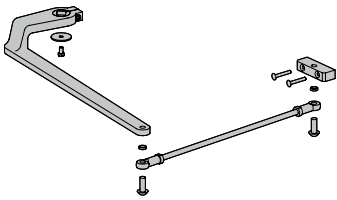
**9540-334-2  
End Dress Plate**

- Metal finish end cap

# 9540 Series Senior Swing

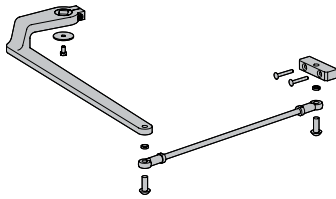
## Accessories

### Arms



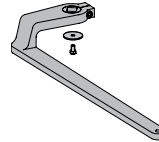
#### 9540-3077 Regular Arm Assembly

- Handed
- Includes 77 main arm assembly and 79 linkage assembly



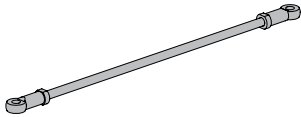
#### 9540-3077L Regular Long Arm Assembly

- Handed
- Includes 77 main arm assembly and 79LR linkage assembly



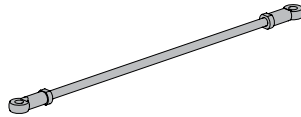
#### 9540-77 Main Arm

- Handed
- Attaches to motor gearbox



#### 9540-79 Linkage Assembly - 15"

- Threaded rod attaches to door
- Extends from main arm



#### 9540-79LR Linkage Assembly - 32"

- Threaded long rod attaches to door
- Extends from main arm.
- Used for reveal 10" to 20"

### Installation Accessories



#### 9540-11A Spindle Plate

- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 2-3/4" offset pivot or butt hinge installations



#### 9540-12 Filler Plate Blank

- Completes length of header box (specify length)



#### 9540-18 Mounting Plate

- For standard hollow metal door frames
- Specify length 55-1/2" to 101-1/2" maximum when using angle brackets
- Specify length 52" to 98" maximum when using dress plates
- Optional

*NOTE: The length of a universal 18 plate will need to be ordered 3-1/2" longer than the supplied header when using angle brackets.*

**How-to-order 9540 Series closers**

**Specify hand**

- RH
- LH

**Specify header/length**

- HL\_\_ (Specify length 33" to 48")
- DD\_\_ (Specify length 49" to 98")

**Specify finish**

- Standard Anodized Finish \_\_\_\_\_  
Aluminum or Dark Bronze

**Operator will be shipped with:**

- Standard motor gearbox
- Standard control box
- Header (at specified length, 36" standard)
- Regular arm (3077)
- 2-3/4" pivot point
- Machine screw pack  
unless options listed below are selected.

**Operator options**

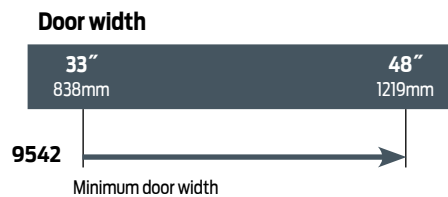
**Mounting plate**

- Plate, \_\_ (Specify Length 33" to 101-1/2")

**Arm**

- Long Arm (3077L)

**Table of sizes**



→ Indicates recommended range of door width for operator.

*NOTE: For all Senior Swing Series.  
Single Door - Width per leaf 33" minimum, 48" maximum.*



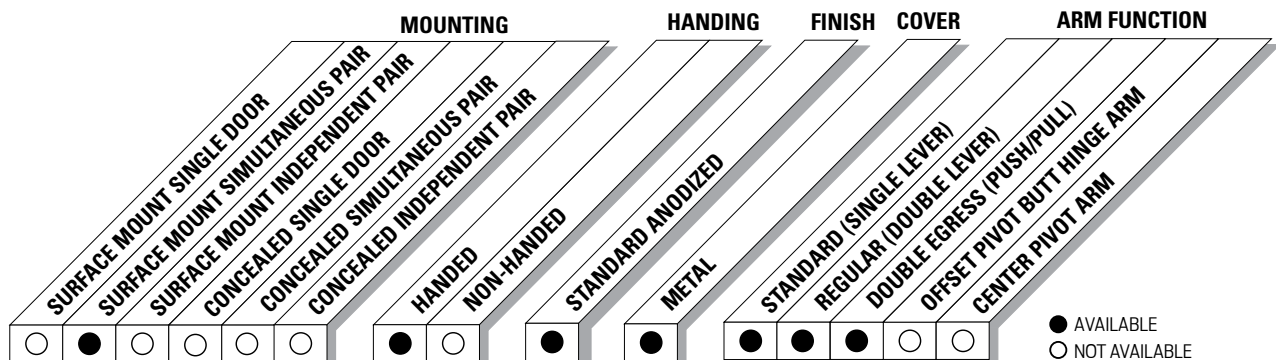


The 9550 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

<b>Certifications</b>	Grade 1 - ANSI A156.19, UL325/228, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Machine screw pack
<b>Handing</b>	Handed	<b>Mounting</b>	Simultaneous pair, surface mount, pull side, push side, double egress
<b>Door Width</b>	<ul style="list-style-type: none"> <li>■ Minimum combined door width 52" - 98" (push)</li> <li>■ Minimum combined door width 60" - 98" (pull; double egress)</li> <li>■ Simultaneous pair - width per leaf 30" minimum - 48" maximum</li> </ul>	<b>Arms</b>	<ul style="list-style-type: none"> <li>■ 2 Regular Arms (push)</li> <li>■ 2 Standard Arms (pull)</li> <li>■ 1 Regular and 1 Standard (double egress)</li> </ul>
<b>Warranty</b>	2 years	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Anodized Aluminum</li> <li>■ Anodized Dark Bronze</li> </ul>

**Special  
Templates**

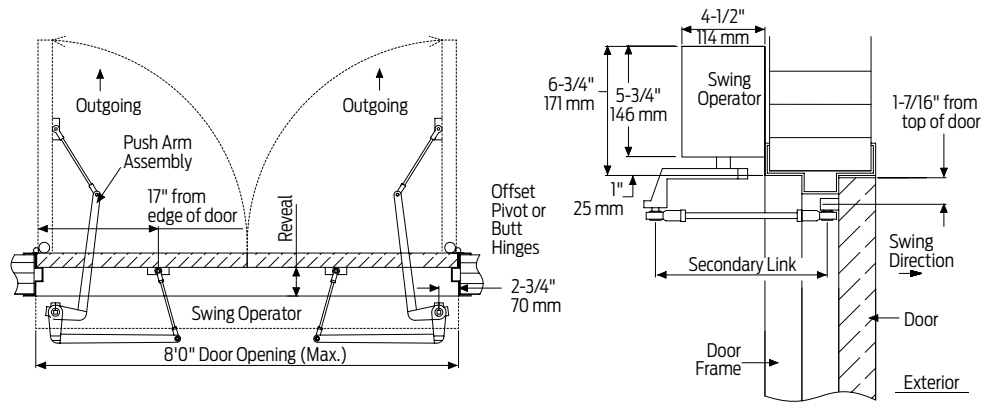
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



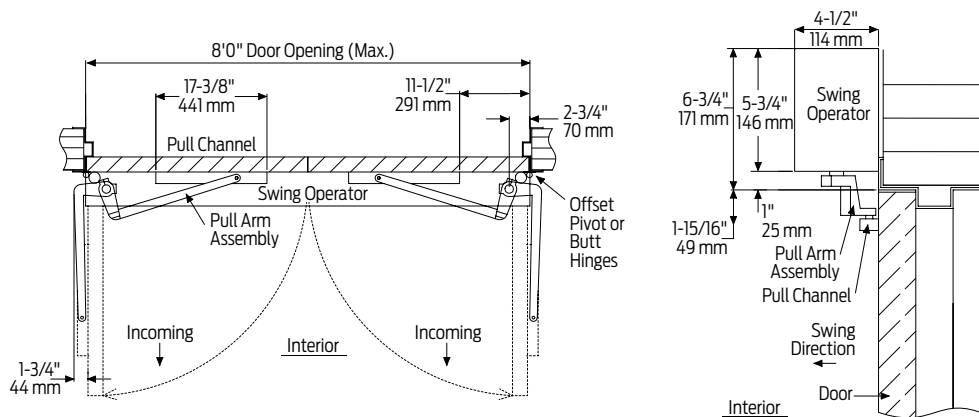
**9550  
Series  
Senior Swing**

Mounting details

Top Jamb Simultaneous  
Pair Mounting



**Offset pivot/butt hinge, center pivot, push**  
Consult factory for all balanced door installations.

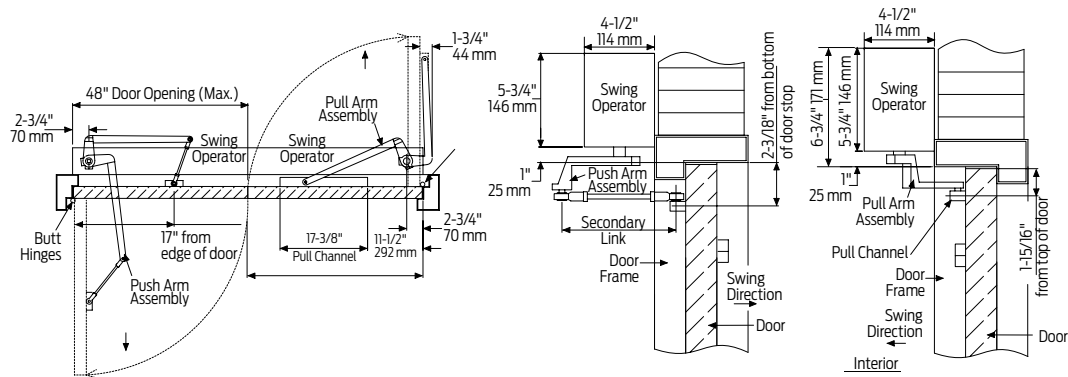


**Offset pivot/ butt hinge, center pivot, pull**  
*NOTE: Cannot be used with swing clear hinges, pocket pivots or balanced doors.*

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Reveal for push</b>	Should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM
<b>Reveal for pull</b>	Should not exceed 4" (102 mm)
<b>Reveal</b>	Double egress installations should not exceed 4" (102 mm)
<b>Head Frame</b>	<ul style="list-style-type: none"> <li>Minimum 1-3/4" (44 mm)</li> <li>Face frame 6-3/4" (171 mm) total operator clearance</li> </ul>
<b>Top Rail</b>	Minimum 2-3/4" (70 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>Variable by adjustments to the electronic control box</li> <li>Maximum hold open time adjustable up to approximately 32 seconds.</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

Notes:

- Push N' Go permits non-switch activation with a power boost providing additional latching force
- Electromechanical unit with microprocessor control
- Digital keypad for easy setup
- 72" header length is standard. Specify other length 52" - 98" (push), specify other length 60" - 98" (pull; double egress). Consult factory regarding this option
- Adjustable hold open period of 2 - 32 seconds in automatic or manual mode
- Actuators available separately, see pages 115-131

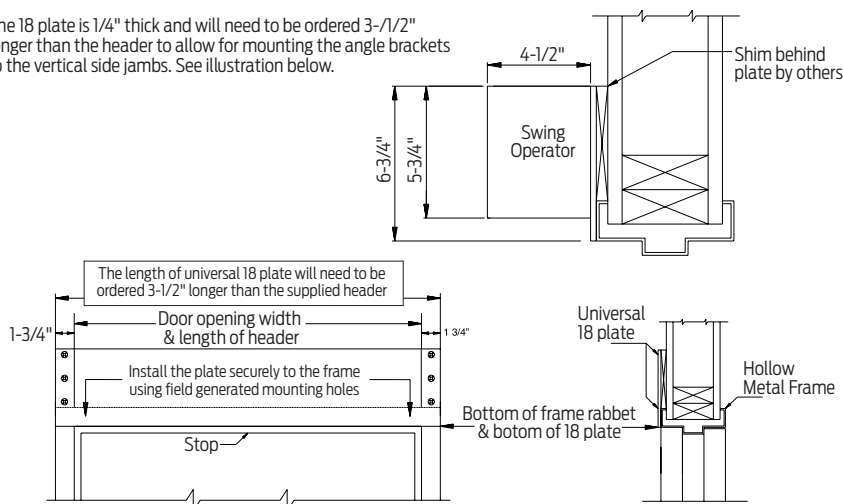


**RH double egress**

Double egress applications with safety sensors require LCN 9560 series.

NOTE: Cannot be used with swing clear hinges, pocket pivots or balanced door.

The 18 plate is 1/4" thick and will need to be ordered 3-1/2" longer than the header to allow for mounting the angle brackets to the vertical side jambs. See illustration below.



**Hollow metal frame Suggested Installation.**

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Reveal for push</b>	Should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM
<b>Reveal for pull</b>	Should not exceed 4" (102 mm)
<b>Reveal</b>	Double egress installations should not exceed 4" (102 mm)
<b>Head Frame</b>	<ul style="list-style-type: none"> <li>Minimum 1-3/4" (44 mm)</li> <li>Face frame 6-3/4" (171 mm) total operator clearance</li> </ul>
<b>Top Rail</b>	Minimum 2-3/4" (70 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>Variable by adjustments to the electronic control box</li> <li>Maximum hold open time adjustable up to approximately 32 seconds.</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

Notes:

- Push N' Go permits non-switch activation with a power boost providing additional latching force
- Electromechanical unit with microprocessor control
- Digital keypad for easy setup
- 72" header length is standard. Specify other length 52" - 98" (push), specify other length 60" - 98" (pull; double egress). Consult factory regarding this option
- Adjustable hold open period of 2 - 32 seconds in automatic or manual mode
- Actuators available separately, see pages 115-131

# 9550 Series Senior Swing

## Accessories

### Motor Gearbox



**9550-3454**  
Motor Gearbox

- Senior swing
- Handed
- Driving mechanism for operator
- Provides maximum 15 lbs opening force

### Mount Brackets



**9550-275**  
Mounting Bracket

- Motor gearbox mounting bracket for 2-3/4" offset pivot or butt hinge installations
- Front bracket



**9550-3018**  
Rear Mounting Bracket

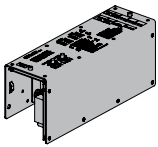
- Motor gearbox mounting bracket



**9550-334-1**  
Angled Bracket

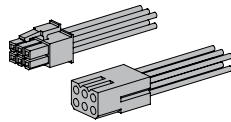
- Mounting bracket for surface applications (includes 2 mounting brackets)

### Control Box



**9550-3462**  
Control Box

- Electronic controlling device for Senior Swing



**9550-982**  
Companion Cable

- Cable that allows one control box to run two motor gear boxes
- For use with Senior Swing

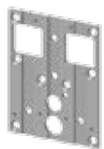
### Header



**9550-3572HL**  
Header

- Pair door, two operators
- Specify other length 52" to 98" (Push)
- Specify other length 60" to 98" (Pull; Double Egress)
- Standard

### End Caps



**9550-334**  
Header End Caps

- With openings for wiring



**9550-334-2**  
End Dress Plate

- Metal finish end cap

## Tracks



**9550-3038  
Track**

- Non-handed
- Standard



**9550-73  
Track End Cap**

- Black plastic end caps



**9550-3034  
Roller**

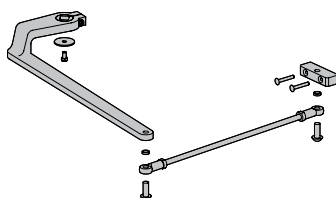
- Quiet low friction roller assembly

## Arms



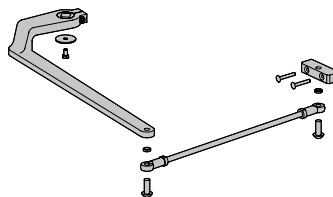
**9550-3077Plcm  
Standard Arm Assembly**

- Handed
- Includes 3077 regular arm assembly, 3038 track, and 3034 track roller



**9550-3077  
Regular Arm Assembly**

- Handed
- Includes 77 main arm assembly and 79 linkage assembly



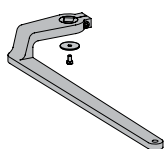
**9550-3077L  
Regular Long Arm Assembly**

- Handed
- Includes 77 main arm assembly and 79LR linkage assembly



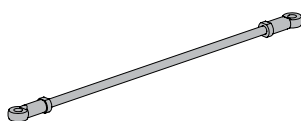
**9550-3077T  
Standard Arm**

- Handed
- Track roller not included



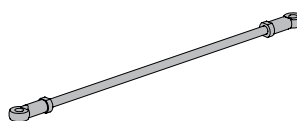
**9550-77  
Main Arm**

- Handed
- Attaches to motor gearbox



**9550-79  
Linkage Assembly**

- 15"
- Threaded rod attaches to door
- Extends from main arm



**9550-79LR  
Linkage Assembly**

- 32"
- Threaded long rod attaches to door
- Extends from main arm
- Used for reveal 10" to 20"

## Installation Assembly



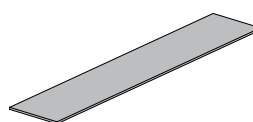
**9550-11A  
Spindle Plate**

- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 2-3/4" offset pivot or butt hinge installations



**9550-12  
Filler Plate**

- Blank
- Completes length of header box
- Specify length



**9550-18  
Mounting Plate**

- Optional mounting plate for standard hollow metal door frames
- Specify length 68-1/2" to 101-1/2" maximum when using angle brackets
- Specify length 65" to 98" maximum when using dress plates.

*NOTE: The length of a universal 18 plate will need to be ordered 3-1/2" longer than the supplied header when using angle brackets.*

# 9550 Series Senior Swing

## Ordering Information

### 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

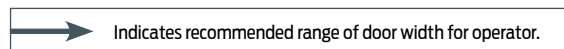
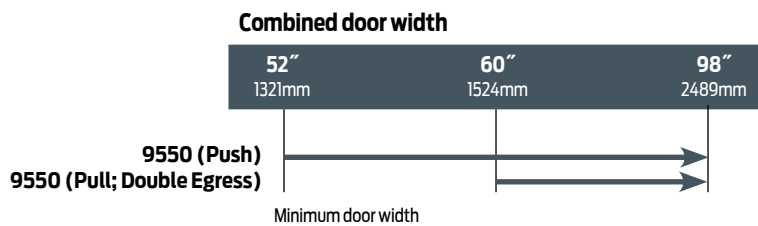
#### Mounting plate

- 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.*

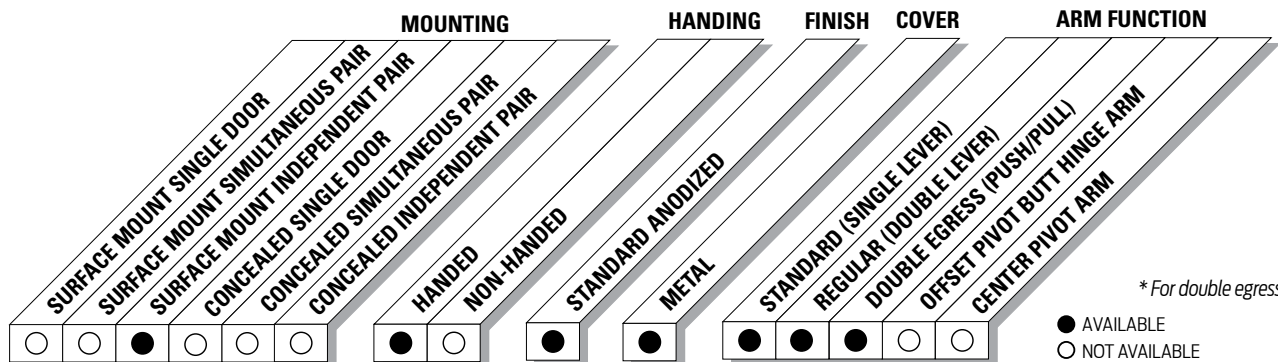


The 9560 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

<b>Certifications</b>	Grade 1 - ANSI A156.19, UL325/228, UL1998, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Cover</b>	Metal, Standard
<b>Handing</b>	Handed	<b>Fasteners</b>	Machine screw pack
<b>Warranty</b>	2 years	<b>Mounting</b>	Independent pair, surface, pull, push, double egress
		<b>Arms</b>	Single lever (push side), Double lever (Pull Side), Double egress (Push/Pull)
		<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Anodized Aluminum</li> <li>■ Anodized Dark Bronze</li> </ul>

**Special  
Templates**

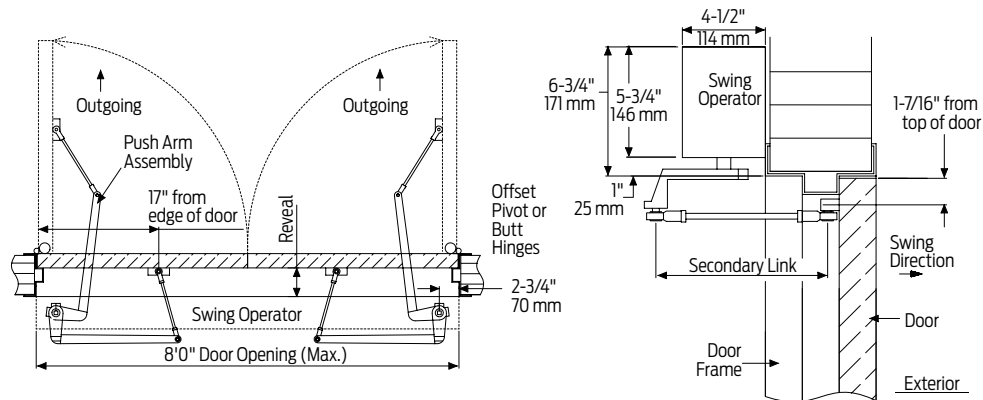
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



# 9560 Series Senior Swing

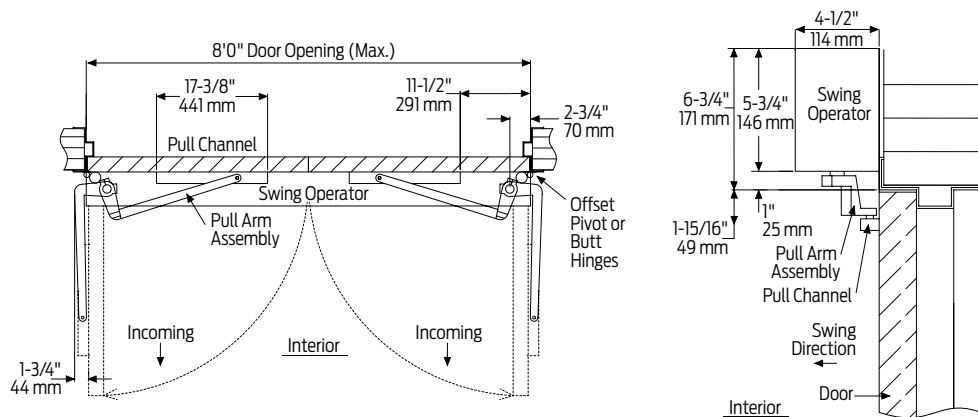
## Mounting details

Top Jamb Independent Pair Mounting



### Offset pivot/butt hinge, center pivot, push

Consult factory for all balanced door installations.



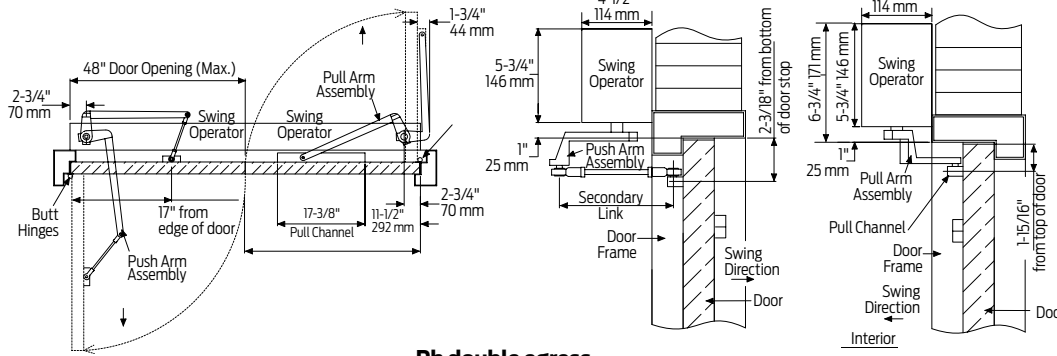
### Offset pivot/butt hinge, center pivot, pull

NOTE: Cannot be used with swing clear hinges, pocket pivots or balanced doors.

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Reveal for push</b>	Should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM
<b>Reveal for pull</b>	Should not exceed 4" (102 mm)
<b>Reveal</b>	Double egress installations should not exceed 4" (102 mm)
<b>Head Frame</b>	<ul style="list-style-type: none"> <li>Minimum 1-3/4" (44 mm)</li> <li>Face frame 6-3/4" (171 mm) total operator clearance</li> </ul>
<b>Top Rail</b>	Minimum 2-3/4" (70 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>Variable by adjustments to the electronic control box</li> <li>Maximum hold open time adjustable up to approximately 32 seconds.</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

**Notes:**

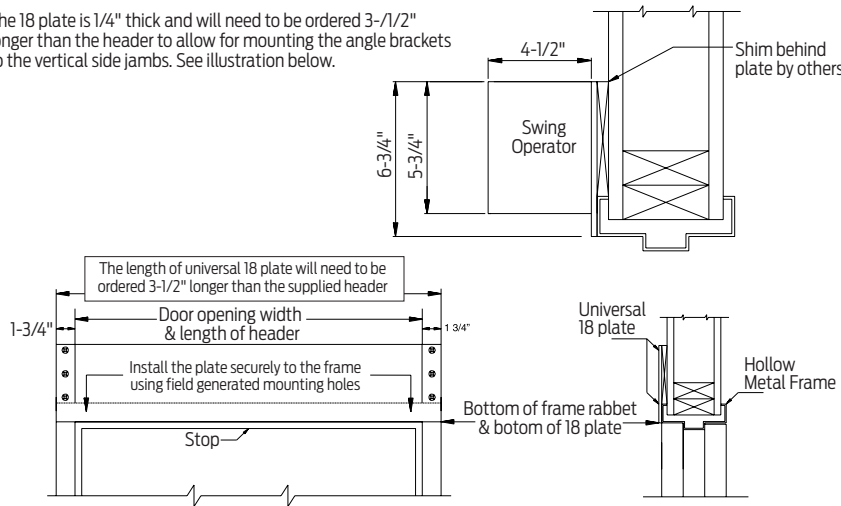
- Push N' Go permits non-switch activation with a power boost providing additional latching force
- Electromechanical unit with microprocessor control
- Digital keypad for easy setup
- 72" header length is standard. Specify 65" - 98" max
- Pull, push, or double egress applications available
- Adjustable hold open period of 2 - 32 seconds in automatic or manual mode
- Actuators available separately, see pages 115-131



**Rh double egress**

*NOTE: Cannot be used with swing clear hinges, pocket pivots or balanced doors.*

The 18 plate is 1/4" thick and will need to be ordered 3-1/2" longer than the header to allow for mounting the angle brackets to the vertical side jambs. See illustration below.



**Hollow metal frame**  
*Suggested Installation.*

<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Reveal for push</b>	Should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM
<b>Reveal for pull</b>	Should not exceed 4" (102 mm)
<b>Reveal</b>	Double egress installations should not exceed 4" (102 mm)
<b>Head Frame</b>	<ul style="list-style-type: none"> <li>Minimum 1-3/4" (44 mm)</li> <li>Face frame 6-3/4" (171 mm) total operator clearance</li> </ul>
<b>Top Rail</b>	Minimum 2-3/4" (70 mm)
<b>Opening and Closing Time</b>	<ul style="list-style-type: none"> <li>Variable by adjustments to the electronic control box</li> <li>Maximum hold open time adjustable up to approximately 32 seconds.</li> </ul>
<b>System Diagram</b>	See "AUTOMATIC OPERATORS" section page 51 for typical system wiring and page 53 for electrical data
<b>Maximum Opening</b>	Template allows 90 degree power opening and 90 degree manual opening

*Notes:*

- Push N' Go permits non-switch activation with a power boost providing additional latching force
- Electromechanical unit with microprocessor control
- Digital keypad for easy setup
- 72" header length is standard. Specify 65" - 98" max
- Pull, push, or double egress applications available
- Adjustable hold open period of 2 - 32 seconds in automatic or manual mode
- Actuators available separately, see pages 115-131

# 9560 Series Senior Swing

## Accessories

### Motor Gearbox



**9560-3454**  
Motor Gearbox

- Senior swing
- Handed
- Driving mechanism for operator
- Provides maximum 15 lbs opening force

### Mounting Brackets



**9560-275**  
Mounting Bracket

- Motor gearbox mounting bracket for 2-3/4" center pivot installations
- Front bracket



**9560-3018**  
Rear Mounting Bracket

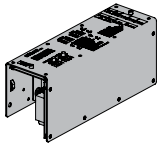
- Motor gearbox mounting bracket



**9560-334-1**  
Angled Bracket

- Mounting bracket for surface applications
- Includes 2 mounting brackets

### Control Box



**9560-3462**  
Control Box

- Electronic controlling device for Senior Swing

### Header



**9560-3572HL**  
Header

- Pair door, two operators
- Specify length 65" to 98" maximum
- Standard

### End Caps



**9560-334**  
Header End Caps

- With openings for wiring



**9560-334-2**  
End Dress Plate

- Metal finish end cap

**Tracks**



**9560-3038  
Track**

- Non-handed
- Standard



**9560-73  
Track End Cap**

- Black plastic end caps



**9560-3034  
Roller**

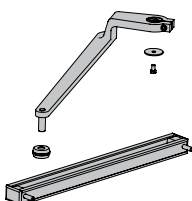
- Quiet low friction roller assembly

**Arms**



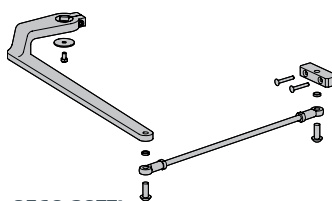
**9560-3077T  
Standard Arm**

- Handed
- Track roller not included



**9560-3077  
Regular Arm Assembly**

- Handed
- Includes 77 main arm assembly and 79 linkage assembly



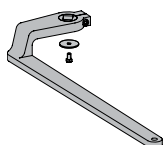
**9560-3077L  
Regular Long Arm Assembly**

- Handed
- Includes 77 main arm assembly and 79LR linkage assembly



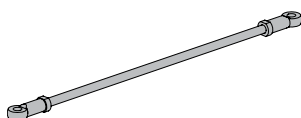
**9560-3077PLCM  
Standard Arm Assembly**

- Handed
- Includes 3077 regular arm assembly, 3038 track, and 3034 track roller



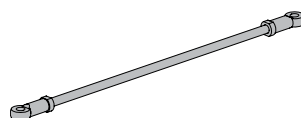
**9560-77  
Main Arm**

- Handed
- Attaches to motor gearbox



**9560-79  
Linkage Assembly**

- 15"
- Threaded rod attaches to door
- Extends from main arm
- Used for reveal 1" to 10"



**9560-79LR  
Linkage Assembly**

- 32"
- Threaded long rod attaches to door
- Extends from main arm.
- Used for reveal 10" to 20"

**Installation Accessories**



**9560-11A  
Spindle Plate**

- Hides bottom of motor gearbox
- Completes header box
- Cutout allows for motor gearbox shaft
- For 2-3/4" offset pivot or butt hinge installations



**9560-12  
Filler Plate**

- Blank
- Completes length of header box
- Specify length



**9560-18  
Mounting Plate**

- Optional mounting plate for standard hollow metal door frames
- Specify length 68-1/2" to 101-1/2" maximum when using angle brackets
- Specify length 65" to 98" maximum when using dress plates.

*NOTE: The length of a universal 18 plate will need to be ordered 3-1/2" longer than the supplied header when using angle brackets.*

# 9560 Series Senior Swing

## Ordering Information

### How-to-order 9560 Series

#### Specify hand

- RH
- LH

#### Specify header/length

- HL\_\_ (Specify length 65" to 98") regular or long arm

#### Specify finish

- Standard Anodized Finish \_\_\_\_\_  
Aluminum or Dark Bronze

#### Operator will be shipped with:

- Standard motor gearbox (SF) (2 ea)
  - Standard control box (SC)
  - Metal cover (at specified length 72" standard)
  - Regular arm (2 ea)
  - 2-3/4" pivot point
  - Machine screw pack
- unless options listed below are selected.

### Operator options

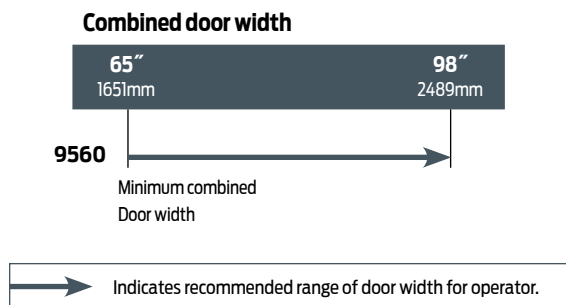
#### Mounting plate

- Plate, \_\_ (Specify Length 65" to 101-1/2")

#### Arm

- Standard Arm (2 ea) w/Standard Track (2 ea)
- Double Egress - Includes Standard Arm w/Track (1 ea) & Regular Arm (1 ea)
- Long Arm (3077L)

### Table of sizes



*NOTE: For all Senior Swing Series  
Independent Pair – Width per leaf 30" minimum to 48" maximum.*

**The actuators and accessories on the following pages are to be used with LCN automatic operators. When using actuators supplied by others, such as card readers, consult the factory.**

The desired function, traffic patterns and physical design of the opening will determine the type of actuators used. Generally, for twoway traffic, an actuator is required on both the interior and exterior side of the door. Each actuator is packaged with a decal to be applied to the controlled door. Scanners operate on 12V or 24V AC/DC and may be powered by the LCN electrohydraulic/electromechanical operators. The 7900 series control box requires separate power supply for scanners. Actuators provide normally open (N.O.) dry contacts.

### Automatic Operator Actuators & Accessories



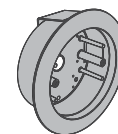
**8310-856**  
Wall Mounted Actuator

- Hardwired low voltage actuator with round, stainless steel touch plate in 4-1/2" (114mm) diameter
- Engraved blue filled handicap symbol conforms to most accessibility codes
- Designed to mount in a flush or surface mount box (sold separately) in/on a vertical surface near the controlled door
- Optional mounting in single gang electrical box (by others)
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard



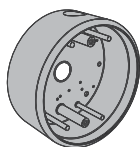
**8310-856T**  
Wall Mounted Actuator

- Same as the 8310-856, with the added engraving of "Push to Open"



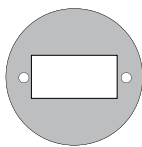
**8310-868F**  
Flush Mount Box

- Rugged Plastic Box, 4-1/2" Round
- Optional accessory - can be used w/any 4-1/2" round actuator



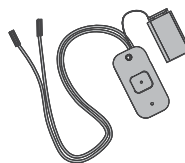
**8310-868S**  
Surface Mount Box

- Rugged Plastic Box, 4-1/2" Round
- Optional accessory - can be used w/any 4-1/2" round actuator



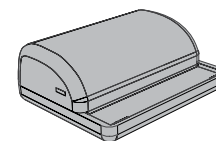
**8310-800**  
Weather/Trim Ring

- Weather/Trim Ring, 4-1/2" Round
- Optional accessory - must be used w/any 4-1/2" round plastic mounting box



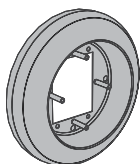
**8310-844**  
Transmitter

- Transmitter, Wireless, 1 Channel, 9v battery included
- Use to convert standard wall mount actuator to wireless
- Requires 8310-865 Receiver



**8310-865**  
Receiver

- Receiver, Wireless, 1 Channel, w/ Sequencing Feature
- Used in conjunction w/ Wireless Actuators & Transmitter(s)



**8310-874**  
Escutcheon

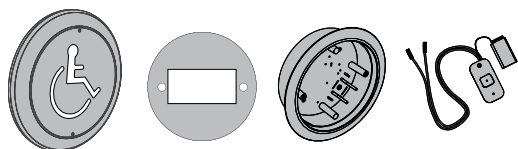
- Tapered stainless steel escutcheon covers the gap between the wall and the back of the wall plate actuators when mounted in electrical boxes (by others) to minimize cart damage or vandalism
- Optional accessory - can be used w/any 4-1/2" round actuator
- Not to be used with wireless function

# 8310 Series

Auto Operator  
Actuators &  
Accessories

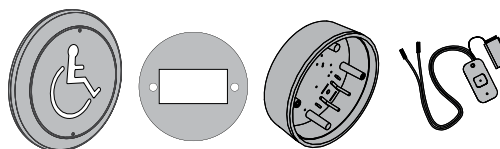
4-1/2" Surface and Flush  
Mounts

## Automatic Operator Actuators & Accessories



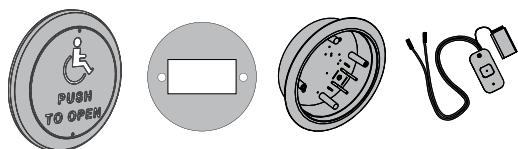
**8310-3856WF**  
Flush Mount Kit

- Actuator, 4-1/2" Round, Logo, Wireless
- Includes 8310-856 Actuator, 8310-844 Transmitter, 8310-868F Flush Box, 8310-800 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



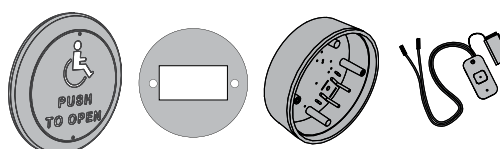
**8310-3856WS**  
Surface Mount Kit

- Actuator, 4-1/2" Round, Logo, Wireless
- Includes 8310-856 Actuator, 8310-844 Transmitter, 8310-868S Surface Box, 8310-800 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



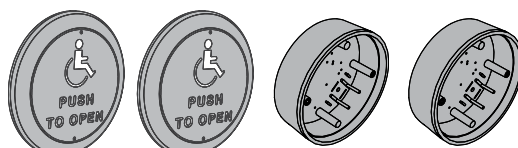
**8310-3856TWF**  
Flush Mount Kit

- Actuator, 4-1/2" Round, Logo, Text, Wireless,
- Includes 8310-856T Actuator, 8310-844 Transmitter, 8310-868F Flush Box, 8310-800 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



**8310-3856TWS**  
Surface Mount Kit

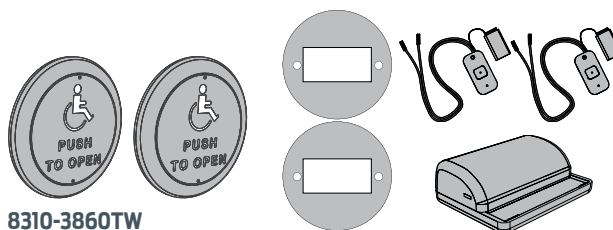
- Actuator, 4-1/2" Round, Logo, Text, Wireless,
- Includes 8310-856T Actuator, 8310-844 Transmitter, 8310-868S Surface Box, 8310-800 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



**8310-3860T**  
Surface Mount Kit

- Actuator Package, 4-1/2" Round
- Includes 8310-856T (2) Wall Mount Actuator, 8310-868S Surface Mount Box.

NOTE: Weather/Trim Rings are sold separately



**8310-3860TW**  
Surface Mount Kit

- Actuator Package, 4-1/2" Round, Wireless
- Includes 8310-856T (2) Wall Mount Actuator, 8310-868S (2) Surface Mount Box, 8310-800 (2) Weather/Trim Ring, 8310-844 (2) Transmitter, 8310-865 Receiver

### Automatic Operator Actuators & Accessories



**8310-852**  
Wall Mounted Actuator

- Hardwired low voltage actuator with round, stainless steel touch plate in 6" (152mm) diameter
- Engraved blue filled handicap symbol conforms to most accessibility codes
- Designed to mount in a flush or surface mount box (sold separately) in/on a vertical surface near the controlled door
- Optional mounting in single gang electrical box (by others) or double gang box (4" x 4" by others)
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard.



**8310-852T**  
Wall Mounted Actuator

- Same as the 8310-852, with the added engraving of "Push to Open"



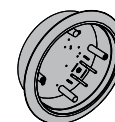
**8310-852WP**  
Wall Mounted Actuator

- Wireless, low profile, low voltage actuator with round, stainless steel touch plate in 6" (152mm) diameter
- Engraved blue filled handicap symbol conforms to most accessibility codes
- Surface mount box includes integral transmitter w/ battery and actuator switch
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard
- Requires 8310-865 Receiver



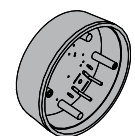
**8310-852TWP**  
Wall Mounted Actuator

- Same as the 8310-852WP, with the added engraving of "Push to Open"



**8310-869F**  
Flush Mount Box

- Rugged Plastic Box, 6" Round
- Optional accessory - can be used w/ any 6" round actuator



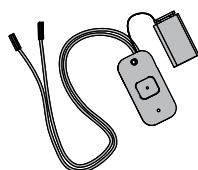
**8310-869S**  
Surface Mount Box

- Rugged Plastic Box, 6" Round
- Optional accessory - can be used w/ any 6" round actuator



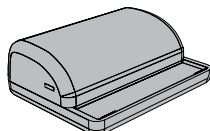
**8310-802**  
Weather/Trim Ring

- Plastic Weather/Trim Ring, 6" Round
- Optional accessory - can be used w/ any 6" round plastic mounting box.



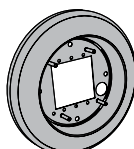
**8310-8/444**  
Transmitter

- Transmitter, Wireless, 1 Channel, 9v battery included
- Use to convert standard wall mount actuator to wireless
- Requires 8310-865 Receiver



**8310-865**  
Receiver

- Receiver, Wireless, 1 Channel, w/ Sequencing Feature
- Used in conjunction w/ Wireless Actuators & Transmitter(s)



**8310-876**  
Escutcheon

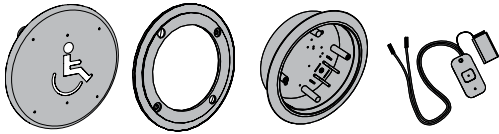
- Tapered stainless steel escutcheon covers the gap between the wall and the back of the wall plate actuators when mounted in electrical boxes (by others) to minimize cart damage or vandalism
- Optional accessory - Can be used w/ any 6" round actuator
- Not to be used with wireless function

## 8310 Series

Auto Operator Actuators & Accessories

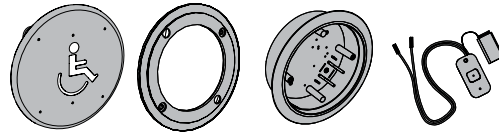
6" Surface and Flush Mounts

### Automatic Operator Actuators & Accessories



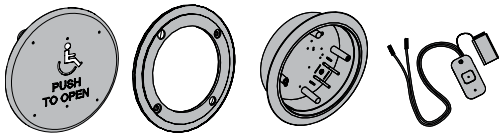
#### 8310-3852WF Flush Mount Kit

- 6" Round, Logo, Wireless
- Includes 8310-852 Actuator, 8310-844 Transmitter, 8310-869F Flush Box, 8310-802 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



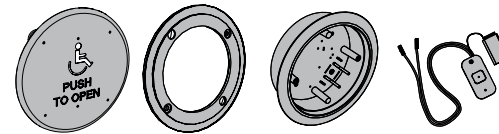
#### 8310-3852WS Surface Mount Kit

- 6" Round, Logo, Wireless,
- Includes 8310-852 Actuator, 8310-844 Transmitter, 8310-869S Surface Box, 8310-802 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



#### 8310-3852TWF Flush Mount Kit

- 6" Round, Logo, Text, Wireless,
- Includes 8310-852T Actuator, 8310-844 Transmitter, 8310-869F Flush Box, 8310-802 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



#### 8310-3852TWS Surface Mount Kit

- 6" Round, Logo, Text, Wireless,
- Includes 8310-852T Actuator, 8310-844 Transmitter, 8310-869S Surface Box, 8310-802 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)

NOTE: LCN recommends for all jamb mount actuators be used on an interior installation only.

### Automatic Operator Actuators & Accessories



**8310-818**  
Jamb Mounted Actuator

- Hardwired low voltage actuator with rectangular stainless steel touch plate.
- 1-1/2" (38mm) wide by 4-3/4" (121mm)
- Engraved blue filled handicap symbol conforms to most accessibility codes
- Designed to mount in a frame cutout (template provided) projecting approximately 1/2" (12mm) from the frame
- Optional mounting in surface or flush mount box (sold separately)
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard



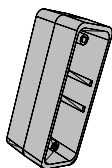
**8310-818T**  
Jamb Mounted Actuator

- Same as the 8310-818, with the added engraving of "Push to Open"



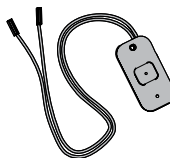
**8310-819F**  
Flush Mount Box

- Rugged Plastic Jamb Box
- 1-1/2" x 4-3/4" rectangle, optional accessory - can be used w/ any 1-1/2" x 4-3/4" jamb mount actuator



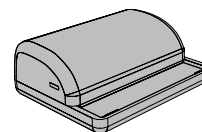
**8310-819S**  
Surface Mount Box

- Rugged Plastic Jamb Box
- 1-1/2" x 4-3/4", rectangle
- Optional accessory - can be used w/ any 1-1/2" x 4-3/4" jamb mount plastic mounting box



**8310-844J**  
Transmitter

- Wireless, 1 Channel, Jamb Mount, 3v battery included
- Used to convert standard jamb mount actuator to wireless when used w/ 819F or 819S boxes. Requires 8310-865 Receiver (interior use only)



**8310-865**  
Receiver

- Wireless, 1 Channel, w/ Sequencing Feature
- Used in conjunction w/ Wireless Actuators & Transmitter(s)

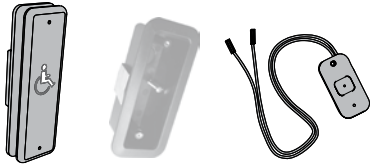
# 8310 Series

Auto Operator Actuators & Accessories

1-1/2" x 4-3/4" Surface and Flush Mounts

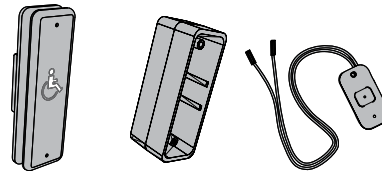
NOTE: LCN recommends for all jamb mount actuators be used on an interior installation only.

## Automatic Operator Actuators & Accessories



### 8310-3818WF Flush Mount Kit

- Actuator, 1-1/2" x 4-3/4" Rectangle, Logo, Wireless
- Includes 8310-818 Actuator, 8310-844J Transmitter, 8310-819F Flush Box
- Requires 8310-865 Receiver (not part of kit)



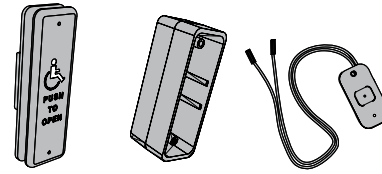
### 8310-3818WS Surface Mount Kit

- Actuator, 1-1/2" x 4-3/4" Rectangle, Logo, Wireless
- Includes 8310-818 Actuator, 8310-844J Transmitter, 8310-819S Surface Box
- Requires 8310-865 Receiver (not part of kit)



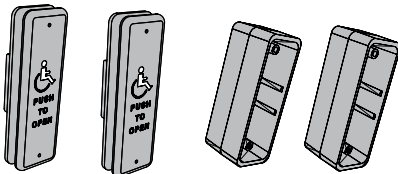
### 8310-3818TWF Flush Mount Kit

- Actuator, 1-1/2" x 4-3/4" Rectangle, Logo, Wireless
- Includes 8310-818T Actuator, 8310-844J Transmitter, 8310-819F Flush Box
- Requires 8310-865 Receiver (not part of kit)



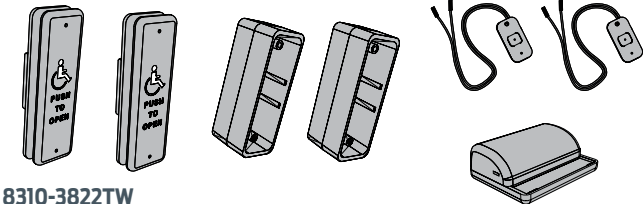
### 8310-3818TWS Surface Mount Kit

- Actuator, 1-1/2" x 4-3/4" Rectangle, Logo, Wireless
- Includes 8310-818T Actuator, 8310-844J Transmitter, 8310-819S Surface Box
- Requires 8310-865 Receiver (not part of kit)



### 8310-3822T Surface Mount Kit

- Actuator Package, 1-1/2" x 4-3/4", Jamb Mount
- Includes 8310-818T (2) Jamb Mount Actuator, 8310-819S (2)
- Surface Mount Box



### 8310-3822TW Surface Mount Kit

- Actuator Package, 1-1/2" x 4-3/4", Wireless, Jamb Mount
- Includes 8310-818T (2) Jamb Mount Actuator, 8310-819S (2)
- Surface Mount Box, 8310-844J (2) Jamb Mount Transmitter, 8310-865 Receiver

### Automatic Operator Actuators & Accessories



**8310-853**  
Wall Mounted Actuator

- Hardwired low voltage actuator with stainless steel touch plate in 4-3/4" (121mm) square
- Engraved blue filled handicap symbol conforms to most accessibility codes
- Designed to mount in a flush or surface mount box (sold separately) in/on a vertical surface near the controlled door
- Optional mounting in single gang electrical box (by others) or double gang box (4" x 4" by others) or on an 8310-866 bollard post
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard



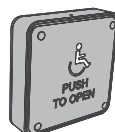
**8310-853T**  
Wall Mounted Actuator

- Same as the 8310-853, with the added engraving of "Push to Open"



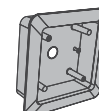
**8310-853WP**  
Surface Mounted Actuator

- Wireless, low profile, low voltage actuator with square, stainless steel touch plate in 4-3/4" (121mm) square
- Engraved blue filled handicap symbol conforms to most accessibility codes
- Surface mount box includes integral transmitter w/ battery and actuator switch
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard
- Requires 8310-865 Receiver



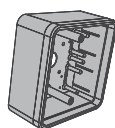
**8310-853TWP**  
Surface Mounted Actuator

- Same as the 8310-853WP, with the added engraving of "Push to Open"



**8310-867F**  
Flush Mount Box

- Rugged Plastic Box
- 4-3/4" Square
- Optional accessory - can be used w/ any 4-3/4" square actuator



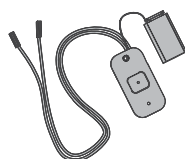
**8310-867S**  
Surface Mount Box

- Rugged Plastic Box, 4-3/4" Square
- Optional accessory - can be used w/ any 4-3/4" square actuator



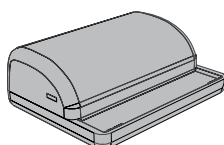
**8310-801**  
Weather/Trim Ring

- Plastic Weather Ring, 4-3/4" Square
- Optional accessory - can be used w/ any 4-3/4" square plastic mounting box



**8310-844**  
Transmitter

- Wireless, 1 Channel, 9v battery included
- Use to convert standard wall mount actuator to wireless
- Requires 8310-865 Receiver



**8310-865**  
Receiver

- Wireless, 1 Channel, w/ Sequencing Feature
- Used in conjunction w/ Wireless Actuators & Transmitter(s)



**8310-813**  
Touchless Wall Mounted Actuator

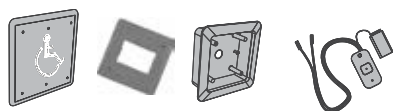
- Hardwired low voltage actuator with plastic plate in 4-3/4" (121mm) square
- Optional mounting in single gang electrical box (by others) or double gang box (4" x 4" by others)

# 8310 Series

Auto Operator Actuators & Accessories

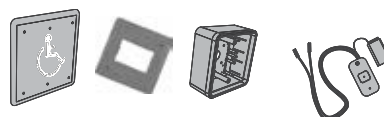
4-3/4" Square Surface and Flush Mounts

## Automatic Operator Actuators & Accessories



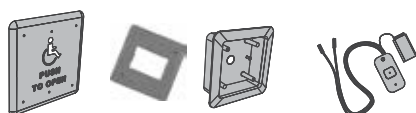
### 8310-3853WF Flush Mount Kit

- Actuator, 4-3/4" Square, Logo, Wireless
- Includes 8310-853, 8310-844 Transmitter, 8310-867F Flush Box, 8310-801 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



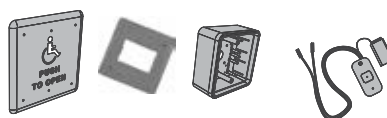
### 8310-3853WS Surface Mount Kit

- Actuator, 4-3/4" Square, Logo, Wireless
- Includes 8310-853, 8310-844 Transmitter, 8310-867S Surface Box, 8310-801 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



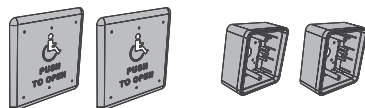
### 8310-3853TWF Flush Mount Kit

- Actuator, 4-3/4" Square, Logo, Text, Wireless
- Includes 8310-853T, 8310-844 Transmitter, 8310-867F Flush Box, 8310-801 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



### 8310-3853TWS Surface Mount Kit

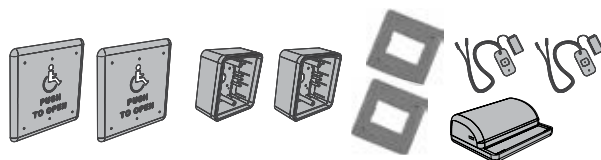
- Actuator, 4-3/4" Square, Logo, Text, Wireless
- Includes 8310-853T, 8310-844 Transmitter, 8310-867S Surface Box, 8310-801 Weather/Trim Ring
- Requires 8310-865 Receiver (not part of kit)



### 8310-3857T Surface Mount Kit

- Actuator Package, 4-3/4" Square
- Includes 8310-853T (2) Wall Mount Actuator, 8310-867S (2)
- Surface Mount Box

NOTE: Weather/Trim Rings are sold separately



### 8310-3857TW Surface Mount Kit

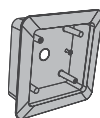
- Actuator Package, 4-3/4" Square
- Includes 8310-853T (2) Wall Mount Actuator, 8310-867S (2) Surface Mount Box, 8310-801 (2) Weather/Trim Ring, 8310-844 (2) Transmitter, 8310-865 Receiver

### Automatic Operator Actuators & Accessories



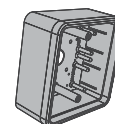
#### 8310-855 Dual Wall Mounted Actuator

- Hardwired low voltage actuator with dual rectangle, stainless steel touch plate in 4-3/4" (121mm) square
- Engraved blue filled handicap symbol w/ text, conforms to most accessibility codes
- Designed to mount in a flush or surface mount box (sold separately) in/on a vertical surface near the controlled door
- Optional mounting in double gang box (4" x 4" by others) or on an 8310-866 bollard post
- Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard



#### 8310-867F Flush Mounted Actuator

- Rugged Plastic Box, 4-3/4" Square
- Optional accessory - can be used w/ any 4-3/4" square actuator



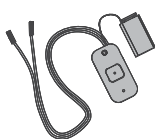
#### 8310-867S Surface Mount Box

- Rugged Plastic Box, 4-3/4" Square
- Optional accessory - can be used w/ any 4-3/4" square actuator



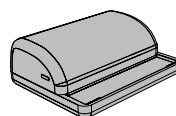
#### 8310-801 Weather/Trim Ring

- Plastic Weather Ring, 4-3/4" Square
- Optional accessory - can be used w/ any 4-3/4" square plastic mounting box



#### 8310-844 Transmitter

- Transmitter, Wireless, 1 Channel, 9v battery included
- Use to convert standard wall mount actuator to wireless
- Requires 8310-865 Receiver



#### 8310-865 Receiver

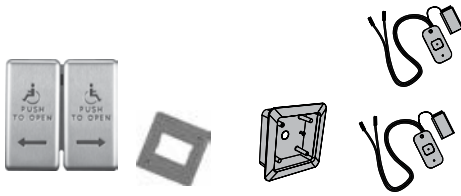
- Receiver, Wireless, 1 Channel, w/ Sequencing Feature
- Used in conjunction w/ Wireless Actuators & Transmitter(s)

## 8310 Series

Auto Operator Actuators & Accessories

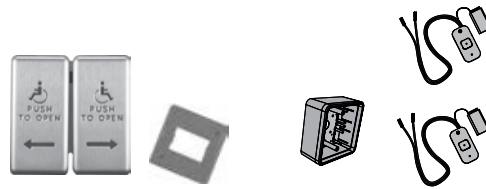
4-3/4" Dual Square Surface and Flush Mounts

### Automatic Operator Actuators & Accessories



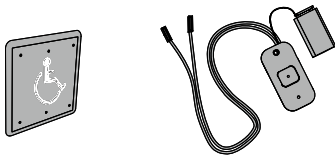
#### 8310-3855WF Flush Mount Kit

- Actuator, 4-3/4" Square, Logo, Text, Dual Vestibule, Wireless
- Includes 8310-855 Actuator, 8310-844 Transmitter (2), 8310-867F Flush Box, 8310-801 Weather/Trim Ring
- Requires 8310-865 Receiver (2) (not part of kit)



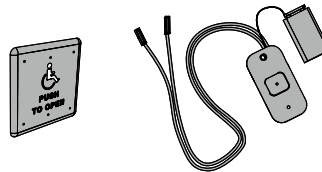
#### 8310-3855WS Surface Mount Kit

- Actuator, 4-3/4" Square, Logo, Text, Dual Vestibule, Wireless
- Includes 8310-855 Actuator, 8310-844 Transmitter (2), 8310-867S Surface Box, 8310-801 Weather/Trim Ring
- Requires 8310-865 Receiver (2) (not part of kit)



#### 8310-3853WB Actuator, Bollard Mount Kit

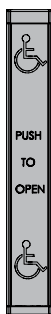
- 4-3/4" Square w/ Logo, Wireless actuator
- Use w/ 8310-866 Bollard (not included) - Includes 8310-853 actuator, 8310-844 transmitter
- Requires 8310-865 Receiver (not part of kit)



#### 8310-3853TWB Actuator, Bollard Mount Kit

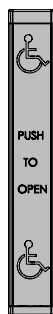
- 4-3/4" Square w/ Logo, Text, Wireless actuator
- Use w/8310-866 Bollard (not included) - Includes 8310-853T actuator, 8310-844 Transmitter
- Requires 8310-865 Receiver (not part of kit)

#### Automatic Operator Actuators & Accessories



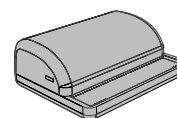
**8310-836T**  
Full Length Actuator (FLA)

- Hardwired low voltage actuator with stainless steel touch plate with 36" x 6" activation surface
- Blue handicap symbol conforms with most accessibility codes
- Added "PUSH TO OPEN" lettering for enhanced identification
- Designed to meet California building codes and increase accessibility for wheelchair bound entrants
- Can easily be mounted to any flat surface or a bollard post



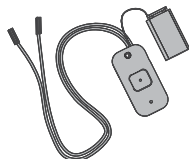
**8310-836TW**  
Flush Length Actuator (FLA)

- Same as the 8310-836T with a built in wireless transmitter and 3v battery
- Use in conjunction with 8310-865 Receiver (not included)



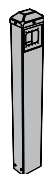
**8310-865**  
Receiver

- Wireless, 1 Channel, w/Sequencing Feature
- Used in conjunction w/ Wireless Actuators & Transmitter(s)



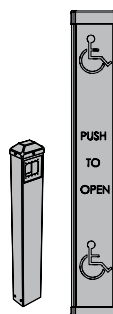
**8310-844**  
Transmitter

- Wireless, 1 Channel, 9v Battery included.
- Used to convert standard actuators to wireless
- Requires 8310-865 Receiver
- Recommended for exterior application with 8310-836T
- Used with the 866FLA bollard post



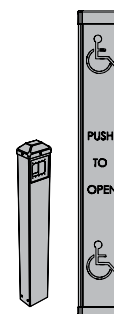
**8310-866FLA**  
FLA Bollard Post

- A powder coated steel 42" x 4" x 6": Bollard Post, mounting base pre prepped for the 8310-836T
- Includes 8310-866 CAP, 2 mounting screws & spacer for installation



**8310-3836T**  
FLA Bollard Mount Kit

- 36" x 6" Actuator with 8310-866FLA Bollard for wired applications



**8310-3836TW**  
FLA Bollard Mount Kit

- 36" x 6" Actuator with 8310-866FLA Bollard and 8310-844 wireless Transmitter
- Transmitter requires 8310-865 Receiver (not included)

# 8310 Series

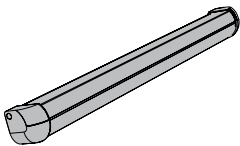
Auto Operator Actuators & Accessories

Sensors

**The sensors and accessories on the following pages are to be used only with LCN automatic operators. When using sensors supplied by others, consult the factory.**

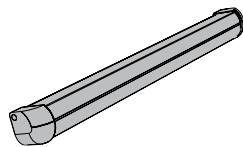
The desired function, traffic patterns and physical design of the opening will determine the type of sensors used.

## Automatic Operator Sensors & Accessories



**8310-804-1**  
Door Mount Safety Sensor

- Contains one active sensor module to detect obstruction(s) on leading edge of door



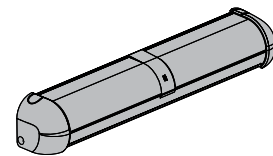
**8310-804-2**  
Door Mount Safety Sensor

- Contains two active sensor modules to detect obstruction(s) on full face of door



**8310-854**  
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



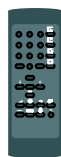
**8310-877**  
Header Mount Safety Sensor

- 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

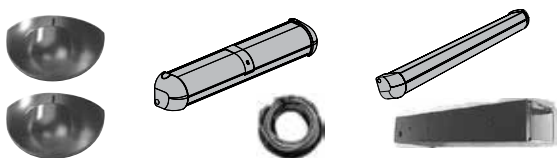
- Comes with 8310-877 Header Mount Safety Sensor



**8310-847**  
Door Mount Harness

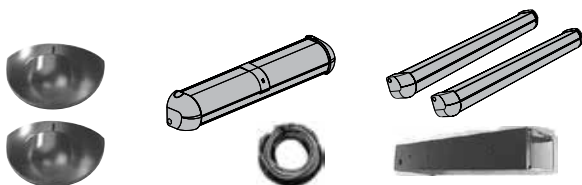
- Used with 8310-804-1 or 8310-804-2 Door Mount Safety Sensor, must order separately.
- Used with Senior Swing only, must order separately

## 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

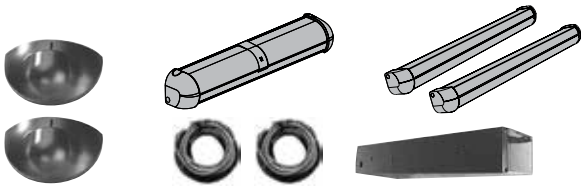
- Activation/Safety Sensor Package, Low Energy Convenience
- Single Door, Includes 8310-804-1 Door Mount Safety
- Sensor (approach side), 8310-805C Door Position Switch (Concealed), 8310-845 Programmable Relay Module (Used with Senior Swing only)

# 8310 Series

Auto Operator Actuators & Accessories

Packages

## Automatic Operator Sensors & Accessories

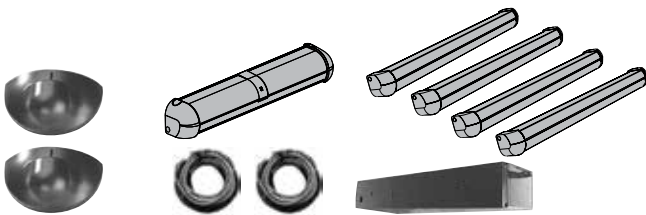


### 8310-3882L

#### 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

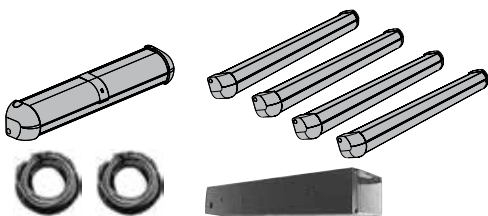


### 8310-3882

#### 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

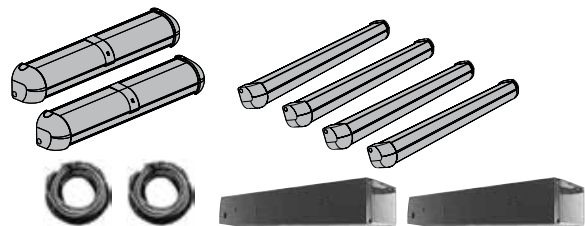


### 8310-3891

#### 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



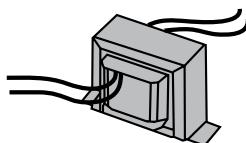
**8310-805**  
Door Position Switch

- 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



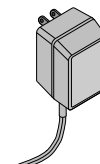
**8310-805C**  
Door Position Switch

- 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



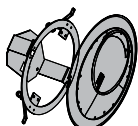
**8310-824**  
Transformer, 24v,

- Hardwired
- Optional accessory - Used to remotely power any 24v sensor/ receiver



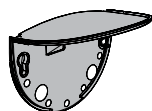
**8310-824P**  
Transformer

- 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



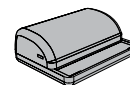
**8310-854ERA**  
Protective Cover

- 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  
Actuators &  
Accessories

## Automatic Operator Sensors & Accessories



**8310-861**  
Transmitter

- Wireless
- 1 Channel, Handheld, 3v.  
Requires 8310-865 Receiver



**8310-862**  
Transmitter

- Wireless
- 2 Channel, Handheld, 3v.  
Requires 8310-865 Receiver



**8310-863**  
Transmitter

- Wireless
- 3 Channel, Handheld, 3v.  
Requires 8310-865 Receiver



**8310-864**  
Transmitter

- Wireless
- 4 Channel, Handheld, 3v.  
Requires 8310-865 Receiver.



**8310-866**  
Bollard Post

- A powder coated steel  
42" x 4" x 6" Bollard Post,  
Mounting Base and 8310-866CAP
- Actuator cut out accepts  
8310-3853WB or 8310-3853TWB  
wireless actuators 4-3/4" square  
hard wired actuator



**8310-866CAP**  
Bollard Post

- Plastic Cap, Protective Cover,  
Service Part for 8310-866 Bollard  
Post

## Automatic Operator Actuators & Accessories



### 8310-806K Key Switch

- Type, 3 Position (On/Off/Hold-Open)
- Optional switch used w/ Senior Swing, Benchmark, or 4630/4640 Operators with (CS) option

### 8310-806R Rocker Switch

- Type, 3 Position (On/Off/Hold-Open)
- Optional switch w/ Senior Swing, Benchmark, or 4630/4640
- Operators with (CS) option

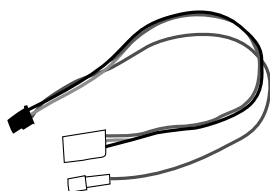
### 8310-807 Line Filter

- AC, 120v, Optional filter used w/ Senior Operators to reduce 'line noise'



### 8310-845 Programmable Relay Module

- Used to sequence door operation in Senior Swing and Benchmark for hard wired applications



### 8310-887 Retrofit Cable

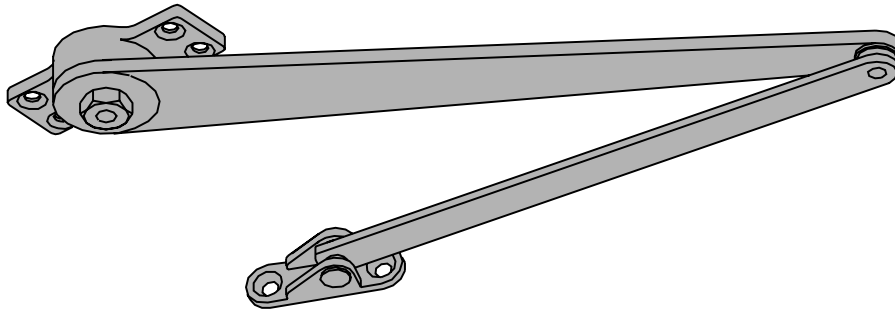
- Allows newer style Senior Swing digital control to be activated by existing switches when replacing older control purchased prior to September, 2006



### 8310-3134 Retrofit Cable Kit

- Allows newer style Senior Swing Digital Control to be activated by existing switches when replacing older control purchased prior to September, 2006.
- Also includes cables to allow Safety Sensors to activate
- Includes 8310-887 plus Safety Sensor Cables





The PAH 60 is recommended for use on the inactive leaf of a pair of doors where the active leaf has a door closer installed.

<b>Handing</b>	Handed	<b>Fasteners</b>	Wood and machine screw pack
<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Aluminum (689)</li> <li>■ Statuary Bronze (690)</li> <li>■ Light Bronze (691)</li> <li>■ Black (693)</li> <li>■ Dark Bronze (695)</li> <li>■ Brass (696)</li> <li>■ Custom colors optional</li> </ul>
<b>Auxiliary Stop</b>	Recommended at hold-open point		
<b>Top Rail</b>	Minimum 2" (51 mm)		
<b>Rabbet Depth</b>	Minimum 1-1/4" (32 mm)		
<b>Maximum opening</b>	<ul style="list-style-type: none"> <li>■ Hold-open points up to 180°</li> <li>■ Hold-open point adjustable at the soffit shoe</li> </ul>		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>

### How-to-order PAH 60 Holder

#### 1. Specify hand

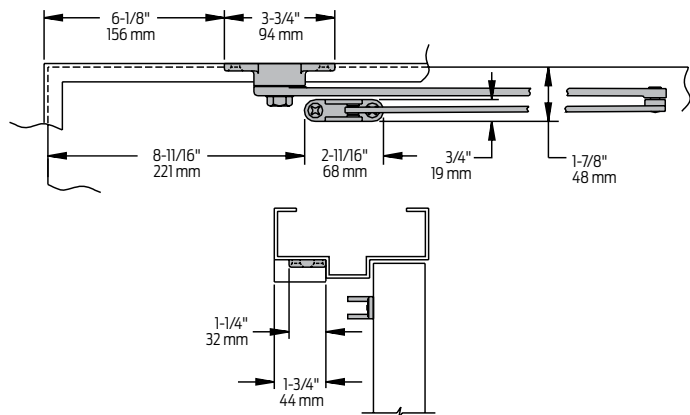
- RH
- LH

#### 2. Select finish

- Standard Powder Coat \_\_\_\_\_  
Aluminum, Dark Bronze, Statuary,  
Light Bronze, Black, Brass

#### 3. Optional arm finish

- Custom Powder Coat (RAL) \_\_\_\_\_
- Plated Finish, US \_\_\_\_\_
- SRI Primer \_\_\_\_\_







## About Allegion

Allegion (NYSE: ALLE) creates peace of mind by pioneering safety and security. As a \$2 billion provider of security solutions for homes and businesses, Allegion employs more than 7,800 people and sells products in more than 120 countries across the world. Allegion comprises 23 global brands, including strategic brands CISA®, Interflex®, LCN®, Schlage® and Von Duprin®.

For more, visit [www.allegion.com](http://www.allegion.com)

*aptiQ* ■ LCN ■ **SCHLAGE** ■ STEELCRAFT ■ VON DUPRIN