



ALLEGION™

LCN®

Door
controls



HISTORY of DOOR CLOSERS & LCN

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. Cast iron, forged steel arms, double heat treating, powder



coat finishes, all-weather fluid, and 10 million cycles are just a few of the features and benefits that LCN offers in producing the finest door closers in the world!

- 1851** – Lewis C. Norton born May 5th in New Hampshire.
- 1880** – First door closer installed at Boston Trinity Church.
- 1881** – Manufacturing begins at Boston plant.
- 1900** – Mr. Norton introduces a liquid door check.
- 1908** – Company moves to Chicago.
- 1917** – David R. Lasier joins company as timekeeper.
- 1925** – Norton-Lasier Company begins operation.
- 1929** – L. C. Norton moves to California. D. R. Lasier heads up company.
- 1930** – Norton-Lasier Company produces wooden riding toys to cope with the Great Depression.
- 1937** – L. C. Norton passes away on November 4th.
- 1942** – Norton-Lasier Company produces hydraulic aircraft fittings for the war effort.
- 1948** – Norton-Lasier Company officially changes name to **LCN**.
- 1958** – **LCN** introduces the 4010/4110 series door closer.
- 1959** – **LCN** sold to Schlage Lock Company.
- 1972** – **LCN** introduces Sentronic line of fire/life safety holder/closers.
- 1973** – **LCN** introduces the 4040 series door closer.
- 1974** – Schlage Lock (and LCN) sold to Ingersoll-Rand.
- 1978** – **LCN** introduces Equalizer units.
- 1980** – Production on traditional series ends.
- 1981** – **LCN** introduces the 1460 series door closer.
- 1981** – **LCN** introduces AutoEqualizer™ units.
- 1985** – **LCN** introduces the 1070 series door closer.
- 1993** – **LCN** introduces the powder coat finish.
- 1995** – **LCN** introduces Electric Operator units.
- 1996** – **LCN** introduces the 1520 series door closer.
- 1998** – **LCN** introduces the 1370 series door closer.
- 2006** – **LCN** introduces the new 4030 series door closer to replace the 1520 closer series.
- 2006** – **LCN** introduces the new Senior, Astro and Middle Swing Digital Control Box.
- 2007** – **LCN** introduces the new Tri-Volt Magnets.
- 2007** – **LCN** introduces the new 4040XP.
- 2007** – **LCN** introduces the new 1260 Series.
- 2013** – In December of 2013, the Security Technologies division of Ingersoll Rand became its own publicly traded company called Allegion.

TABLE OF CONTENTS

GENERAL INFORMATION

History of Door Closers & LCN	2-3
Table of Contents	4
Finishes	5
Warranty	6
Door Closer Specialists	7
Specifications	8-10
ANSI Cross Reference	11-14
Materials	15
Proper Door Control	16
Mechanical Considerations	17-22
Glossary of Abbreviations	24
Glossary of Terms	25-33

4000 SERIES SURFACE MOUNTED CLOSERS

Product Selection Guide	1-2
4010 Series	3-6
4010T Series	7-11
4020 Series	13-16
4020T Series	17-21
4030 Series	23-30
4030T Series	31-36
4040XP Series	37-45
4040XPT Series	47-53
4110 Series	55-59
4110T Series	61-65
4000T Series	67-70

1000 SERIES SURFACE MOUNTED CLOSERS

Product Selection Guide	1-2
1260 Series	3-10
1460 Series	11-18
1460T Series	19-25

CONCEALED CLOSERS SERIES

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

FIRE/LIFE SAFETY CLOSER/HOLDERS SERIES

Product Selection Guide	1-3
SEM Series	5-12
3130SE Series	13-16
4040SE Series	17-22
2310ME Series	23-26
4310ME Series	27-31
4410ME Series	33-37
4310 HSA Series	39-42
4410 HSA Series	43-46
SEH Series	47-50

HIGH SECURITY CLOSERS SERIES

Product Selection Guide	1-2
2210 Series	3-6
4210 Series	7-10
4210T Series	11-14
4510 Series	15-18
4510T Series	19-22

AUTOMATIC OPERATORS

Product Selection Guide	1-5
Pneumatic Powered Systems	7-9
2610 Series	11-14
4810 Series	15-18
4820 Series	19-22
4840 Series	23-27
7900 Series Control Boxes	28-33
900 Series Compressors	34
Electrohydraulic Powered Systems	35-37
4630/4640 Electrohydraulic Series	38
Electrohydraulic Powered Systems	39
4630 Series	41-45
4640 Series	47-51
Electromechanical Powered Systems	53-57
Benchmark Unique Features	59
9130 Series	61-65
9140 Series	67-71
9150 Series	73-77
Senior Swing Unique Features	79
2810 Series	81-86
2850 Series	87-92
2860 Series	93-98
9530 Series	99-103
9540 Series	105-109
9550 Series	111-116
9560 Series	117-122
Actuators & Accessories	123-133
Sensors & Accessories	134-139

LCN

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

For SSC Representative contact information, please visit <https://portal.allegion.com>.

To view or download an electronic copy, visit www.allegion.com/us.

LCN reserves the right to change the information contained in this catalog without notice.

STANDARD POWDER COAT FINISHES

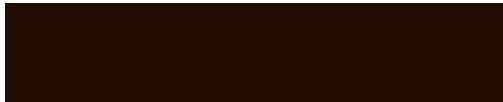
LCN powder coating provides superior protection against the effects of weather conditions and is an environmentally friendly process. The high quality, chip resistant finish is far superior to any previously offered. Corrosion resistance surpasses 100 hours salt spray testing (four times the industry standard). Non-metallic components also provide the same high resistance to the effects of the elements. All LCN products must be shipped with a finish.

LCN STANDARD FINISHES (CLOSEST BHMA EQUIVALENT):

ALUM ALUMINUM (BHMA 689)



DKBRZ DARK BRONZE (BHMA 695)



STAT STATUARY BRONZE (BHMA 690)



LTBRZ LIGHT BRONZE (BHMA 691)



BLK BLACK (BHMA 693)



BRASS BRASS (BHMA 696)



OPTIONAL CUSTOM POWDER COAT FINISHES

LCN offers custom powder coating to provide a custom appearance and all the corrosion resistance of standard powder coat finishes at a nominal additional cost. LCN uses the RAL numbering system for the 150+ custom colors available. Contact your local SSC representative for a brochure showing the available custom colors. Note: Custom powder coat finishes require a metal cover.

OPTIONAL PLATED FINISHES

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

LCN PLATED FINISHES:

- US 3 Bright Brass (BHMA 632)
- US 4 Satin Brass (BHMA 633)
- US 10 Satin Bronze (BHMA 639)
- US 10B Oxidized Satin Bronze (BHMA 641)
- US 15 Satin Nickel (BHMA 646)
- US 26 Bright Chrome (BHMA 651)
- US 26D Satin Chrome (BHMA 652)

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)

LCN Limited Warranty

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

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

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: All Product claimed to be defective under this limited warranty shall be sent to: LCN, Warranty and Replacement Department, 121 West Railroad Avenue, P.O. Box 100, Princeton, Illinois USA 61356-0100. For information, contact Customer Care at (877) 671-7011.

DOOR CLOSER SPECIALISTS

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



Cast Iron

Heavy-duty cast iron. There isn't a stronger, harder, more reliable material for door closers that are expected to deliver millions of cycles. Cast iron is more compatible with high grade steel components and is more resistant to the wear of millions of opening/closing cycles.



10 Million Cycles

Why do some hardware professionals claim that LCN stands for "Last Closer Needed?" LCN closers were put through grueling independent cycle tests and have exceeded 10 million cycles.



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.

SPECIFICATIONS

PART 1 - GENERAL

1.1 QUALITY ASSURANCE

A. Reference Standards

- 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
- Americans with Disabilities Act (ADA)
- American Society for Testing and Material (ASTM): Specification B117-9 Method of Finish Corrosion Testing
- Underwriters Laboratory (UL):
 - 228 Door Closers-Holders
 - UL10C Standard Positive Pressure Fire Test of Door Assemblies
 - UL10B Standard for Fire Test of Door Assemblies
- National Fire Protection Association (NFPA):
 - No. 80 Fire Doors and Windows
 - No. 101 Life Safety Code

B. Source Quality Control

- 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.
- All products shall meet grade 1 or the highest level of cycle test requirements of the applicable ANSI/BHMA standard.

C. Supplier Qualifications

- 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.
- 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

- Provide hardware for fire rated openings in compliance with NFPA Standard No. 80, NFPA Standard No. 101, and local building codes.
- [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

- 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:

- [Applies to 4010, 4020, 4110, 4210, 4510, 5010 Series only.]** All manual door closers shall be certified to exceed ten million (10,000,000) full load operating cycles by a recognized independent testing laboratory.
- All manual closers shall carry a manufacturers ten (10) year warranty.
- 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.]
- Fully hydraulic, rack and pinion action with high strength cast iron cylinders and one piece forged steel pistons.
- Fluid of a type requiring no seasonal adjustments.
- [Delete for 1460, 1260, 3030, 3130 and 4030 Series.]** Pinion shaft minimum diameter of 11/16".
- Hydraulic regulation controlled by tamper-proof, non-critical screw valves, adjustable with a hex wrench.
- Separate adjustments for backcheck, general speed, and latch speed.
- [Applies to 1260, 1460, 4010, 4020, 4040, 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°.
- Backcheck shall be properly located for protection of the door, frame, and applied hardware.
- [Applies to 2210, 4110, 4210, 4210T, 4510, and 4510T Series only.]** Where detailed, provide advanced variable backcheck to start backcheck function at approximately 45°.
- Include high efficiency, low friction full compliment pinion bearings.
- [Delete for 1260, 1460, 6030 Series.]** Forged steel main arms.
- [Applies to 4110, 4210, 4510 Series and all EDA and CUSH arms.]** Forged steel main and forearm.
- [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.
- [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 1261, 1461, 1460T, 4011, 4021, 4040SE, 4040XP, 4040XPT, 4041DEL, 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 ten million (10,000,000) 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 ten million (10,000,000) 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 ten million (10,000,000) 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.

SPECIFICATIONS

- h) Provisions in the control box or module shall provide control {inputs and outputs} for; electric strike delay, auxiliary contact, sequential operations, fire alarm systems, actuators, swing side sensors, stop side sensors.
[2610, 4630, 4640, 4810, 4820, 4840, 9130, 9140, 9150 Series]
5. **[4630, 4640 Series]** All electrohydraulic automatic operators shall include the following features or functions:
- a) Second Chance Feature: When an obstruction or resistance to the opening swing is encountered the operator will pause at that point, then attempt to continue opening the door. If the obstruction or resistance remains, the operator will again pause the door.
 - b) Easily accessible main power and maintain hold-open switches will be provided on the operator.
 - c) An electronically controlled clutch to provide adjustable opening force.
 - d) A microprocessor to control all motor and clutch functions.
 - e) An on-board power supply capable of delivering both 12V and 24V outputs up to a maximum of 1.0 ampere combined load.
 - f) All input and output power wiring shall be protected by a resettable circuit breaker.

-Or-

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

2.12 HARDWARE FINISHES

A. Finish

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

PART 3 - EXECUTION

3.1 INSTALLATION

A. General

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

3.2 ADJUSTMENT

A. Adjustment

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

ANSI CROSS REFERENCE

ANSI FUNCTION NUMBER TO LCN PRODUCT

SURFACE MOUNTED		ANSI Standard A156.4-2000								
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	
		1260	X	X	X	X	X		X	
		1460	X	X	X	X	X		X	
		4010	X	X	X	X	X		X	
C02021	PARALLEL	4510	X	X	X	X	X		X	X
		4031	X	X	X	X		X	X	
		4040XP	X	X	X	X		X	X	
		1260	X	X	X	X	X	X	X	
		1460	X	X	X	X	X	X	X	
C02031	BRACKET	4110	X	X	X	X	X	X	X	X
		4210	X	X	X	X	X	X	X	X
		4040XP	X	X	X	X			X	
C02041	TOP JAMB	4010	X	X	X	X	X		X	
		4031	X	X	X	X			X	
C02051	HINGE SIDE HOLD OPEN	4040XP	X	X	X	X			X	
		1260	X	X	X	X	X		X	
		1460	X	X	X	X	X		X	
		4010	X	X	X	X	X		X	
		4031	X	X	X	X		X	X	
C02061	PARALLEL HOLD OPEN		X	X	X	X		X	X	
		1260	X	X	X	X	X	X	X	
		1460	X	X	X	X	X	X	X	
		4110	X	X	X	X	X	X	X	X
		4210	X	X	X	X	X	X	X	X
C02071	BRACKET HOLD OPEN	4010	X	X	X	X	X		X	
		4040XP	X	X	X	X			X	
C02081	TOP JAMP HOLD OPEN	4031	X	X	X	X			X	
		4040XP	X	X	X	X			X	
		1260	X	X	X	X	X		X	
		1460	X	X	X	X	X		X	
		4020	X	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	
		4040XPT	X	X	X	X			X	
		4510T	X	X	X	X			X	X
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	

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 CROSS REFERENCE

ANSI FUNCTION NUMBER TO LCN PRODUCT

SURFACE MOUNTED		ANSI Standard A156.4-2000								
ANSI NUMBER	MOUNTING	LCN CLOSER	PT-4A	PT-4B	PT-4C	PT-4D	PT-4F	PT-4G	PT-4H	PT-4J
		4031T	X	X	X	X		X		
		4040XPT	X	X	X	X		X		
		4510T	X	X	X	X		X	X	
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		
C02231	STOP FACE 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		
		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	1260	X	X	X	X	X	X		
C03021	PARALLEL	1260	X	X	X	X	X	X		
C03041	TOP JAMB	1260	X	X	X	X	X	X		
C03051	HINGE SIDE HOLD OPEN	1260	X	X	X	X	X	X		
C03061	PARALLEL HOLD OPEN	1260	X	X	X	X	X	X		
C03081	TOP JAMB HOLD OPEN	1260	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 CROSS REFERENCE

ANSI FUNCTION NUMBER TO LCN PRODUCT

CONCEALED IN DOOR		ANSI Standard A156.4-2000			
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 A156.4-2000								
ANSI NUMBER	MOUNTING	ARM	LCN CLOSER	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
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
			2210 DPS	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 CROSS REFERENCE

ANSI FUNCTION NUMBER TO LCN PRODUCT

LIFE SAFETY CLOSER/ HOLDER RELEASE DEVICE

ANSI Standard A156.15-2001

ANSI NUMBER	MOUNTING	ARM	LCN CLOSER	PT4D	PT4N	PT4P
C00011	WALL	N/A	7830, 7840, 7850			
	WALL	N/A	1960, 1970, 1980			
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.

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.

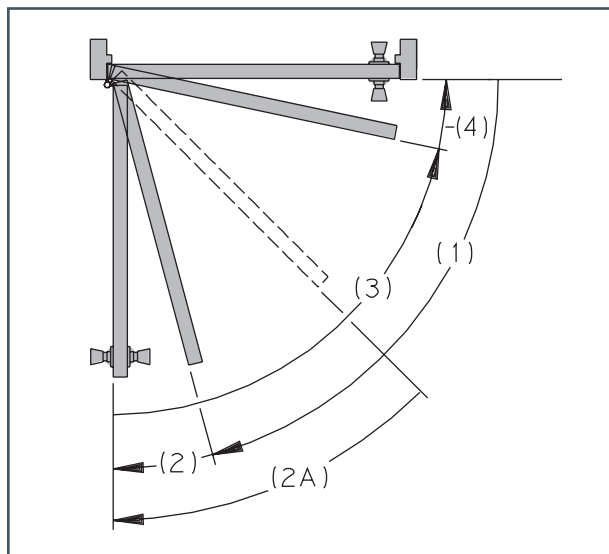
Forged steel main arms are superior to stamped steel arms used on closers where price is the primary concern. Specially designed shoe and elbow joints provide maintenance free service. A state-of-the-art, **powder coat** process delivers a high quality, corrosion resistant finish on all metal parts in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

PROPER DOOR CONTROL

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

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

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

In opening, more leverage for the person.

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

In closing, more leverage for the closer.

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

Special closers for reduced opening force.

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

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

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



MECHANICAL CONSIDERATIONS

HOW TO SELECT A DOOR CLOSER

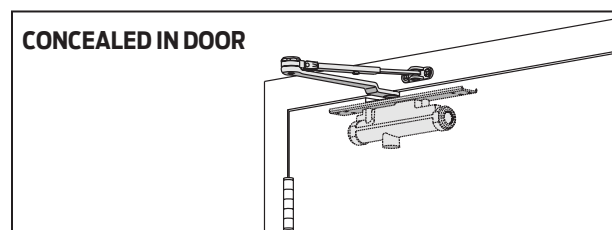
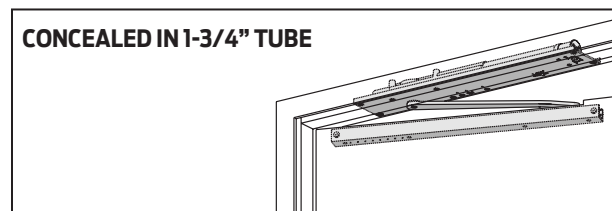
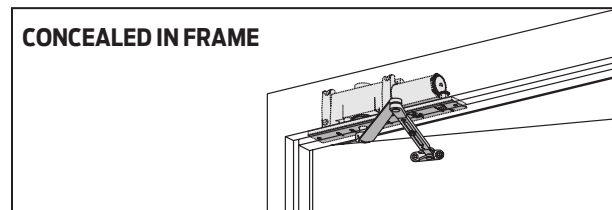
CONCEALED OR SURFACE MOUNTED CLOSERS?

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

IF CONCEALED, WHERE?

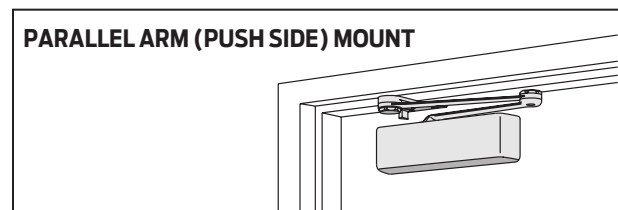
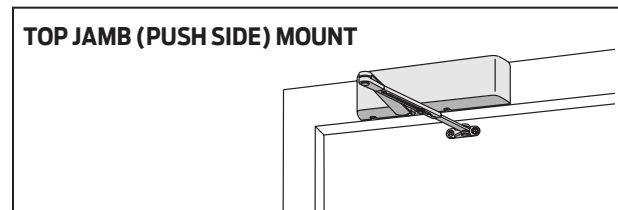
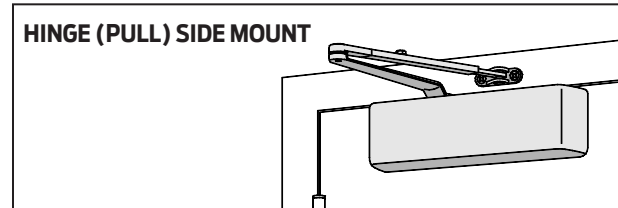
Closers concealed in the head frame over the door are out of sight and entirely out of the pedestrians way. They cannot be harmed by scrub water, cleaning chemicals or floor dirt, and are protected from airborne contaminants, like dust. They are easy to reach for regulation without removing any parts.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

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



SURFACE MOUNTED CLOSERS – LOCATION?

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



WHERE ARE HEAVY DUTY CLOSERS REQUIRED?

Heavy duty closers should always be used in these places:

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

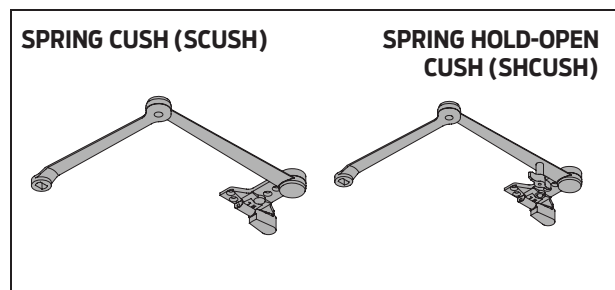
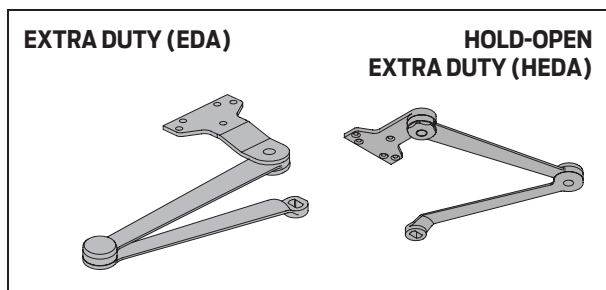
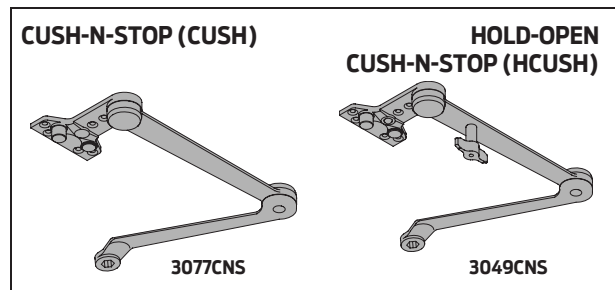
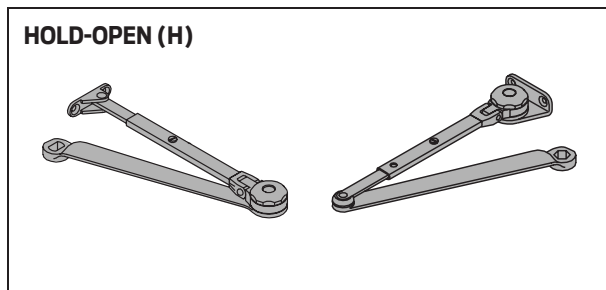
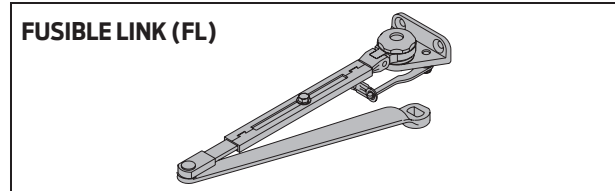
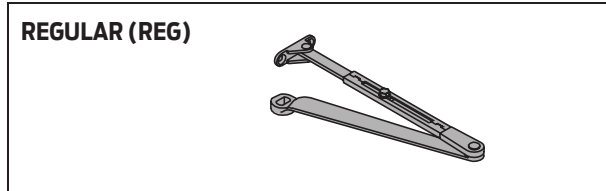
MECHANICAL CONSIDERATIONS

WHICH ARM SYSTEM?

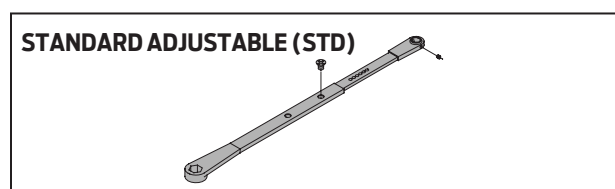
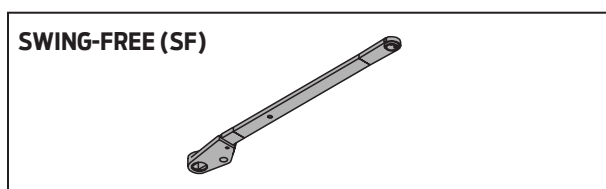
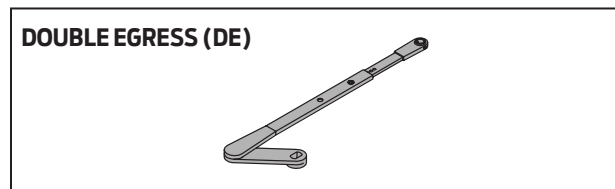
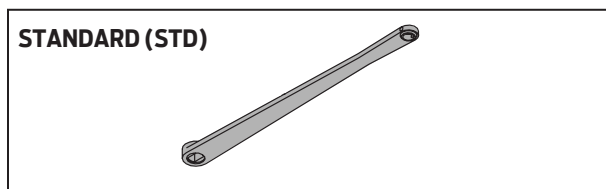
Double lever arm closers can provide control under difficult conditions for either interior or exterior doors.

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:



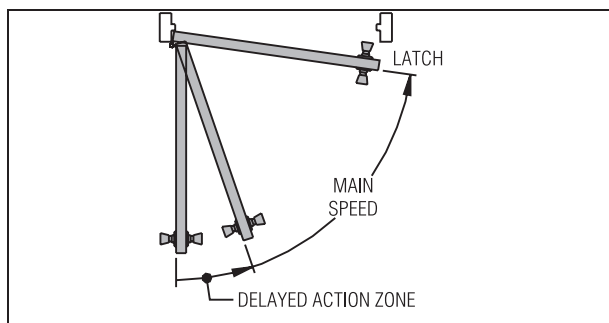
Single lever arm (track) closers may be used on interior or sheltered exterior doors. The hold-open function in a single lever arm system is provided by either the track or the cylinder assembly. Available single lever arms:



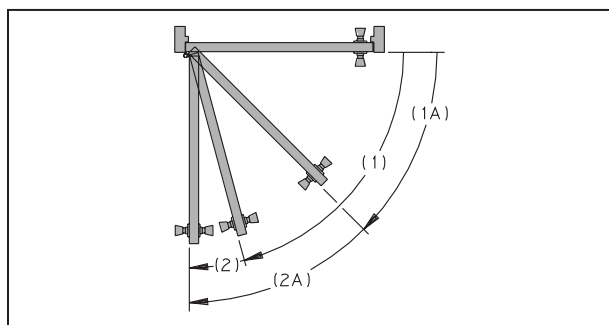
MECHANICAL CONSIDERATIONS

DO YOU NEED SPECIAL CYLINDER FUNCTIONS?

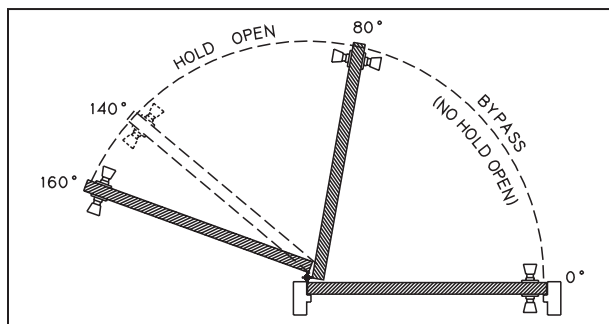
Many LCN closers can be ordered with a delayed action function built into the cylinder. **Delayed action** (DEL) is a special hydraulic circuit that provides additional time to pass through the door. A special regulating screw controls the closing speed from maximum opening through approximately 75°.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

MECHANICAL CONSIDERATIONS

HOW FAR SHOULD THE DOOR OPEN?

Three basic rules apply to maximum degree of opening.

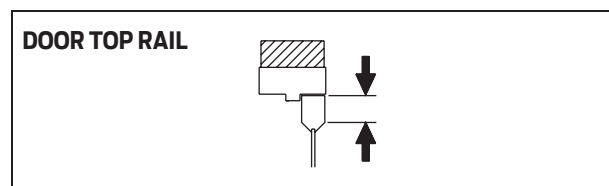
1. It is best to let the door swing as far as it can swing freely. Some closers are mounted in different locations for different degrees of opening.
2. Use a mechanical stop when a door can not swing 180° or at the selected hold-open point of a double lever arm system. The mechanical stop can be mounted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

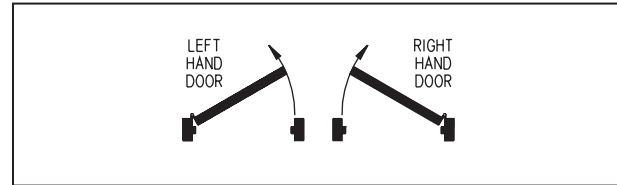
Door thickness may be a factor. A concealed-in-the-door closer should not be used in a hollow metal door less than 1-1/2" (38 mm) thick or a wood door under 1-3/4" (44 mm). Exceptionally thick doors can affect hinge and pivot centers to the extent that closer functions and geometry are also affected.

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.

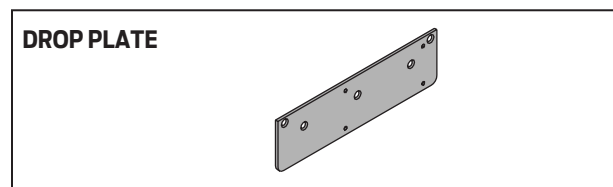
WILL A STANDARD CLOSER AND TEMPLATE MEET YOUR NEEDS?

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.

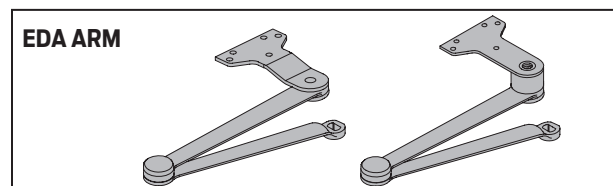
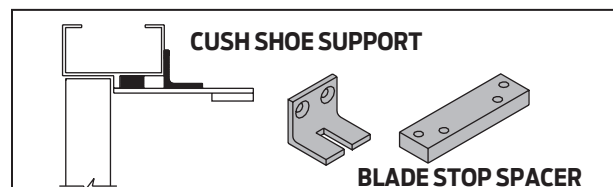
MECHANICAL CONSIDERATIONS

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.



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

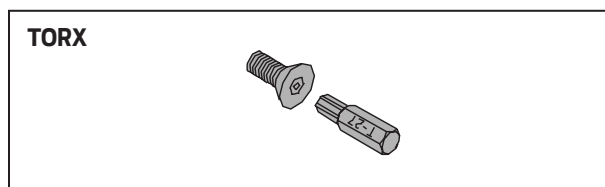


WHAT FASTENERS SHOULD BE USED?

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

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

For high security applications, TORX machine screws are available with most closers. These are standard for all exposed fasteners with high security closers. TORX fasteners feature a hex lobular drive with a security pin in the center. They can only be installed or removed with a special set of bits that are available from LCN.



MECHANICAL CONSIDERATIONS

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 it's 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 $\leq 1/4$ 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.

GLOSSARY OF ABBREVIATIONS

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

Motor Gearbox Options

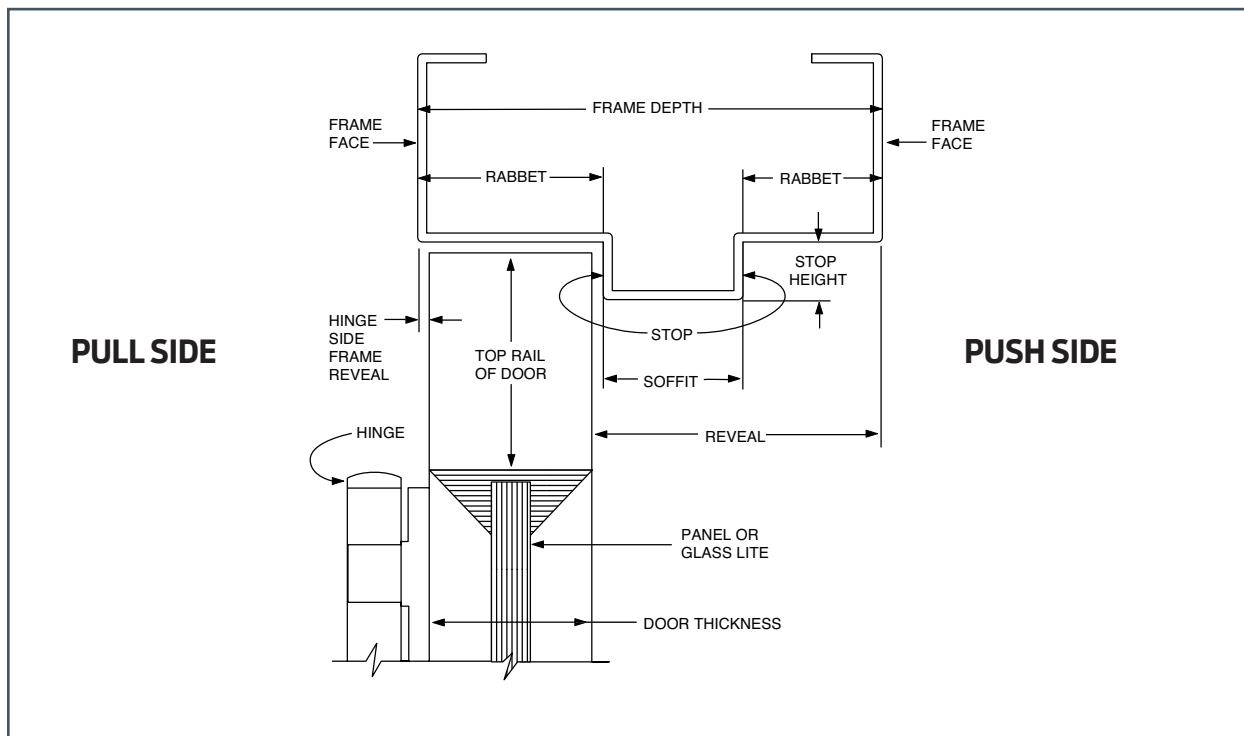
SF	- Standard Force Motor Gearbox
----	--------------------------------

Powder Coat Finishes

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

Miscellaneous Terms

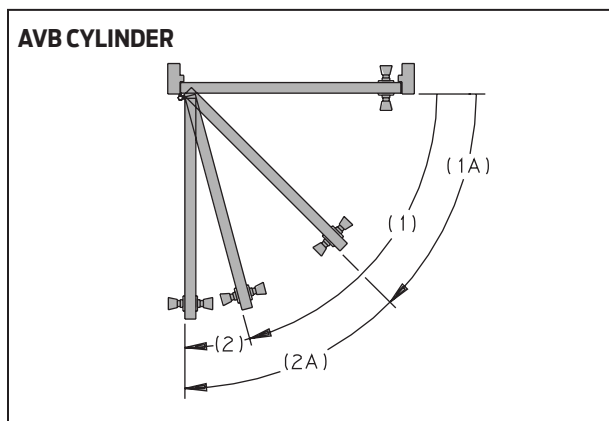
ELR	- Extra Long Rod
SRI	- Special Rust Inhibitor
SE	- Single Point Electronic
ME	- Multi-Point Electronic
PAH	- Parallel Arm Holder
HSA	- Hold Open / Scanner Activated
ES	- Electric Strike Relay (Control Boxes)
S	- Sequential (Control Boxes)
RF	- Radio Frequency
TJ	- Top Jamb
PA	- Parallel Arm
G	- Flush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



A

ADA – Americans with Disabilities Act.

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



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

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

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

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

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

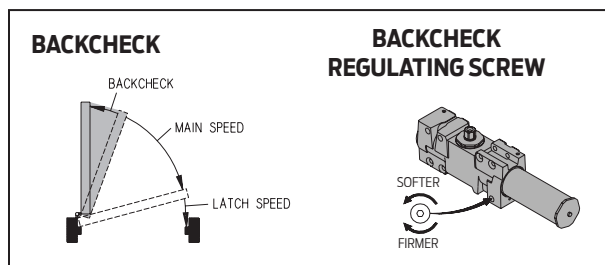
AUTOEQUALIZER™ – An LCN specific term for an electric or a pneumatic power operator. System is low-energy & carries a two-year warranty.

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

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

B

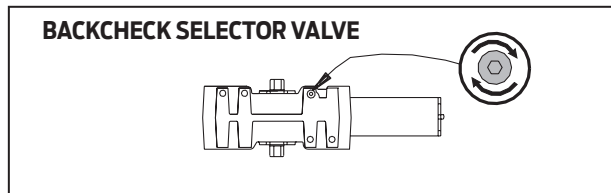
BACKCHECK – Hydraulic circuit designed to cushion the doors opening swing at about 75°. Standard on all LCN closers.



GLOSSARY OF TERMS

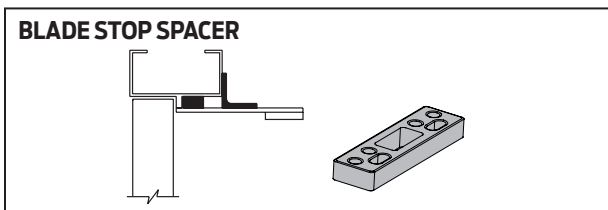
B-C

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



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

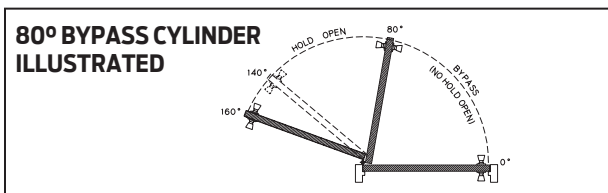
BLADE STOP SPACER – Spacer lowers a parallel arm 1/2" so the arm will clear a blade stop.



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.

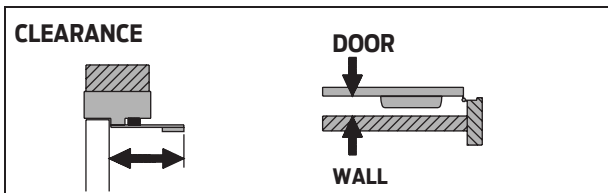


C

CASED OPENING – Frame section without stops.

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

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



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

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

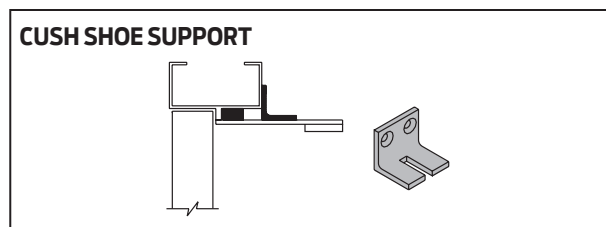
CONTROL BOX, 2800, 9500 SERIES – Microprocessor door control, includes adjustment for opening, closing & backcheck speeds. Features Push 'N Go & Power Boost.

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

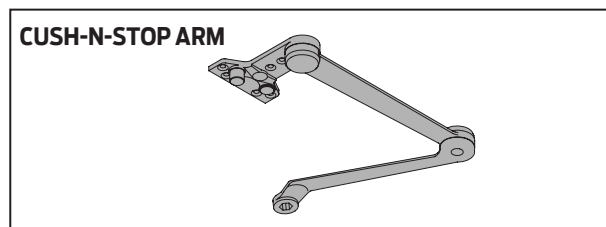
CONTROLLER ASSEMBLY – Digital control suite used in the LCN electric power operator. Includes adjustments for opening force and opening speed.

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

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



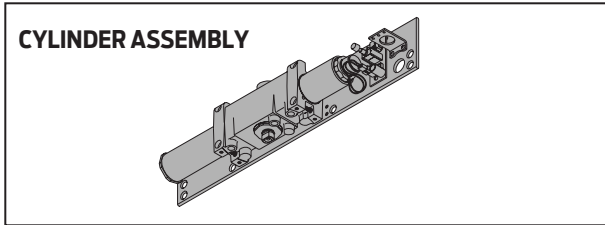
CUSH-N-STOP ARMS (CUSH) – Extra duty, parallel arm that includes a stop in the CUSH shoe.



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

CUTOUT – Preparation of the top rail of a door or frame for concealment of the closer, arm or track.

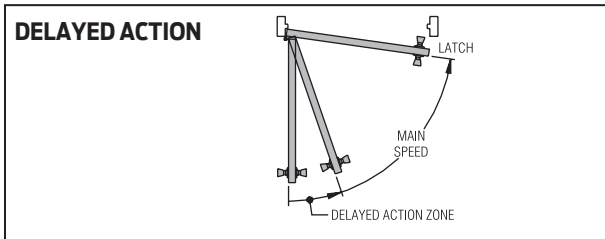
CYLINDER ASSEMBLY – Main closer component complete with any mounting plates or electronics.



CYLINDER ONLY – Hydraulic cast iron cylinder.

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

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



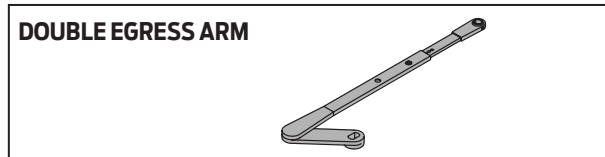
DESIGNER SERIES COVER (DS1) – An aesthetically pleasing cover design that appeals to many types of facilities & architects.

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

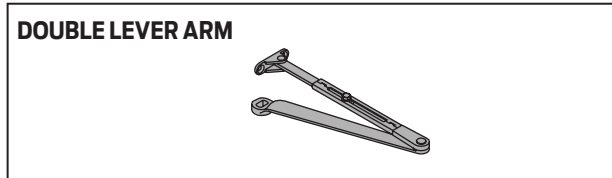
DOUBLE DOOR HEADER – One automatic electromechanical power operator and one manual door within the same header, for a pair of doors.

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

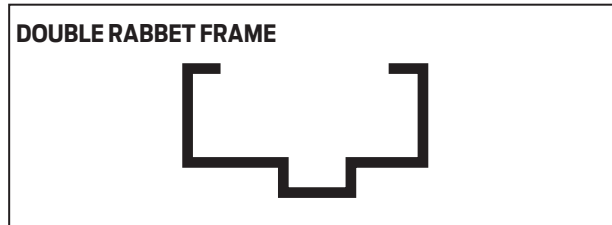
DOUBLE EGRESS ARM (DE) – Designed for pull side installation on double egress frames. Actual arm varies depending on selected closer.



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



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



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

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

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

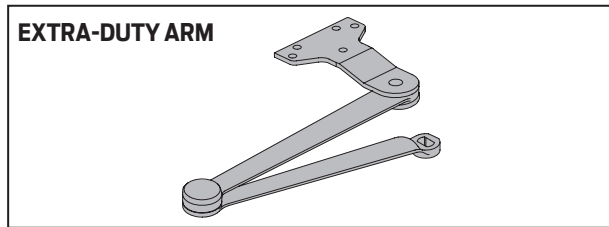
ELECTROHYDRAULIC POWER OPERATOR – Power operator with an electrically controlled opening feature and hydraulic closing feature.

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

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

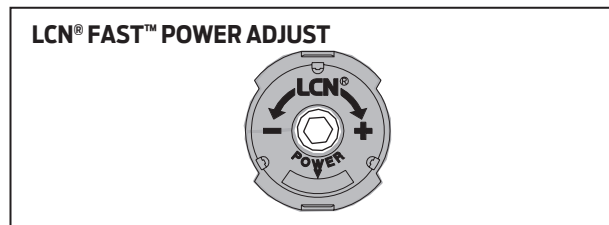
GLOSSARY OF TERMS

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



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

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



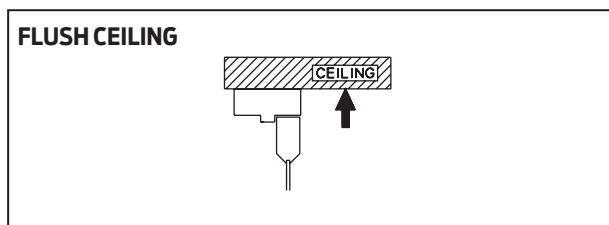
FIFTH SCREW – Mounting screw farthest from the door on a parallel arm shoe.

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

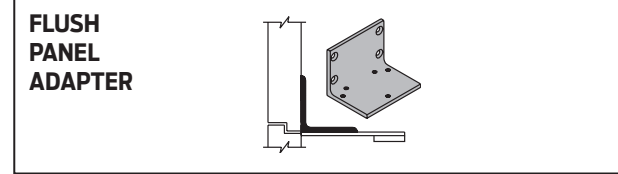
FINISH PLATE – Decorative plate applied to overhead concealed closer to conceal closer mounting plate and screws.

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

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



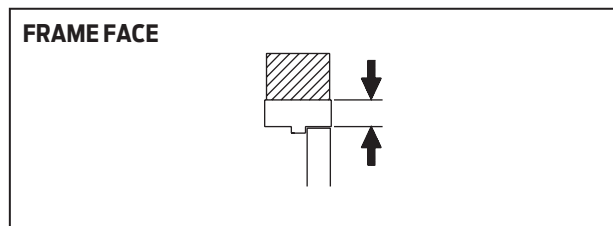
FLUSH PANEL ADAPTER – Adapter provides PA shoe mounting surface when door and frame are flush.



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

FRAME DEPTH – Face to face dimension of the frame.

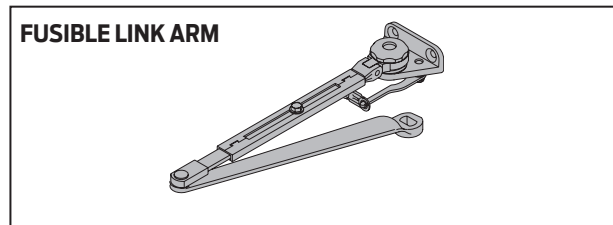
FRAME FACE – Exposed part of frame parallel to face of the wall.



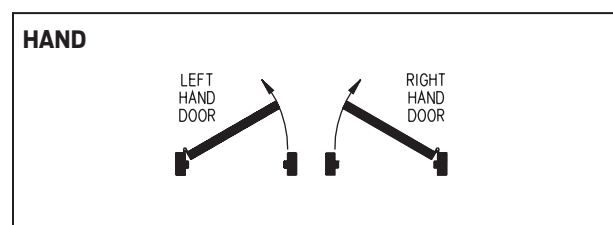
FULL COMPLIMENT BEARINGS – Low friction, high load needle bearings found in all LCN closers.

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

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



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



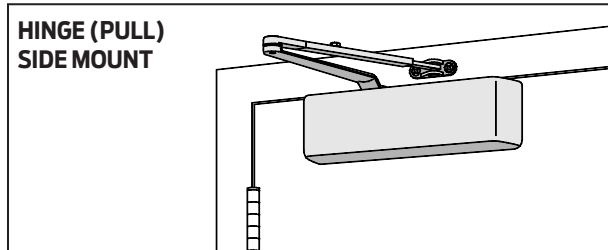
HANDED – Closer or part designed for ONLY right or left swinging doors.

HEAD FRAME – Member of the frame above the door.

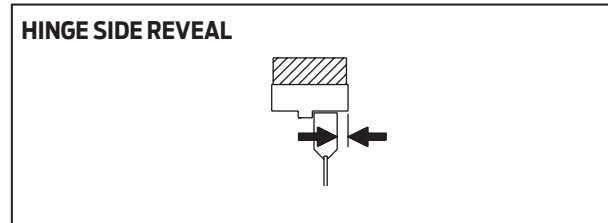
HEADER – Aluminum enclosure for motor gearbox & controller.

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 (HO) – Track with hold-open clip installed.

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.

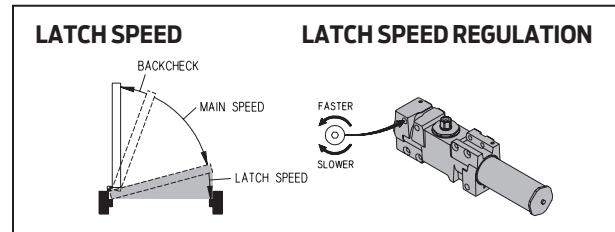
J

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.

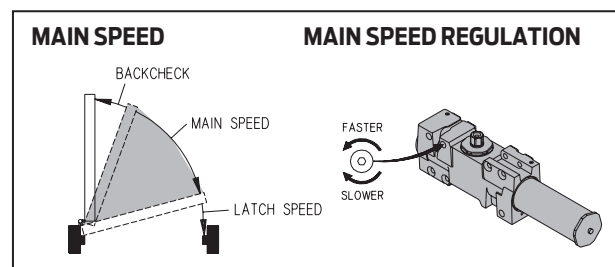
LONG ARM (LONG) – Extended arm for deep reveals or other special applications.

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.

GLOSSARY OF TERMS

M-P

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.

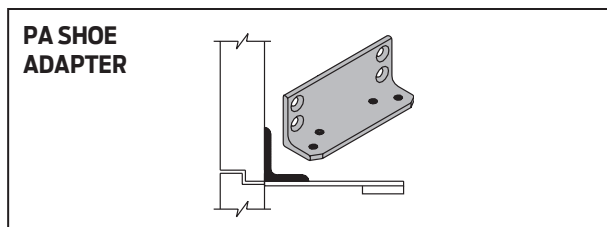
O

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.

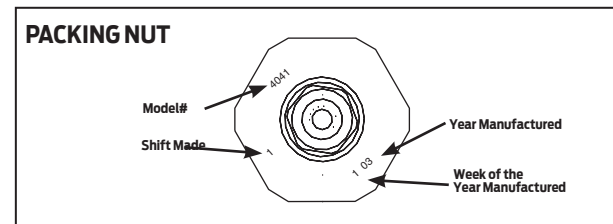
P

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



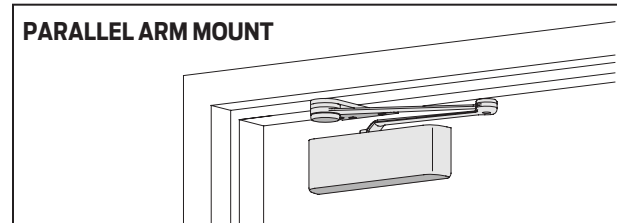
PA SHOE – Attaches the forearm to the soffit for a parallel arm system.

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.

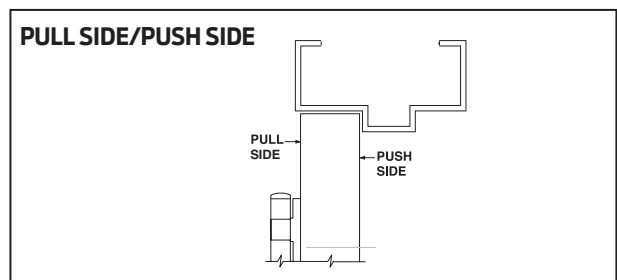
PNEUMATIC – This type of LCN Automatic Operator is driven by an air source. The air source can be built into the control box or provided separately within the building.

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.

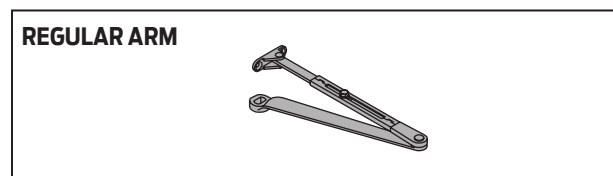
PUSH 'N GO – Provides power opening after partial (5°) manual opening of door.

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

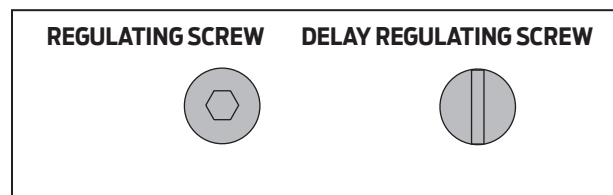
R
RABBET – Recess or offset formed in the face to receive a door.

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

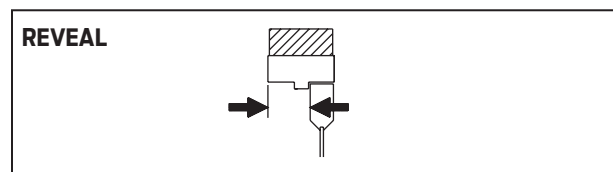
REGULAR ARM – A double lever, non hold-open arm.



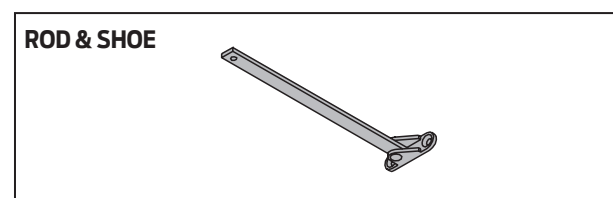
REGULATING SCREW – Valve that adjusts flow of hydraulic fluid within cylinder to control door closing speed.



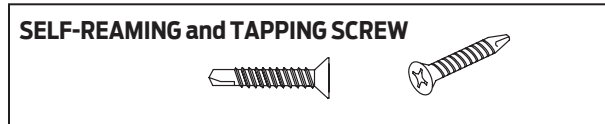
REVEAL – Depth measured from the frame face to the door face.



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.

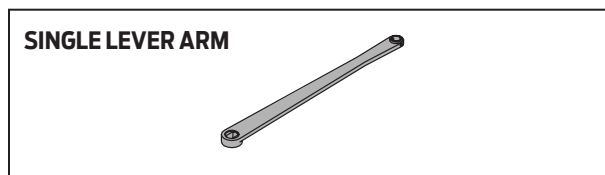
SEQUENCE – An option to the LCN series of automatic operators. This option allows a pair of vestibule doors to open one after the other.

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

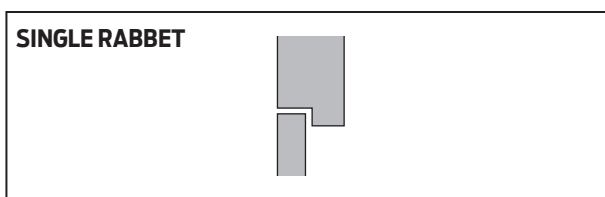
SIMULTANEOUS PAIR – Two automatic doors that open at the same time.

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.

GLOSSARY OF TERMS

S-T

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.

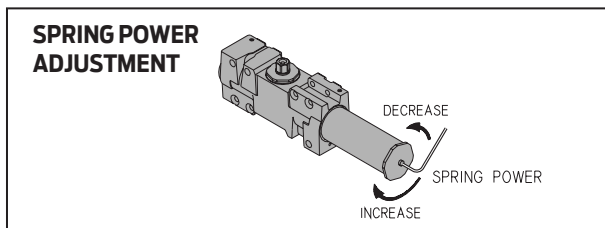
SPECIAL TEMPLATE (ST) – A special template is usually a modification to a standard product. Either the product itself changes location in the opening or a component is modified from the standard offering to accommodate other hardware or door and frame dimensions.

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.

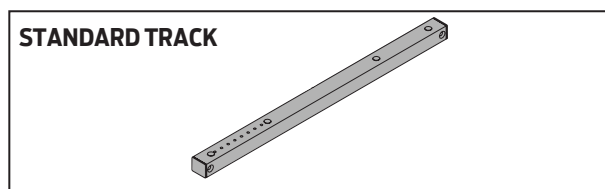
SPRING POWER ADJUSTMENT – Mechanical pre-loading of spring to adjust closing force.



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

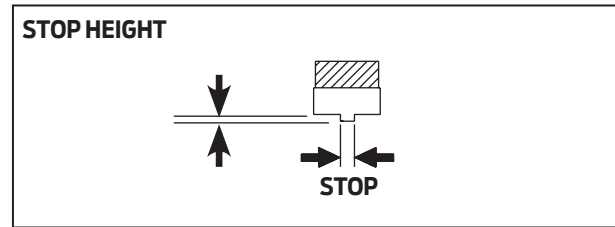
STANDARD CYLINDER – Cylinder with main speed, latch speed, and backcheck adjustments.

STANDARD TRACK – Non hold-open track.

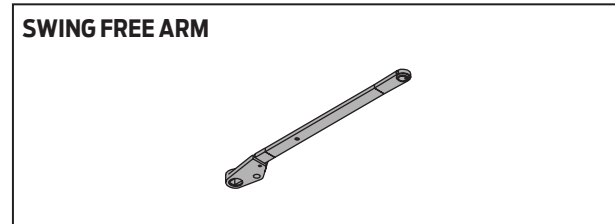


STOP – Part of frame against which the door closes.

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.



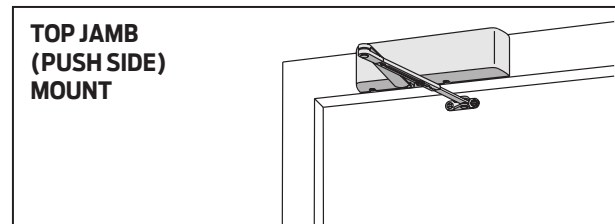
T
TBSRT – Thru bolts and self-reaming and tapping screw package.

TBTRX – Thru bolts and TORX security machine screw package.

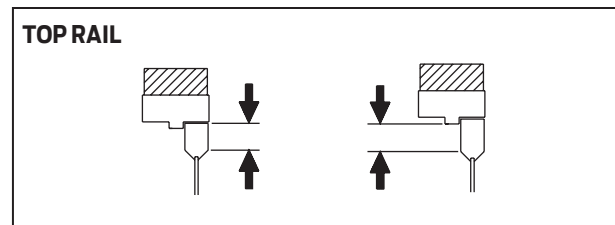
TBWMS – Thru bolt, wood and machine screw package.

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

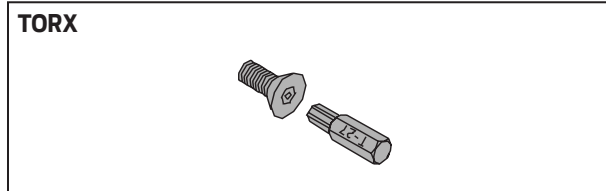
TOP JAMB – Mounting with closer installed on frame face.



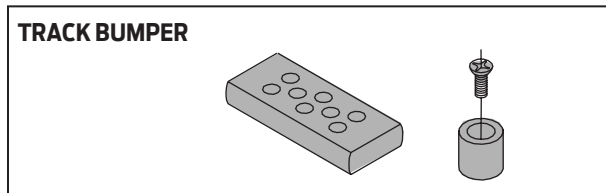
TOP RAIL – Horizontal top member of a door that connects the latch and hinge stiles. Height is measured from stop on push side.



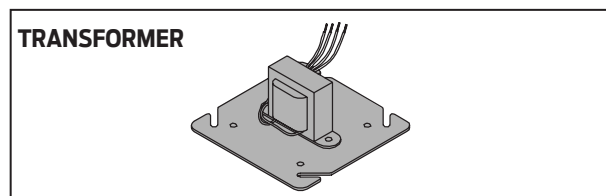
TORX – Security machine screw with TORX drive and security pin for tamper resistant applications.



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

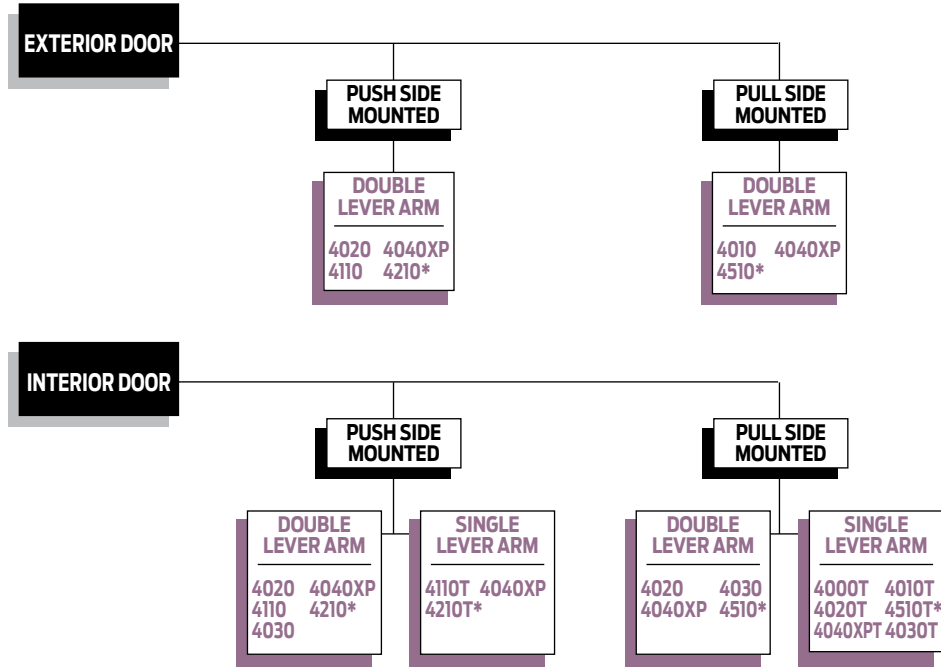
WMS – Standard wood and machine screw package.

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

4000 SERIES SURFACE MOUNTED CLOSERS

PRODUCT SELECTION GUIDE

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



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

PRODUCT COMPARISON

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

CLOSER SERIES	MOUNTING					FINISH		COVER		CYLINDER				**ARM FUNCTION								
	HINGE (PULL) SIDE	TOP JAMB (PULL)	TOP JAMB (PUSH)	PARALLEL ARM	STOP FACE	POWDER COAT	PLATED	PLASTIC	METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY	DELAYED ACTION****	AVB***	REGULAR (DOUBLE)	STANDARD (SINGLE)	HOLD OPEN	FUSIBLE LINK	EDA/HEDA	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°	○	○	○	○	○
4110	○	○	○	○	○	●	●	●	●	○	○	♿	○	○	○	○	○	180°	180°	110°	110°	○
4110T	○	○	○	○	○	●	●	●	●	○	○	♿	○	○	○	○	○	○	○	○	○	○
4000T	●	○	○	○	○	●	●	●	●	●	○	○	○	○	○	110°	100°	○	○	○	○	○
																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 Requires 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 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 and 4040 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 4000T, 4030, 4030T, 4040XP 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 for over 85 years. 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

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

SPECIFICATIONS

Refer to "SPECIFICATIONS" section for suggested architectural specifications.

MATERIALS

- High strength **cast iron** cylinder.
- **Forged steel** main arms.
- One piece **forged steel** piston.
- **Double heat treated** pinion.
- **All weather fluid** eliminates seasonal adjustments temperatures ranging 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 seven 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.

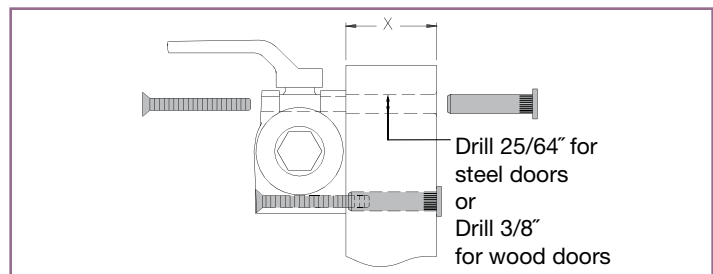
Consult factory for other listings such as; cUL, California State Fire Marshal, Bureau of Standards and Appeals.

POSITIVE PRESSURE

LCN closers have been certified for three hours by UL to be in compliance with UBC 7.2 (1997) and UL 10C. Contact LCN for specific details on door closer fire ratings.

FASTENERS

4010, 4010T, 4020, 4020T, 4040XP, 4040XPT, 4110, 4110T Series closers are shipped with: A standard SELF-REAMING and TAPPING SCREW (SRT) pack that contains Philips head SRT screws to install the closer. 4000T series closers are shipped with: A standard WOOD and MACHINE SCREW (WMS) pack that contains Philips 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

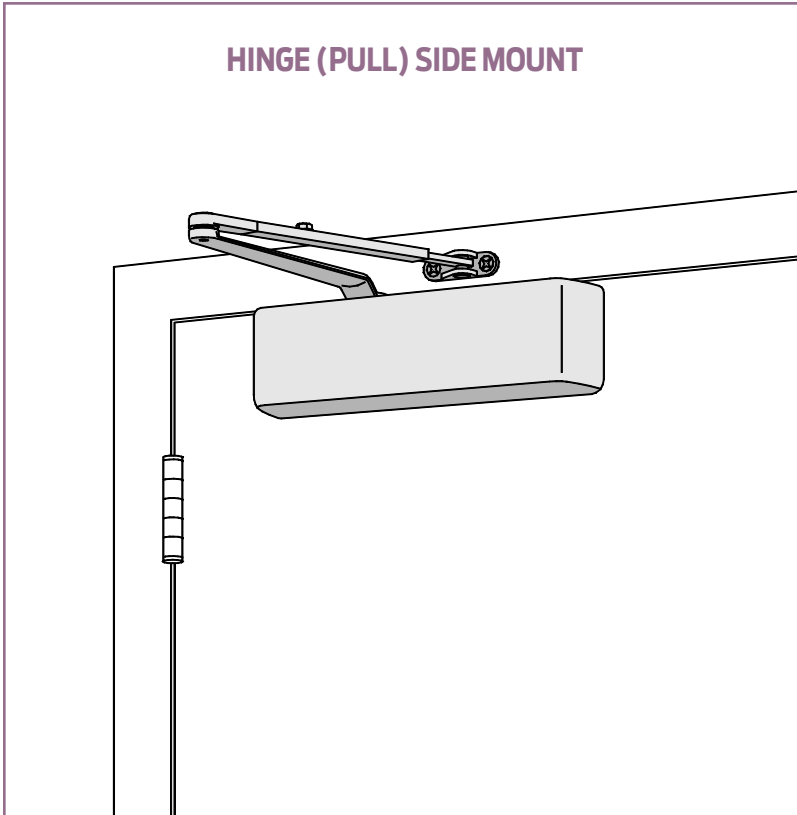
Closers mounted according to LCN installation instructions require no periodic maintenance or adjustments.

4010 SERIES

FEATURES

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

- Cast Iron
- Forged Steel Main Arm
- Double Heat Treated Steel Pinion
- All Weather Fluid
- LCN Patented Green Dial
- UL & cUL Listed
- Peel-n-Stick Templates for Fast and Accurate Installations



- Standard 4010 Series closer is shipped with regular arm, standard plastic cover, and self reaming and tapping screws. See 4010 Series page 5 for options.
- Size 6 (4016) cylinder for interior doors to 5' 0" and exterior doors to 4' 0".
- Non-sized cylinder (4011) adjustable for interior doors to 4' 6" and exterior doors to 3' 6".
- Closer mounts hinge side, specify right or left swinging door.
- 4011 cylinder meets ADA requirements. See 4010 Series page 6.
- Standard or optional custom powder coat finish.
- Optional plated finish on metal cover, arm and fasteners.
- Optional SRI primer for installations in corrosive conditions is available with powder coat finish only.
- The 4010 Series is UL and cUL listed with regular or fusible link arms for self-closing doors.
- Tested and certified under ANSI Standard A156.4, grade one.



MOUNTING					FINISH		COVER		CYLINDER			**ARM FUNCTION									
HINGE/PULLSIDE	TOP JAMB (PULL)	TOP JAMB (PUSH)	PARALLEL ARM	STOP FACE	POWDER COAT	PLATED	PLASTIC	METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY	DELAYED ACTION	AVB***	REGULAR (DOUBLE)	STANDARD (SINGLE)	HOLD-OPEN	FUSIBLE LINK	EDA/HEDA	CUSH/HCUSH	SCUSH/SHCUSH	DOUBLE EGRESS
●	○	○	○	○	●	●	●	●	○	●	♿	●	○	140°	○	140°	140°	○	○	○	○

● AVAILABLE
○ NOT AVAILABLE

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

4010 SERIES

MOUNTING DETAILS

HINGE (PULL) SIDE MOUNTING

MAXIMUM OPENING

Can be templated for 100°

(A) = 5-15/16" (151 mm)

(B) = 11-15/16" (303 mm)

or 140°

(A) = 4-3/16" (106 mm)

(B) = 10-3/16" (259 mm)

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

Arm Clearance above door.

Regular arm requires

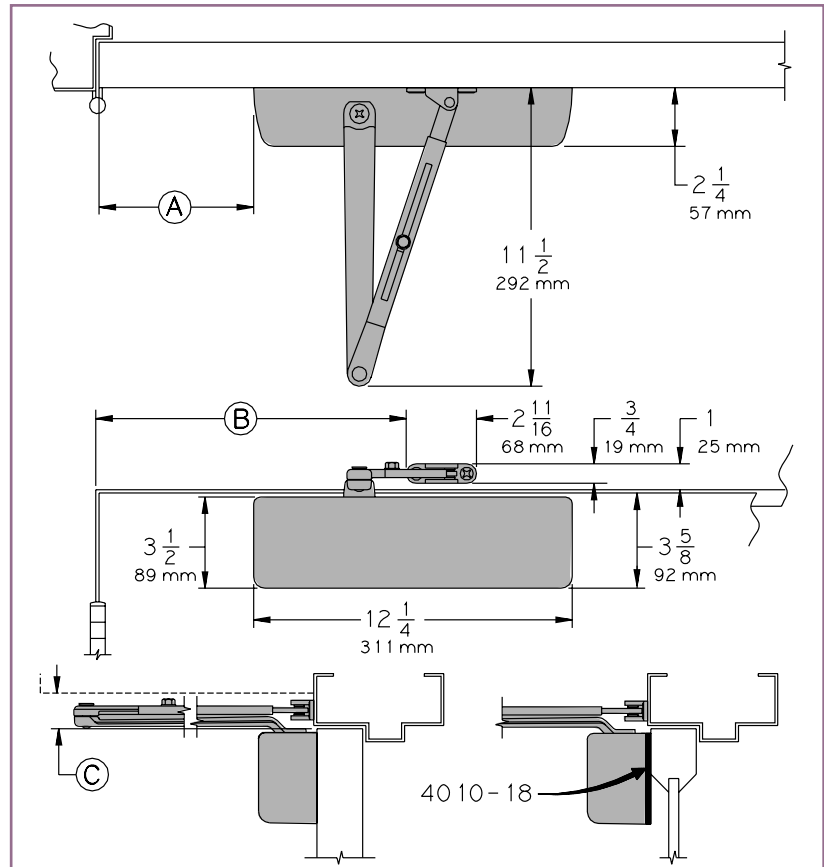
(C) = 1-1/16" (27 mm).

Hold-open arm requires

(C) = 1-3/8" (35 mm).

Fusible link arm requires

(C) = 1-5/8" (41 mm).



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 140°.
- **Reveal** should not exceed 3/4" (19 mm). Should not exceed 1/8" (3 mm) for Fusible link arm.
- **Top Rail** less than 3-3/4" (95 mm) requires PLATE, 4010-18. Plate requires 2" (51 mm) minimum.
- **Clearance** of 2-1/4" (57 mm) behind door required for 90° installation.
- **Delayed Action** Add suffix "DEL" to selected cylinder. Not available with 4016 cylinder. Delays closing from maximum opening to approximately 70°. Delay time adjustable up to approximately 1 minute.

Options

- Size 6 or non-sized cylinder.
- Delayed action cylinder.
- Hold-open or fusible link arm.
- Metal cover.

Special Templates

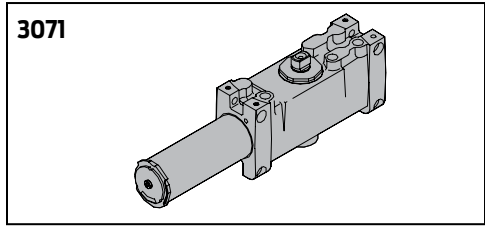
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.

4010 SERIES

CYLINDERS

CYLINDER, 4010-3071

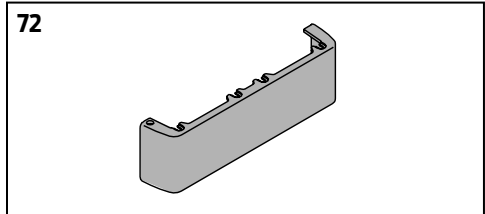
Standard, handed cast iron cylinder assembly.
For various applications see "Table of Sizes" on 4010 Series page 6. Available in size 1 (Adjustable 1-5) or size 6.



COVERS

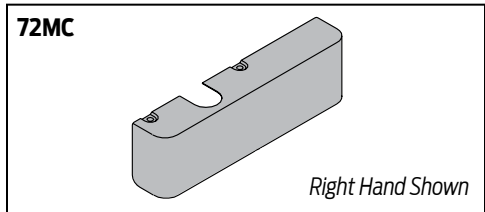
COVER, 4010-72

Standard, non-handed plastic cover.



METAL COVER, 4010-72MC

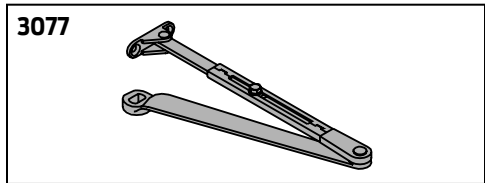
Optional, handed cover. Required for plated finishes and custom powder coat finishes.



ARMS

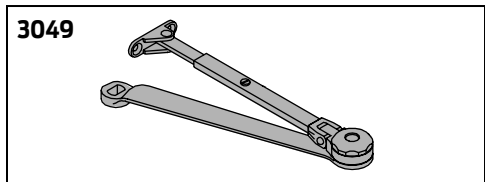
REGULAR ARM, 4010-3077

Non-handed arm.



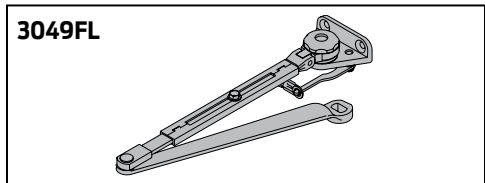
HOLD-OPEN ARM, 4010-3049

Optional, handed arm provides hold-open function, adjustable at elbow.



FUSIBLE LINK ARM, 4010-3049FL

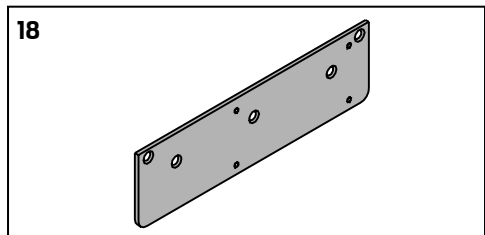
Optional, handed arm releases hold-open function when exposed to temperatures above 165° F. 1/8" (3 mm) maximum reveal.
NOTE: Check local codes before specifying FL arms. NOT A life safety product!



INSTALLATION ACCESSORIES

PLATE, 4010-18

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



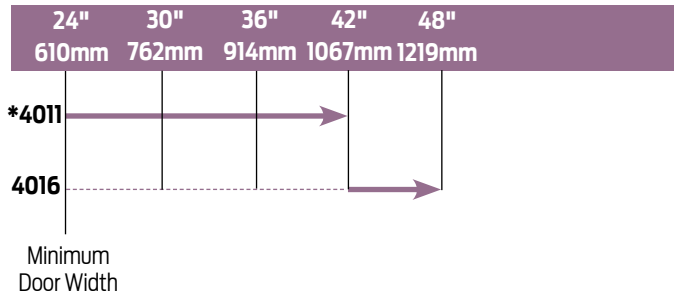
4010 SERIES

TABLE OF SIZES

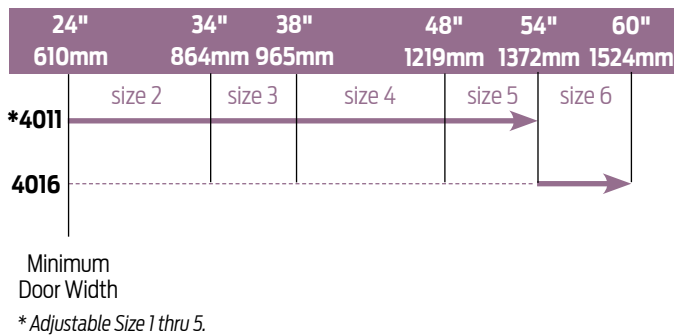
Select closer based on width of door.
 The spring power of non-sized 4011 cylinder is adjustable from size 1 through size 5 and is shipped set to size 3.
 Sized 4010 Series cylinders available in size 6.
 Delayed action not available with 4016 cylinder.

→ Indicates recommended range of door width for closer size.

EXTERIOR (and VESTIBULE) DOOR WIDTH




INTERIOR DOOR WIDTH



REDUCED OPENING FORCE 4010 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 affecting closing power.

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

* Maximum opening force.

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 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

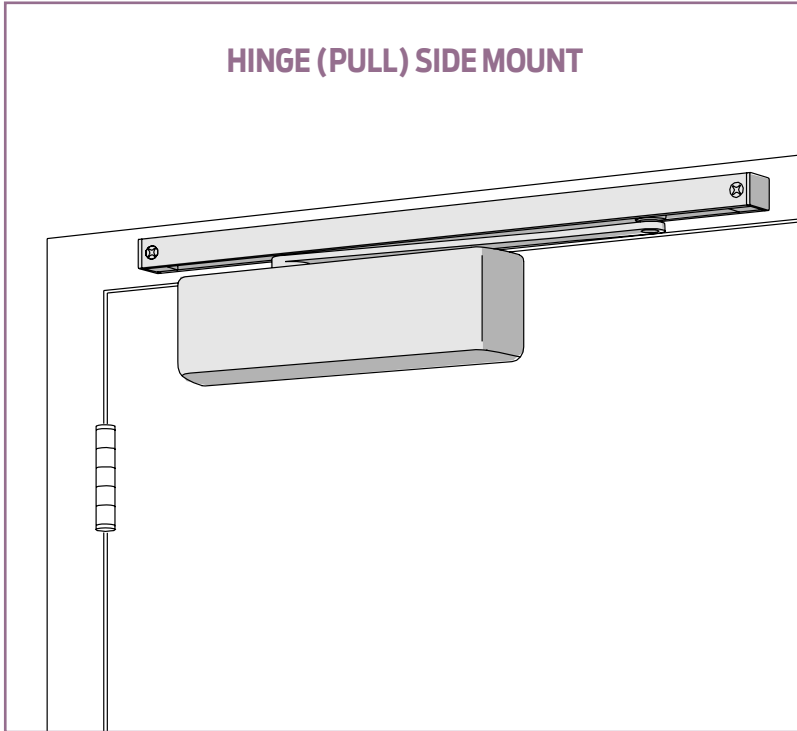
- Plate, 4010-18

SPECIAL TEMPLATE

- ST- _____

4010T SERIES

FEATURES



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

- Cast Iron
- Forged Steel Arm
- Double Heat Treated Steel Pinion
- All Weather Fluid
- UL & cUL Listed
- Peel-n-Stick Templates for Fast and Accurate Installations

- Standard 4010T Series closer is shipped with standard arm, standard track, track roller, standard plastic cover, and self reaming and tapping screws. See 4010T Series pages 9 & 10 for options.
- Sized cylinders for interior doors to 4' 0".
- Closer mounts hinge side, specify right or left swinging door.
- Standard or optional custom powder coat finish.
- Optional plated finish on metal cover, arm and fasteners.
- Optional SRI primer for installations in corrosive conditions is available with powder coat only.
- 4010T-DE available for double egress frames. See 4010T Series page 9.
- The 4010T Series is UL and cUL listed with a standard track for self-closing doors.
- Tested and certified under ANSI Standard A156.4, grade one.

MOUNTING					FINISH		COVER		CYLINDER			**ARM FUNCTION										
HINGE (PULL/SIDE)	TOP JAMB (PULL)	TOP JAMB (PUSH)	PARALLEL ARM	STOP FACE	POWDER COAT	PLATED	PLASTIC	METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY	DELAYED ACTION	AVB***	REGULAR (DOUBLE)	STANDARD (SINGLE)	HOLD-OPEN	FUSIBLE LINK	EDA/HEDA	CUSH/HCUSH	SCUSH/SHCUSH	DOUBLE EGRESS	
●	○	○	○	○	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● AVAILABLE
○ NOT AVAILABLE

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

4010T SERIES

MOUNTING DETAILS

HINGE (PULL) SIDE MOUNTING

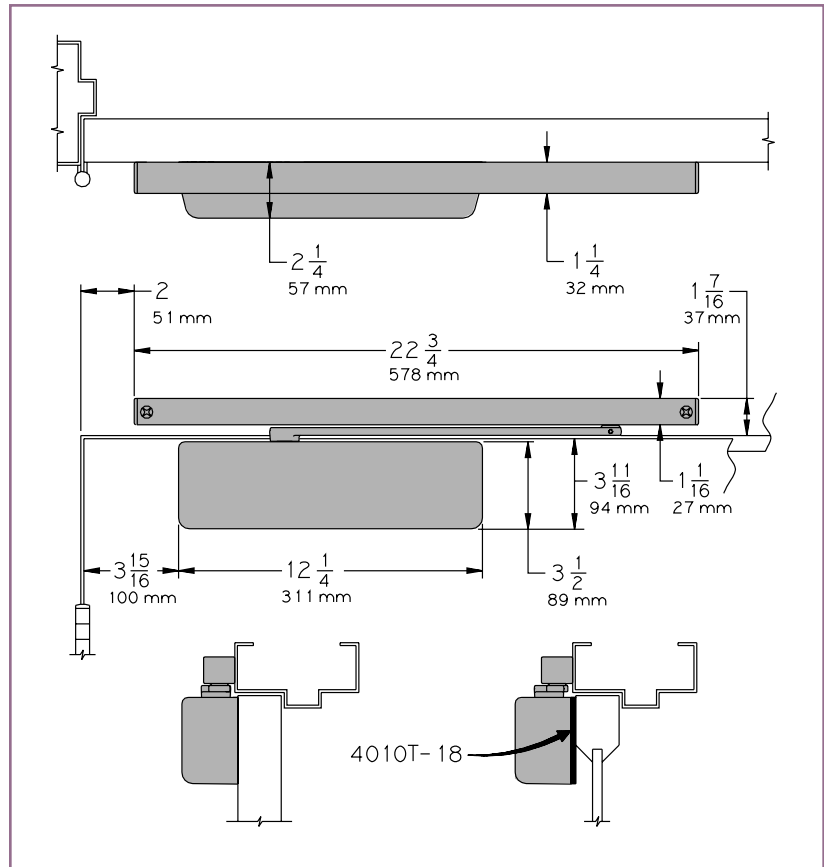
MAXIMUM OPENING

Templating allows 180° with standard arm, limited to 120° when optional bumper is installed.

Consult factory if door will be held open at 180°.

Hold-open points at , 90°, 95°, 100°, 105°, 110° or 120°, depending on the clip location in track.

Please note that many track style door closers are capable of allowing 180° of door swing. Be aware that the majority of track style closers are at their weakest closing force in the 180 – 130° range. Consult factory for applications where an exterior or large/heavy door must swing 180°.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 180°.
 - Note: Optional track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop.**
- **Reveal** should not exceed 1/8" (3 mm) for standard arm. Should not exceed 3-5/16" (84 mm) for double egress arm.
- **Top Rail** less than 3-3/4" (95 mm) requires PLATE, 4010T-18.
 - Note: Plate requires 2" (51 mm) minimum.**
- **Head Frame** requires 1-1/2" (38 mm) minimum.
- **Clearance** of 2-1/4" (57 mm) behind door required for 90° or 180° installation.

Options

- Standard track with bumper, hold-open track, hold-open track with bumper.
- Double egress arm.
- Metal cover.

Special Templates

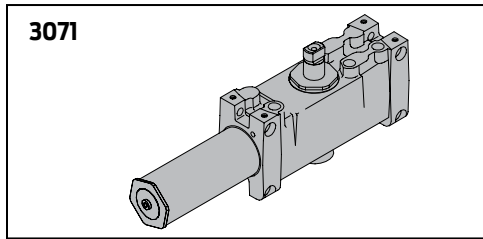
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.

4010T SERIES

CYLINDERS

CYLINDER, 4010T-3071

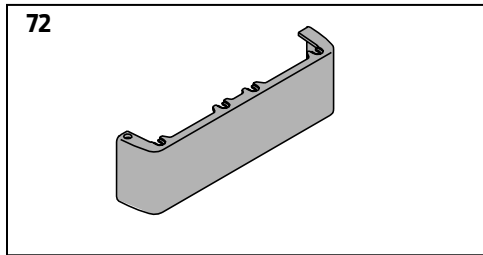
Standard, handed cast iron cylinder assembly.
For various applications see "Table of Sizes" on 4010T Series page 11. Available in sizes 1, 3, & 4.



COVERS

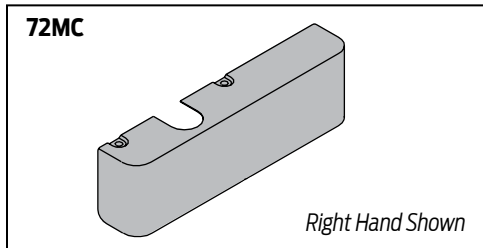
COVER, 4010T-72

Standard, non-handed plastic cover.



METAL COVER, 4010T-72MC

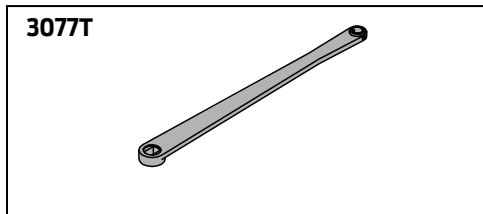
Optional, handed cover. Required for plated finishes and custom powder coat finishes.



ARMS

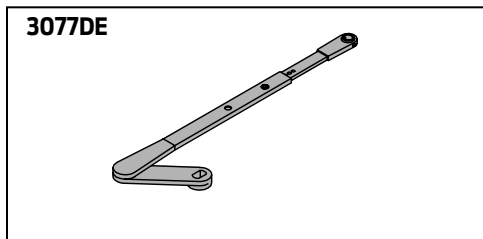
STANDARD ARM, 4010T-3077T

Handed arm.
Arm does not include track roller.



DOUBLE EGRESS ARM, 4010T-3077DE

Optional, handed arm for double egress doors and frames.
Arm does not include track roller.
Maximum reveal is 3 5/16" (84mm).



TRACKS

STANDARD TRACK, 4010T-3038

Standard, non hold-open, non-handed track.
Will accept hold-open clip and/or bumper assembly.

STANDARD TRACK with BUMPER, 4010T-3038B

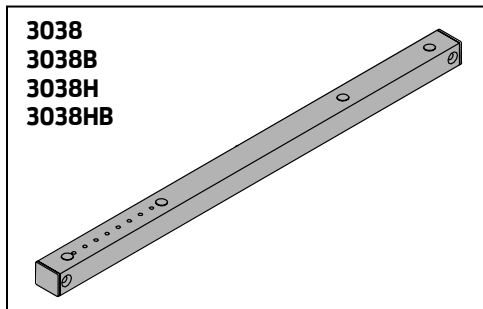
Optional non hold-open, non-handed track with bumper assembly installed.
Will accept hold-open clip.

HOLD-OPEN TRACK, 4010T-3038H

Optional, non-handed track with hold-open clip installed.
Will accept bumper assembly.

HOLD-OPEN TRACK with BUMPER, 4010T-3038HB

Optional, non-handed track with hold-open clip and bumper assembly installed.

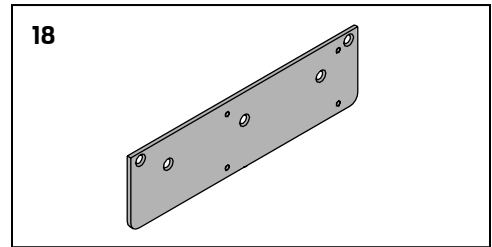


4010T SERIES

INSTALLATION ACCESSORIES

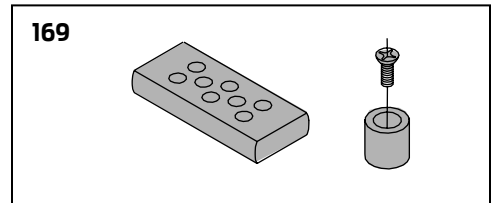
PLATE, 4010T-18

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



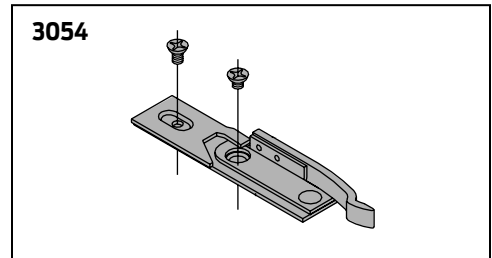
TRACK BUMPER, 4010T-169

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



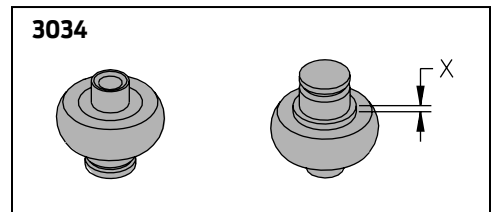
HOLD-OPEN CLIP, 4010T-3054

Mounts in track to provide hold-open function.
Hold-open point controlled by clip location.
Consists of clip and mounting screws.



TRACK ROLLER, 4010T-3034

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



4010T SERIES

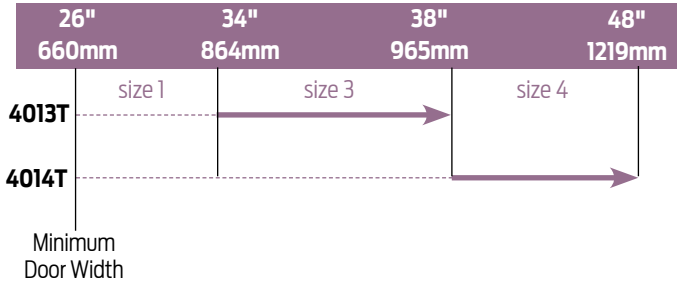
TABLE OF SIZES

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%.

INTERIOR DOOR WIDTH



→ Indicates recommended range of door width for closer size.

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

REDUCED OPENING FORCE 4010 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.

HOW-TO-ORDER 4010T SERIES CLOSERS

1. SPECIFY CYLINDER SIZE

- 4011T (ADA)
- 4013T
- 4014T

2. SPECIFY HAND

- RH
- LH

3. SPECIFY 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)

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 ACCESSORY

- Plate, 4010T-18

SPECIAL TEMPLATE

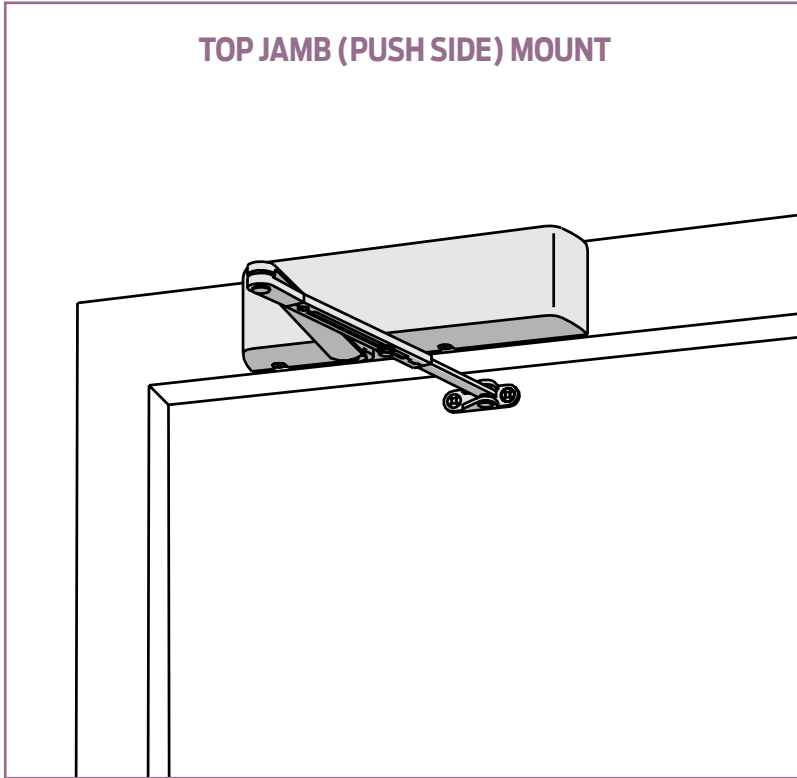
- ST- _____

4020 SERIES

FEATURES

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

- Cast Iron
- Forged Steel Main Arm
- Double Heat Treated Steel Pinion
- All Weather Fluid
- LCN Patented Green Dial
- UL & cUL Listed
- Peel-n-Stick Templates for Fast and Accurate Installations



- Standard 4020 Series closer is shipped with regular arm, standard plastic cover, and self reaming and tapping screws. See 4020 Series page 15 for options.
- Size 6 cylinder for interior doors to 5'0" and exterior doors to 4'0".
- Non-sized cylinder (4021) adjustable for interior doors to 4'6" and exterior doors to 3'6".
- Closer mounts top jamb (push side), specify right or left swinging door.
- 4021 cylinder meets ADA requirements. See 4020 Series page 16.
- Standard or optional custom powder coat finish.
- Optional plated finish on metal cover, arm and fasteners.
- Optional SRI primer for installations in corrosive conditions is available with powder coat only.
- The 4020 Series is UL and cUL listed with regular or fusible link arms for self-closing doors.
- Tested and certified under ANSI Standard A156.4, grade one.



MOUNTING					FINISH		COVER		CYLINDER			**ARM FUNCTION									
HINGE (PULL SIDE)	TOP JAMB (PULL)	TOP JAMB (PUSH)	PARALLEL ARM	STOP FACE	POWDER COAT	PLATED	PLASTIC	METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY	DELAYED ACTION	AVB***	REGULAR (DOUBLE)	STANDARD (SINGLE)	HOLD-OPEN	FUSIBLE LINK	EDA/HEDA	CUSH/HCUSH	SCUSH/SHCUSH	DOUBLE EGRESS
○	○	●	○	○	●	●	●	●	○	●	♿	●	○	180°	○	140°	140°	○	○	○	○

● AVAILABLE
○ NOT AVAILABLE

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

4020 SERIES

MOUNTING DETAILS

TOP JAMB (PUSH SIDE) MOUNTING

MAXIMUM OPENING

Can be templated for
100°,

Ⓐ = 6" (152 mm)

Ⓑ = 12 3/8" (314 mm)

140°,

Ⓐ = 4" (102 mm)

Ⓑ = 10 3/8" (264 mm)

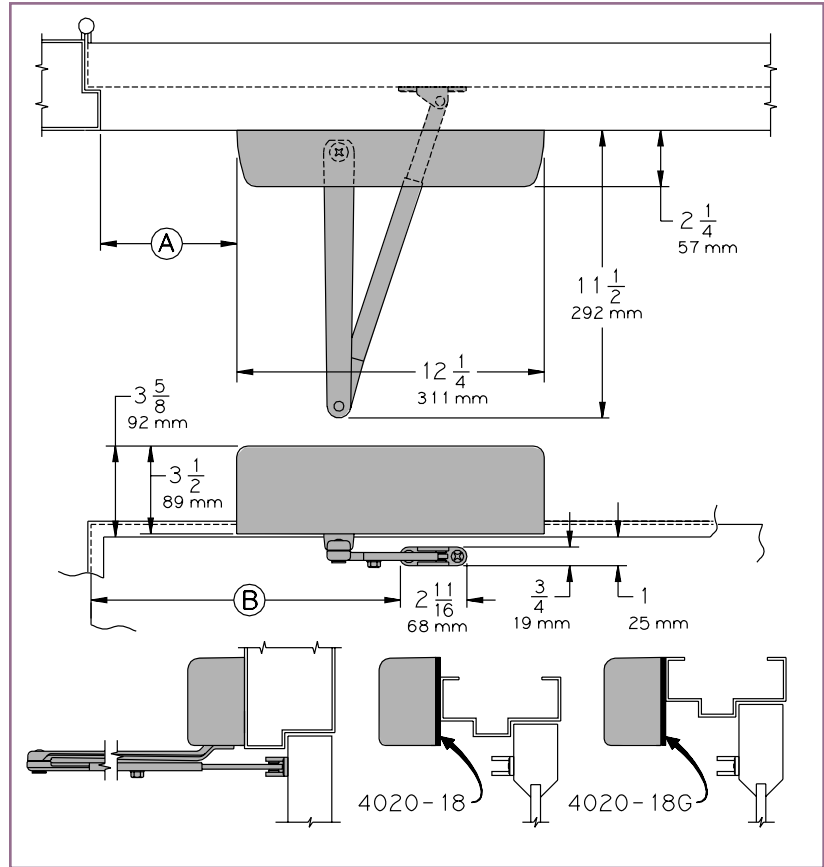
or 180°.

Ⓐ = 2" (51 mm)

Ⓑ = 8 3/8" (213 mm)

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.



Options

- Size 6 or non-sized cylinder.
- Delayed action cylinder.
- Hold-open, or fusible link arm.
- Metal cover.

Special Templates

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

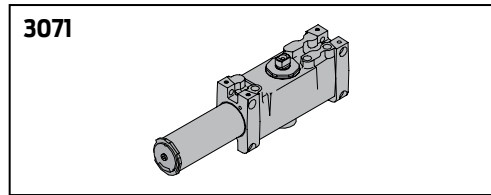
- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where the door cannot swing 180°.
- **Reveal** of 2-9/16" (65 mm) allows 180° opening with regular arm.
4-13/16" (122 mm) allows up to 140° opening with regular arm.
8" (203 mm) allows up to 140° opening with LONG ARM where standard rod and shoe is replaced with optional long rod and shoe (4020-79LR).
- **Head Frame** less than 3-7/16" (87 mm) requires PLATE, 4020-18
Use PLATE, 4020-18G for flush ceiling condition.
Either plate requires 1-3/4" (44 mm) minimum.
- **Top Rail** requires minimum 1-1/2" (38 mm).
Closer on 4020-18 plate requires 2" (51 mm) minimum.
Closer on 4020-18G plate requires 2-3/4" (70 mm) minimum.
- **Delayed Action** Add suffix "DEL" to selected cylinder.
Not available with 4026 cylinder.
Delays closing from maximum opening to approximately 75°.
Delay time adjustable up to approximately 1 minute.

4020 SERIES

CYLINDERS

CYLINDER, 4020-3071

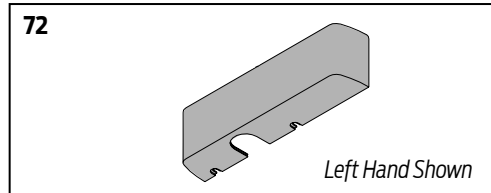
Standard, handed cast iron cylinder assembly.
For various applications see "Table of Sizes" on 4020 Series page 16.



COVERS

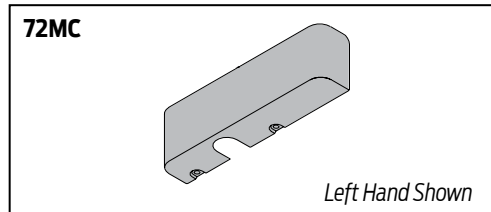
COVER, 4020-72

Standard, handed plastic cover.



METAL COVER, 4020-72MC

Optional, handed cover. Required for plated finishes and custom powder coat finishes.



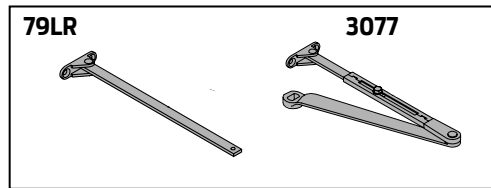
ARMS

REGULAR ARM, 4020-3077

Non-handed arm.

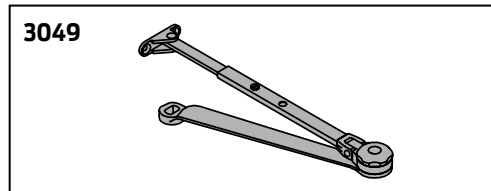
LONG ARM, 4020-3077L

Optional non-handed arm includes 4020-79LR for deep reveals.
(see page 14 for allowable reveals)



HOLD-OPEN ARM, 4020-3049

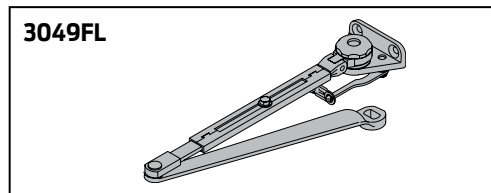
Optional, handed arm provides hold-open function, adjustable at elbow. 5-3/4" (146 mm) maximum reveal, 140° hold open.



FUSIBLE LINK ARM, 4020-3049FL

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

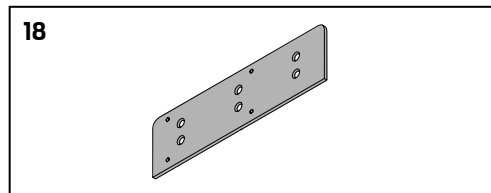
NOTE: Check local codes before specifying FL arms. NOT A life safety product!



INSTALLATION ACCESSORIES

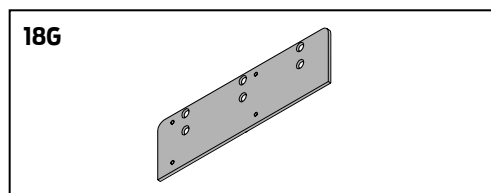
PLATE, 4020-18

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



PLATE, 4020-18G

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

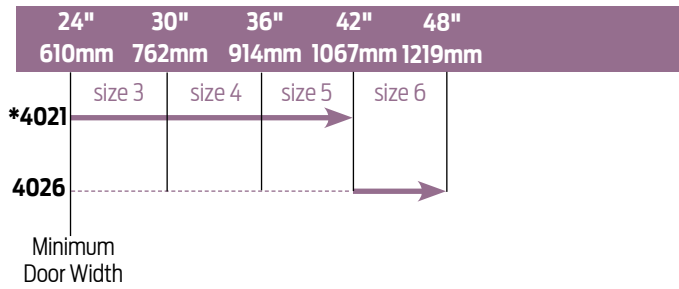


4020 SERIES

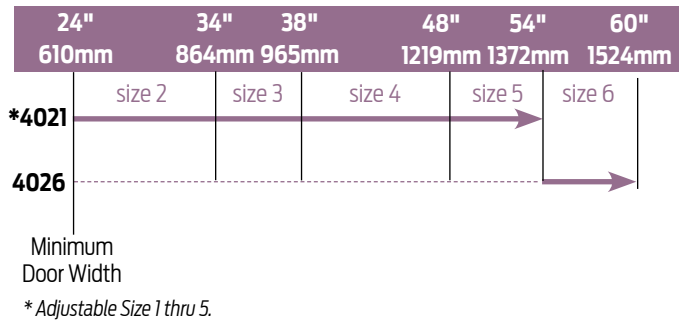
TABLE OF SIZES

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.

REDUCED OPENING FORCE 4010 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.

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 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

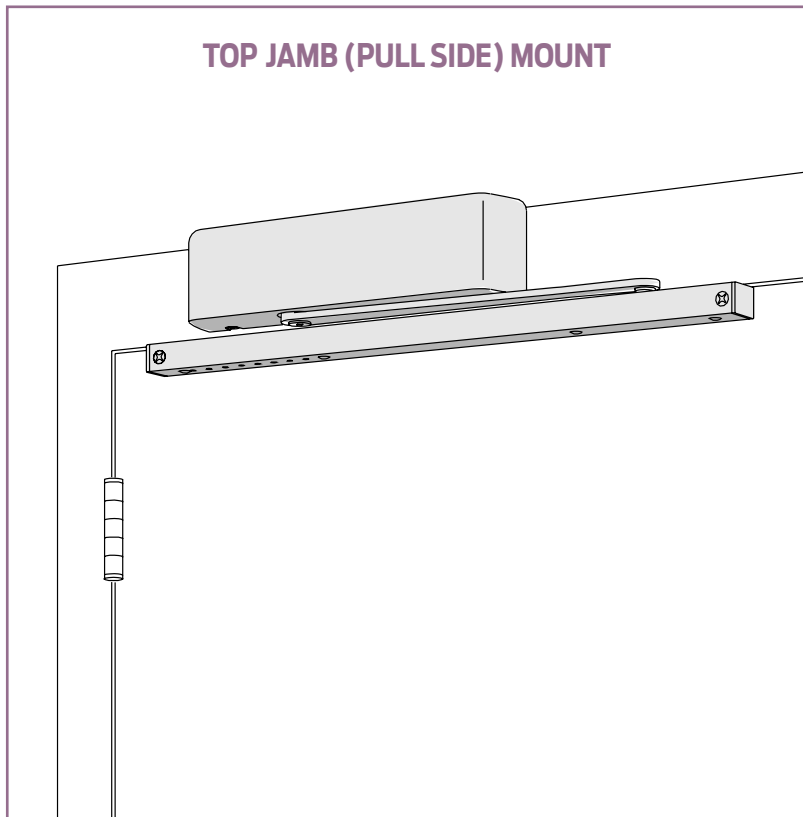
- ST- _____

4020T SERIES

FEATURES

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

- Cast Iron
- Forged Steel Arm
- Double Heat Treated Steel Pinion
- All Weather Fluid
- UL & cUL Listed
- Peel-n-Stick Templates for Fast and Accurate Installations



- Standard 4020T Series closer is shipped with standard arm, standard track, track roller, standard plastic cover, and self reaming and tapping screws. See 4020T Series pages 19 & 20 for options.
- Sized cylinders for interior doors to 4'0".
- Closer mounts top jamb (pull side), specify right or left swinging door.
- Standard or optional custom powder coat finish.
- Optional plated finish on metal cover, arm and fasteners.
- Optional SRI primer for installations in corrosive conditions is available with powder coat only.
- The 4020T Series is UL and cUL listed with a standard track for self-closing doors.
- Tested and certified under ANSI Standard A156.4, grade one.

MOUNTING					FINISH		COVER		CYLINDER			**ARM FUNCTION									
HINGE (PULL SIDE)	TOP JAMB (PULL)	TOP JAMB (PUSH)	PARALLEL ARM	STOP FACE	POWDER COAT	PLATED	PLASTIC	METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY	DELAYED ACTION	AVB***	REGULAR (DOUBLE)	STANDARD (SINGLE)	HOLD-OPEN	FUSIBLE LINK	EDA/HEDA	CUSH/HCUSH	SCUSH/SHCUSH	DOUBLE EGRESS
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

● 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

TOP JAMB (PULL SIDE) MOUNTING

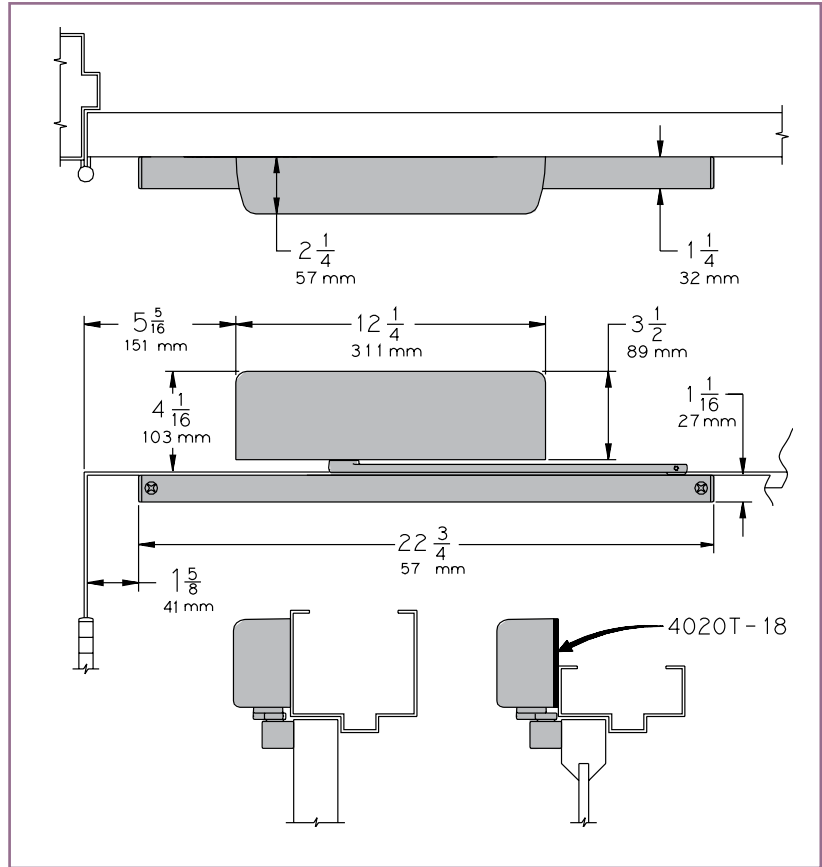
MAXIMUM OPENING

Templating allows 180° with standard track arm, limited to 100° with optional bumper installed.

Consult factory if door will be held open at 180°.

Hold-open points at 80°, 85°, 90°, 95°, or 100° with hold-open tracks.

Please note that many track style door closers are capable of allowing 180° of door swing. Be aware that the majority of track style closers are at their weakest closing force in the 180° – 130° range. Consult factory for applications where an exterior or large/heavy door must swing 180°.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 180°. Optional track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop.
- **Reveal** should not exceed 1/8" (3 mm).
- **Head Frame** less than 3-7/8" (98 mm), requires PLATE, 4020T-18. Plate requires 1-3/4" (44 mm) minimum.
- **Clearance** of 1-1/2" (38 mm) behind door required for 90° or 180° installation.

Options

- Standard track with bumper, hold-open track, hold-open track with bumper.
- Metal cover.

Special Templates

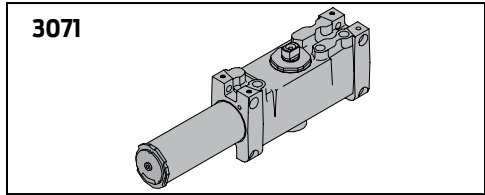
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.

4020T SERIES

CYLINDERS

CYLINDER, 4020T-3071

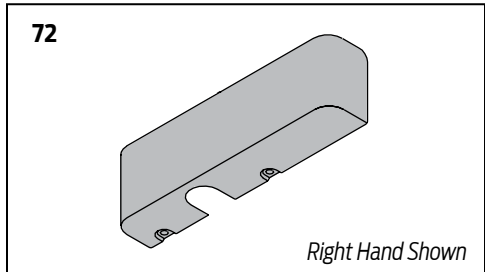
Standard, handed cast iron cylinder assembly.
For various applications see "Table of Sizes" on 4020T Series page 21.



COVERS

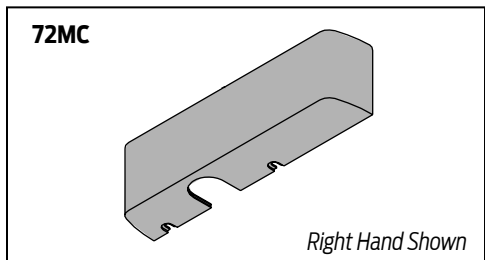
COVER, 4020T-72

Standard, handed plastic cover.



METAL COVER, 4020T-72MC

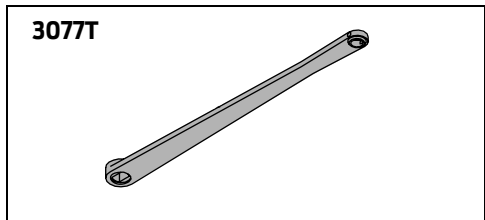
Optional, handed cover. Required for plated finishes and custom powder coat finishes.



ARMS

STANDARD ARM, 4020T-3077T

Handed arm. Roller not included with arm.



TRACKS

STANDARD TRACK, 4020T-3038

Standard, non hold-open, non-handed track.
Will accept hold-open clip and/or bumper assembly.

STANDARD TRACK with BUMPER, 4020T-3038B

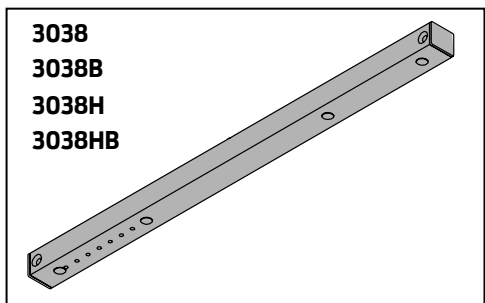
Optional non hold-open, non-handed track with bumper assembly installed. Will accept hold-open clip.

HOLD-OPEN TRACK, 4020T-3038H

Optional, non-handed track with hold-open clip installed.
Will accept bumper assembly.

HOLD-OPEN TRACK with BUMPER, 4020T-3038HB

Optional, non-handed track with hold-open clip and bumper assembly installed.

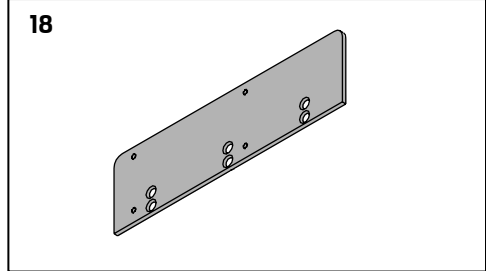


4020T SERIES

INSTALLATION ACCESSORIES

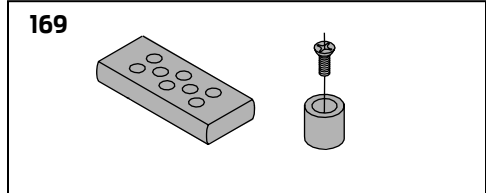
PLATE, 4020T-18

Required where head frame is less than 3-7/8" (98 mm).
Plate requires minimum 1-3/4" (44 mm) frame face.



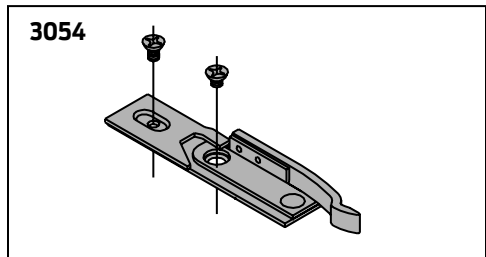
TRACK BUMPER, 4020T-169

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



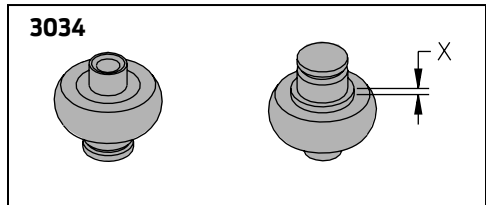
HOLD-OPEN CLIP, 4020T-3054

Mounts in track to provide hold-open function.
Hold-open point controlled by clip location.
Consists of clip and mounting screws.



TRACK ROLLER, 4020T-3034

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



4020T SERIES

TABLE OF SIZES

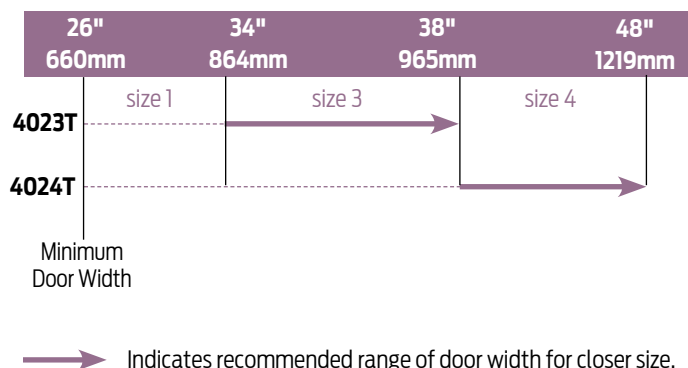
Select closer based on width of door.

4020T Series cylinders available in size 1, 3 or 4.

Closing power of all 4020T Series closers may be increased 15%.

Specify next higher size closer where strong drafts exist.

INTERIOR DOOR WIDTH



HOW-TO-ORDER 4020T SERIES CLOSERS

1. SELECT CYLINDER SIZE

- 4021T (ADA)
- 4023T
- 4024T

2. SPECIFY HAND

- RH
- LH

3. SPECIFY 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)

TRACK

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

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 ACCESSORY

- Plate, 4020T-18

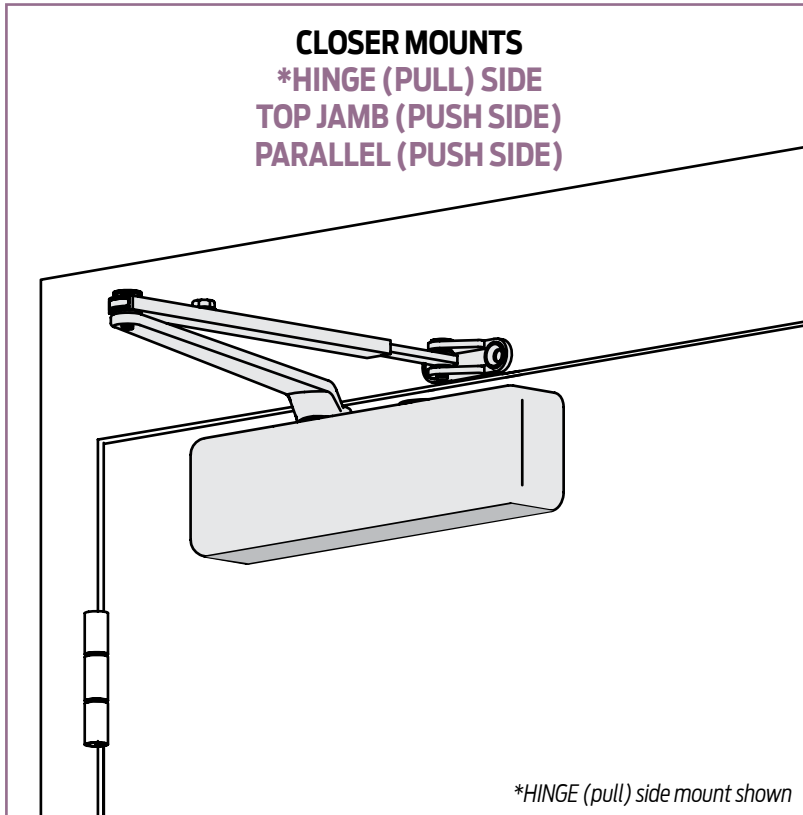
SPECIAL TEMPLATE

- ST- _____

ORDERING INFORMATION

4030 SERIES

FEATURES



The 4031 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.

- Cast Iron
- Forged Steel Main Arm
- Heat Treated Steel Pinion
- All Weather Fluid
- UL & cUL Listed

- Standard new 4030 Series closer is shipped with forged regular arm, metal cover and wood/self-tapping machine screw pack. See 4030 Series pages 28 & 29 for options.
- Non-sized (1-4) 4031 cylinder for exterior doors to 36" (914 mm) and interior doors to 48" (1219 mm).
- Closer mounts hinge side, top jamb, and parallel arm, on either right or left swinging doors.
- Closer meets ADA requirements. See 4030 Series page 30.
- Standard or optional custom powder coat finish.
- Optional plated finish on metal cover, arm and fasteners.
- Optional SRI primer for installations in corrosive conditions is available with powder coat only.
- The 4030 Series is UL and cUL listed for Self-closing doors without hold-open.
- Tested and certified under ANSI Standard A156.4, grade one.

MOUNTING					FINISH		COVER		CYLINDER			**ARM FUNCTION									
HINGE (PULL) SIDE	TOP JAMB (PULL)	TOP JAMB (PUSH)	PARALLEL ARM	STOP FACE	POWDER COAT	PLATED	PLASTIC	METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY	DELAYED ACTION	AVB***	REGULAR (DOUBLE)	STANDARD (SINGLE)	HOLD-OPEN	FUSIBLE LINK	EDA/HEDA	CUSH/HCUSH	SCUSH/HCUSH	DOUBLE EGRESS
●	○	●	●	○	●	●	○	●	●	○	○	○	○	180°	○	180°	○	110°	100°	100°	○

● AVAILABLE
○ NOT AVAILABLE

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

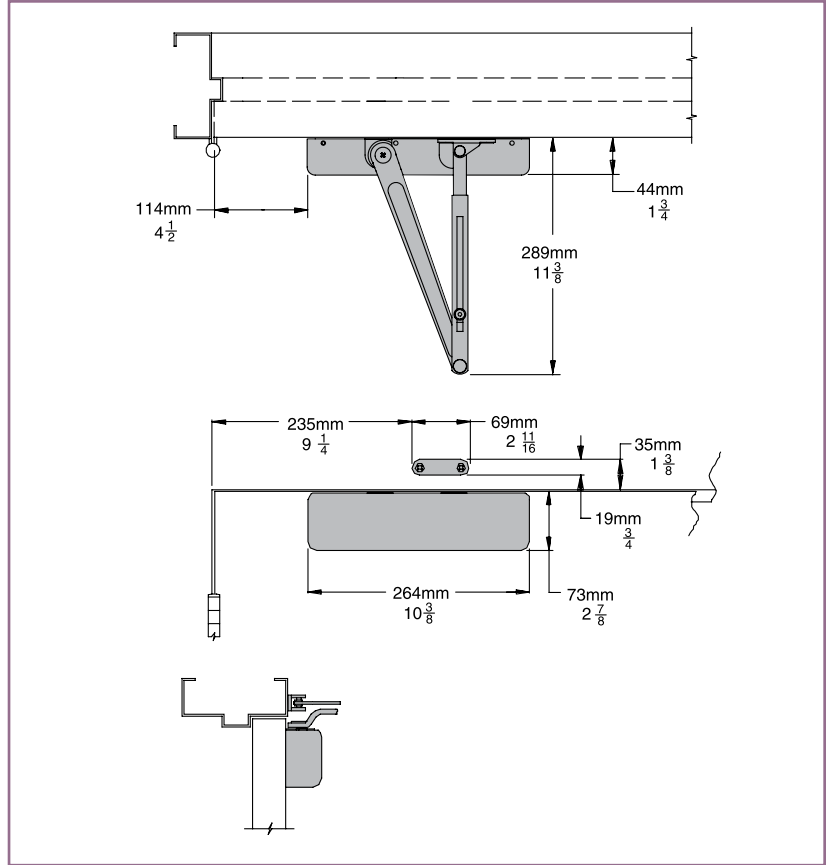
4030 SERIES

HINGE (PULL) SIDE MOUNTING

MAXIMUM OPENING

Can be templated for 180°.

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



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 180°.
- **Reveal** should not exceed 3/16" (5 mm) for regular arm or 3/16" (5 mm) for hold-open arm.
- **Top Rail** requires 2-7/8" (73 mm) minimum.
- **Clearance** of 1-3/4" (44 mm), behind door required for installation.

Options

- Hold-open arm.

Special Templates

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

4030 SERIES

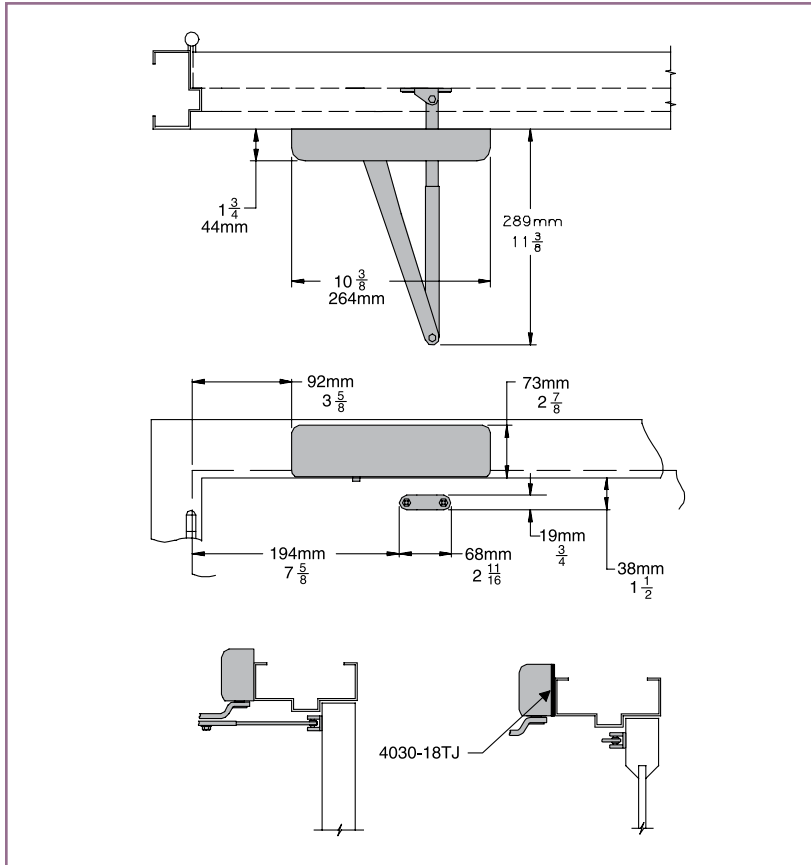
TOP JAMB (PUSH SIDE) MOUNTING

MAXIMUM OPENING

Can be templated for 180°.

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

MOUNTING DETAILS



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where the door cannot swing 180°.
- **Reveal** up to 3-1/2" (89 mm) allows 180° opening. Reveal up to 7-1/2" (191 mm) with long arm allows for 140° opening.
- **Top Rail** requires 1-1/2" (38 mm) minimum from stop.
- **Head Frame** less than 2-1/4" (57 mm) requires PLATE, 4030-18TJ. Plate requires 1-1/2" (38 mm) minimum.

Options

- Hold-open arm.
- Long arm.
- Long Hold-open arm.

Special Templates

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

4030 SERIES

PARALLEL ARM (PUSH SIDE) MOUNTING

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.

MAXIMUM OPENING

REGULAR or HOLD-OPEN arms can be templated for 180°.

EDA template allows 110° maximum opening. Hold-open points up to maximum opening with hold-open arm.

- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing maximum opening.
- **Clearance** for 4030-62PA shoe is 4" (102 mm) from door face. EDA arm is 5-1/2" (140 mm) from door face.
- **Top Rail** less than 5" (127 mm) measured from the stop requires PLATE, 4030-18PA. Plate requires 1-3/4" (44 mm) minimum.
- **Stop Width** minimum 1" (25 mm).
- **Head Frame** flush or single rabbeted requires PA SHOE ADAPTER, 4030-419.
- **Blade Stop** clearance, requires 1/2" (13 mm) BLADE STOP SPACER, 4030-61.
- **Auxiliary Shoe** 4030-62A allows installation of regular arm with overhead holder/stop. Special templating required.
- **EDA Arm** requires SHOE SUPPORT, 4030-30 for fifth screw anchorage where reveal is less than 3-1/16" (78 mm).

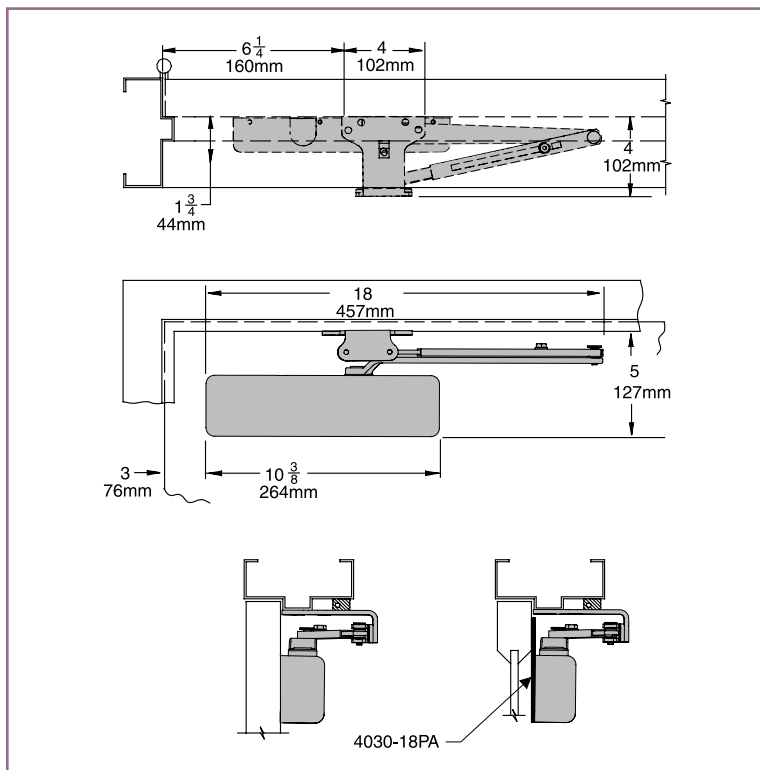
Options

- Hold-open, EDA, HEDA, CUSH, HCUSH, arm.

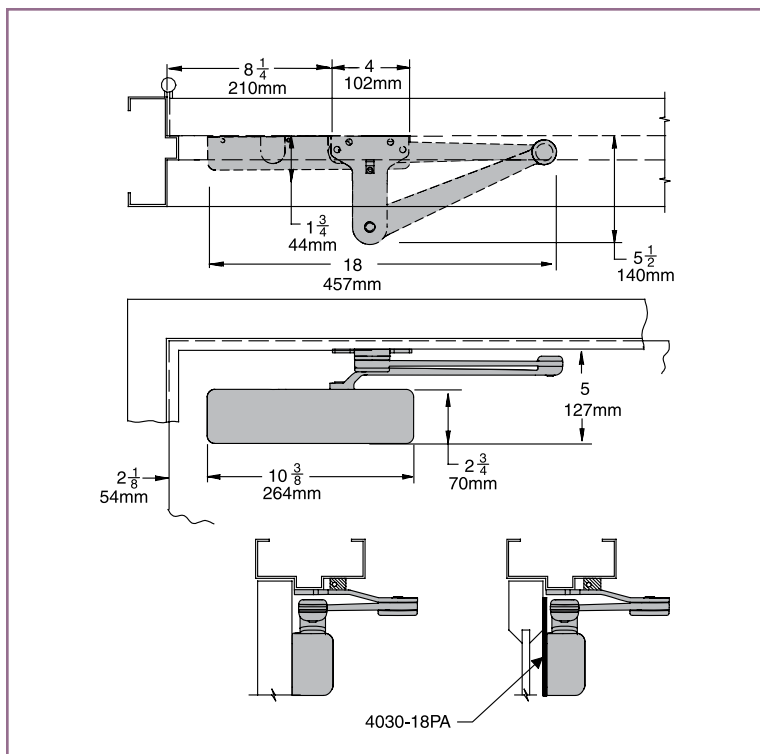
Special Templates

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

4030 PARALLEL ARM MOUNT



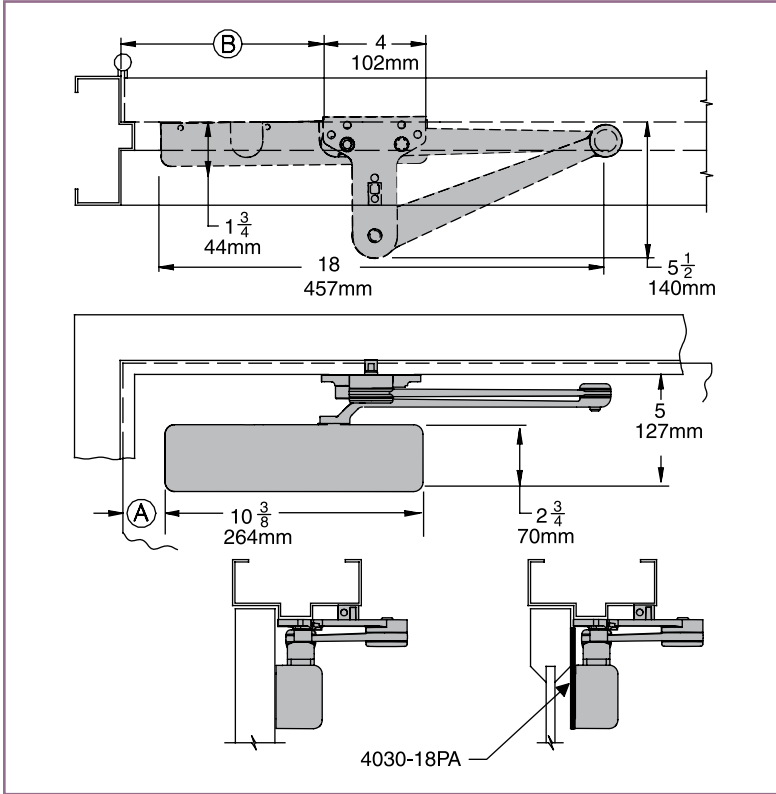
4030 EDA MOUNT



4030 closers ordered with EDA arms include 4030-201 FIFTH HOLE SPACER to support the shoe.

4030 SERIES

4030 CUSH MOUNT



CUSH-N-STOP OR SPRING CUSH MOUNTING

4031 closers ordered with CUSH or SPRING CUSH arms include 4030-201 FIFTH HOLE SPACER to support the shoe.

MAXIMUM OPENING

CUSH and SPRING CUSH arms can be templated for maximum opening/hold-open point at 85°,

Ⓐ = 3-5/8" (92 mm)

Ⓑ = 9-3/4" (248 mm)

90°,

Ⓐ = 3" (76 mm)

Ⓑ = 9-1/8" (232 mm)

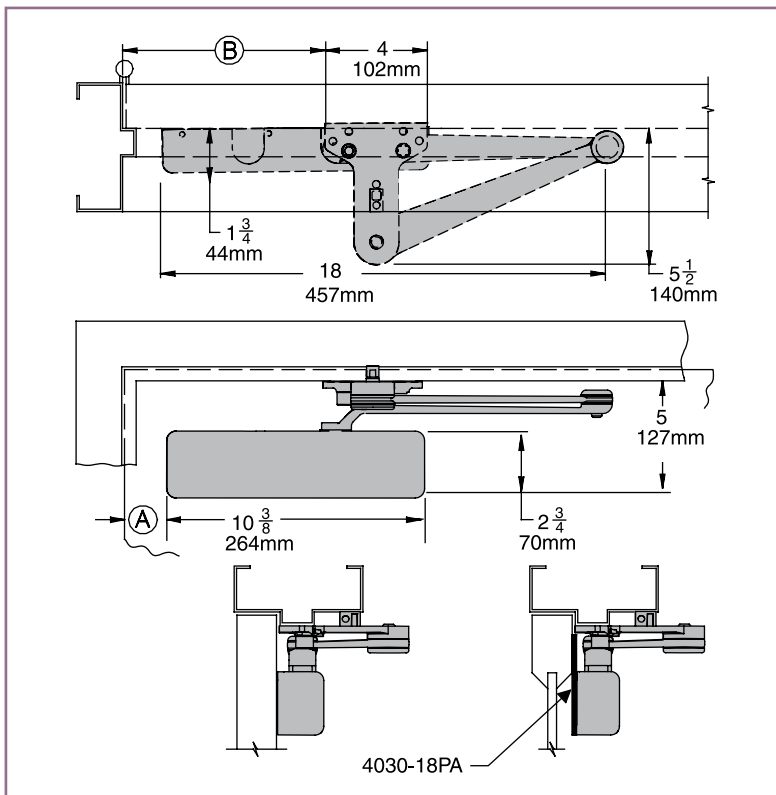
or 100°*.

Ⓐ = 1-7/8" (48 mm)

Ⓑ = 8" (203 mm)

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

4030 SPRING CUSH MOUNT



Spring Cush hold-open points are approximately 5° less than templated stop point.

Clearance for CUSH or SPRING CUSH shoe is 5-1/2" (140 mm) from door face.

Head Frame flush or rabbeted requires CUSH FLUSH PANEL ADAPTER, 4030-419.

CUSH or SPRING CUSH ARM requires SHOE SUPPORT, 4030-30 for fifth screw anchorage where reveal is less than 3-1/16" (78 mm).

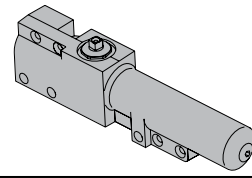
4030 SERIES

CYLINDERS

CYLINDER, 4031-3071

Standard, non-handed cast iron cylinder assembly.

3071

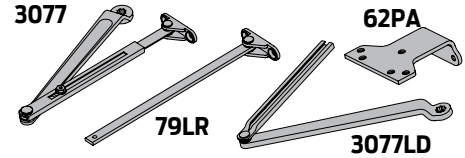


ARMS

REGULAR ARM, 4030-3077

Non-handed arm mounts hinge side or top jamb. P4031 closer includes PA SHOE, 4030-62PA is required for parallel arm mounting.

3077



LIGHT DUTY ARM, 4030-3077LD

Optional non-handed stamped arm mounts hinge side, top jamb or parallel arm (62PA required).

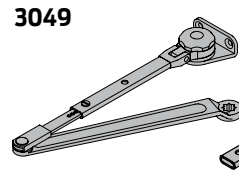
PA SHOE, 4030-62PA

Required for parallel arm mounting.

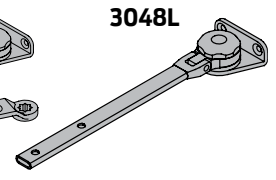
LONG ARM, 4030-3077L

Optional non-handed arm includes LONG ROD AND SHOE, 4030-79LR for top jamb mount with deep reveals.

3049



3048L



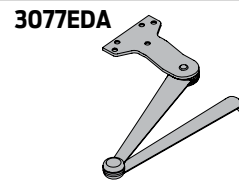
HOLD-OPEN ARM, 4030-3049

Optional, non-handed arm mounts hinge side, top jamb or parallel arm (62PA required). Hold-open adjustable at shoe.

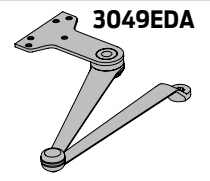
LONG HOLD-OPEN ARM, 4030-3049L

Optional non-handed arm includes LONG HEAD AND TUBE, 4030-3048L for top jamb mount with deep reveals.

3077EDA



3049EDA



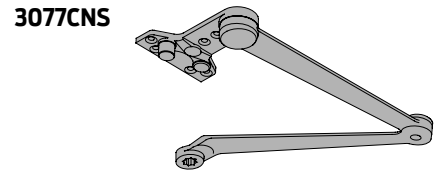
EXTRA DUTY ARM, 4030-3077EDA

Optional, non-handed parallel arm features solid forged steel main and forearm for potentially abusive installations.

HOLD-OPEN EDA ARM, 4030-3049EDA

Optional handed arm, provides hold-open function adjustable at shoe.

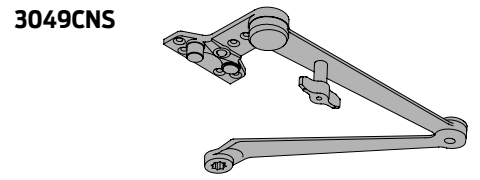
3077CNS



CUSH-N-STOP® ARM, 4030-3077CNS

Optional, non-handed parallel arm features solid forged steel main arm and forearm with stop in soffit shoe.

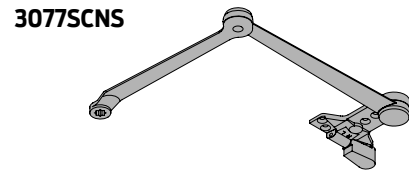
3049CNS



HOLD-OPEN CUSH ARM, 4030-3049CNS

Optional non-handed arm, provides hold-open function with templated stop/hold-open points. Handle controls hold-open function.

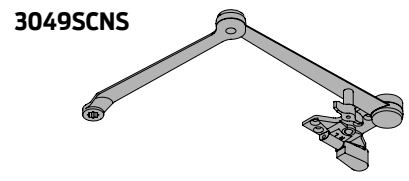
3077SCNS



SPRING CUSH ARM, 4030-3077SCNS

Optional, non-handed parallel arm for abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe.

3049SCNS



SPRING HCUSH ARM, 4030-3049SCNS

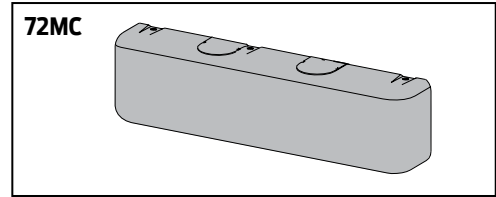
Optional, non-handed parallel arm for abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe. Handle controls hold-open function.

4030 SERIES

COVERS

COVER, 4030-72MC

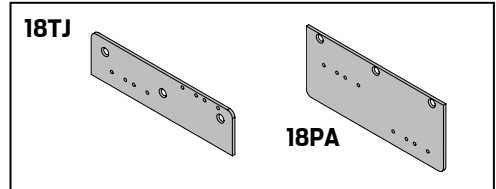
Non-handed metal cover.



INSTALLATION ACCESSORIES

PLATE, 4030-18TJ

Required for top jamb mounting where head frame is less than 2-1/4" (57 mm) or flush ceiling condition exists. Plate requires 1-1/2" (38 mm) minimum.

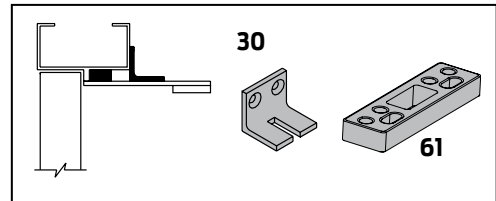


PLATE, 4030-18PA

Required for parallel arm mounting where top rail is less than 5" (127 mm), measured from the stop. Plate requires 1-3/4" (44 mm) minimum.

CUSH SHOE SUPPORT, 4030-30

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

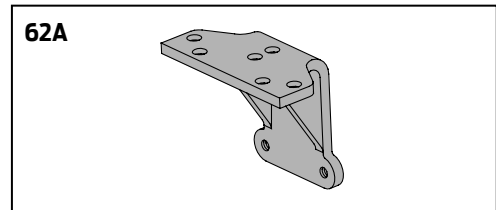


BLADE STOP SPACER, 4030-61

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

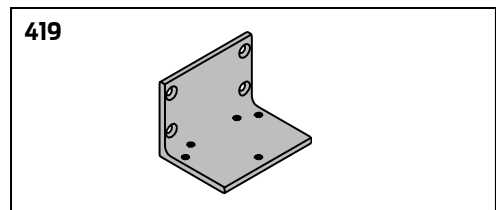
AUXILIARY SHOE, 4030-62A requires a top rail of 7" (178 mm).

Optional shoe replaces -62PA for parallel arm mounting of regular arm with some overhead holder/stop. Consult factory.



PA FLUSH PANEL ADAPTER, 4030-419

Provides horizontal mounting surface for PA or CUSH shoe on single rabbeted or flush frame.

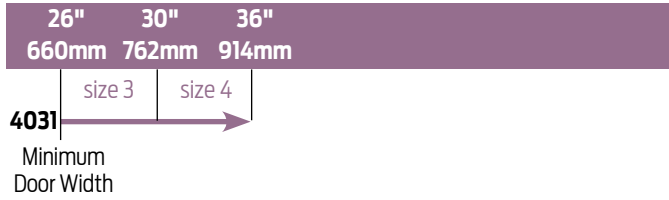


4030 SERIES

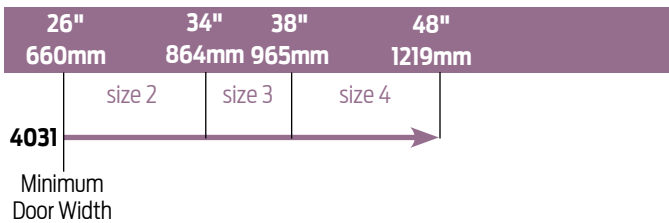
TABLE OF SIZES

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 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.

HOW-TO-ORDER 4030 SERIES CLOSERS

1. SELECT FINISH

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

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.

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

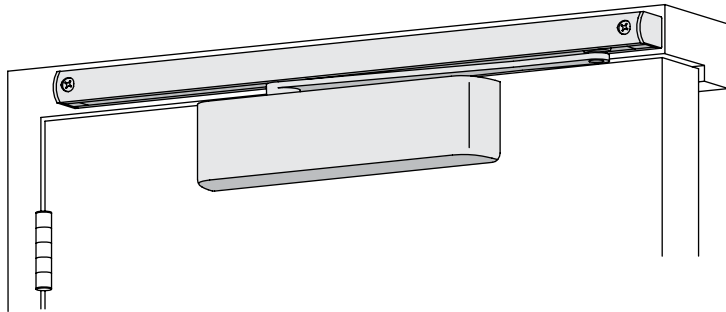
- Plate, 4030-18TJ
- Plate, 4030-18PA
- CUSH Shoe Support, 4030-30
- Blade Stop Spacer, 4030-61
- Auxiliary Shoe, 4030-62A
- PA Flush Panel Adapter, 4030-419

SPECIAL TEMPLATE

- ST- _____

4030T SERIES

CLOSER MOUNTS
***HINGE (PULL) SIDE**
TOP JAMB (PULL SIDE)
STOP FACE (PUSH SIDE)



*HINGE (pull) side mount shown

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

- Cast Iron
- Heat Treated Steel Pinion
- All Weather Fluid
- UL & cUL Listed

- Standard 4031T Series closer is shipped with a standard arm, metal cover, a standard track and wood/self-tapping machine screw pack. See 4030T Series page 35 for options.
- Non-sized 4031T cylinder for interior doors to 38" (965 mm).
- Closer mounts pull side on door, pull side on frame and push side on door, on either right or left swinging doors.
- Standard or optional custom powder coat finish.
- Optional plated finish on metal cover, arm and fasteners.
- Optional SRI primer for installations in corrosive conditions is available with powder coat only.
- The 4030 Series is UL and cUL listed for Self-closing doors without hold-open.
- Tested and certified under ANSI Standard A156.4, grade one.

MOUNTING					FINISH		COVER		CYLINDER			** ARM FUNCTION										
HINGE (PULL) SIDE	TOP JAMB (PULL)	TOP JAMB (PUSH)	PARALLEL ARM	STOP FACE	POWDER COAT	PLATED	PLASTIC	METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY	DELAYED ACTION	AVB***	REGULAR (DOUBLE)	STANDARD (SINGLE)	HOLD-OPEN	FUSIBLE LINK	EDA/HEDA	CUSH/H/CUSH	SCUSH/SHCUSH	DOUBLE EGRESS	
●	●	○	○	●	●	○	○	●	●	♿	○	○	○	○	○	○	○	○	○	○	○	○

● 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.

4030T SERIES

HINGE (PULL) SIDE MOUNTING

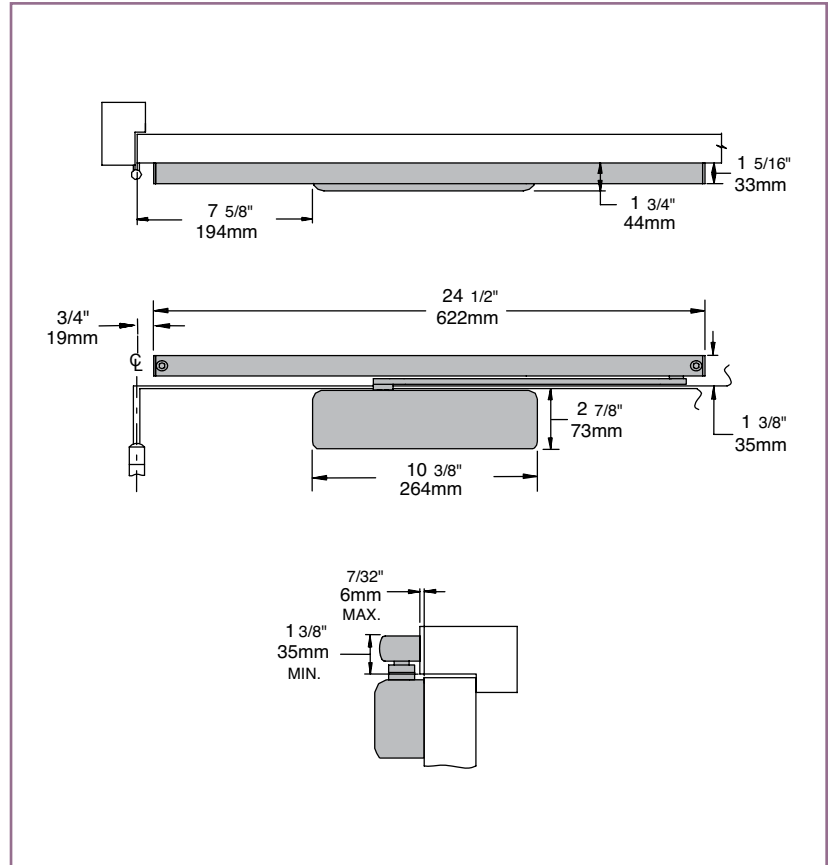
MAXIMUM OPENING

Can be templated for 180°.

Consult factory if door will be held open at 180°.

Hold-open points up to Maximum opening point with hold-open option.

Please note many track style door closers are capable of allowing 180° of door swing. Be aware 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°.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 180°.
- **Reveal** should not exceed 7/32" (6 mm).
- **Top Rail** requires 2-7/8" (73 mm) minimum.
- **Clearance** of 1-3/4" (44 mm) behind door required for installation.

Options

- Hold-open track.

Special Templates

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

4030T SERIES

TOP JAMB (PULL SIDE) MOUNTING

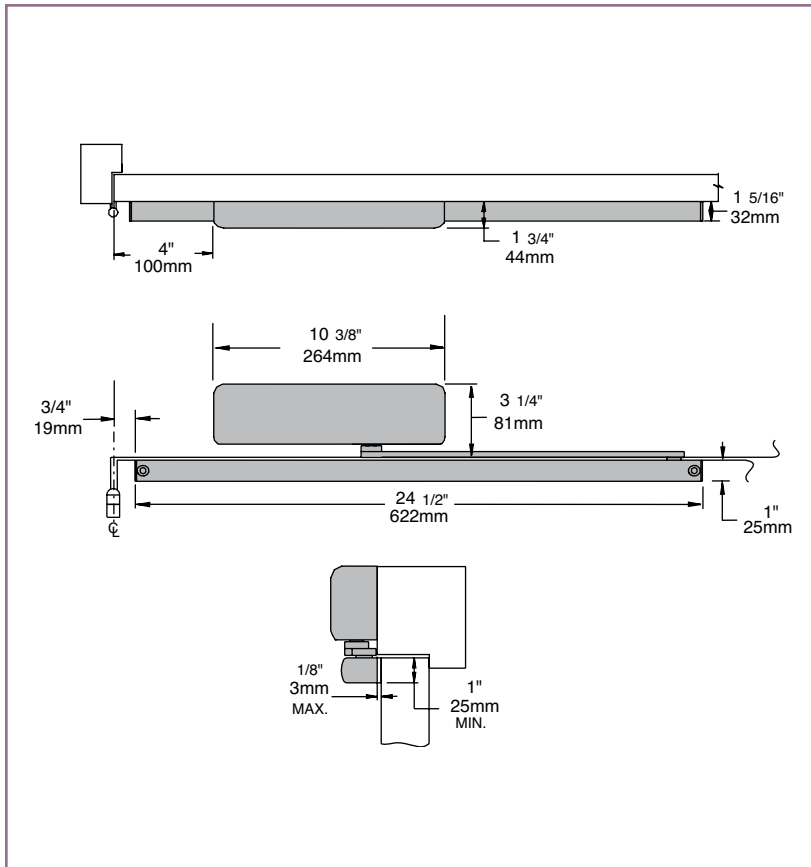
MAXIMUM OPENING

Can be templated for 180°.

Consult factory if door will be held open at 180°.

Hold-open points up to maximum opening with hold-open option.

Please note many track style door closers are capable of allowing 180° of door swing. Be aware 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°.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where the door cannot swing 180°.
- **Reveal** should not exceed 1/8" (3 mm).
- **Top Rail** requires 1" (25 mm) minimum.
- **Head Frame** requires 2-7/8" (73 mm) minimum.

Options

- Hold-open track.

Special Templates

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

4030T SERIES

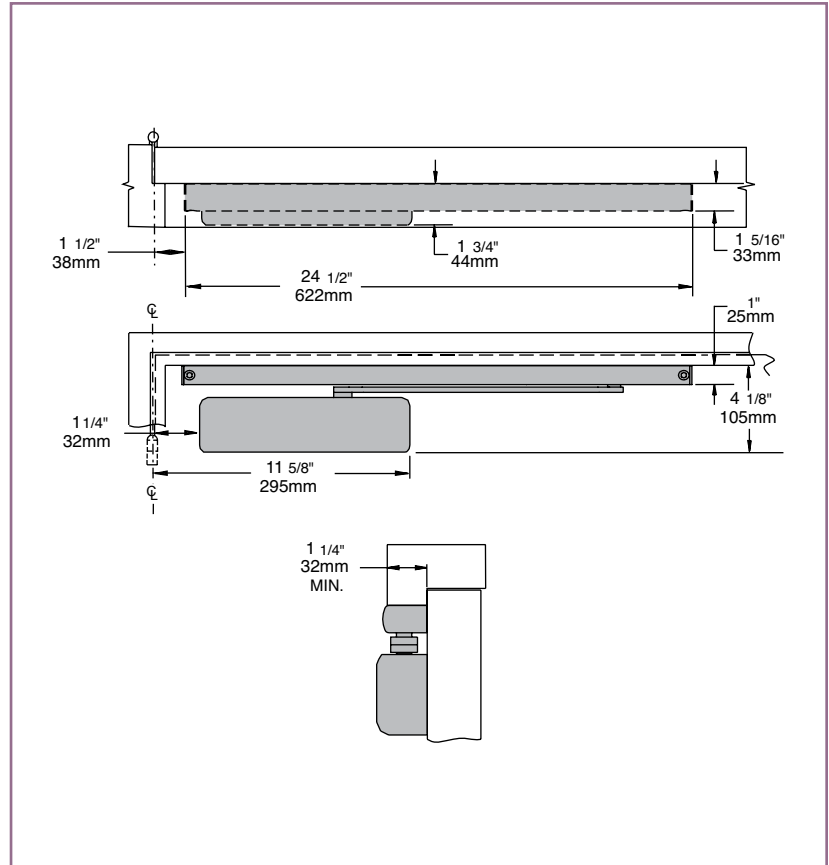
STOP FACE (PUSH SIDE) MOUNTING

MAXIMUM OPENING

Can be templated for 110°.

Hold-open points up to maximum opening with hold-open option.

Please note that many track style door closers are capable of allowing 180° of door swing. Be aware that the majority of track style closers are at their weakest closing force in the 180° – 130° range. Consult factory for applications where an exterior or large/heavy door must swing 180°.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where the door cannot swing 110°.
- **Reveal** should not exceed 1-3/4" (44 mm).
- **Top Rail** requires 4-1/8" (105 mm) minimum measured from the stop.
- **Head Frame** minimum 1-1/4" (32 mm).

Options

- Hold-open track.

Special Templates

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

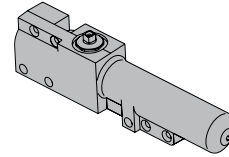
4030T SERIES

CYLINDERS

CYLINDER, 4031T-3071

Standard, non-handed cast iron cylinder assembly.

3071

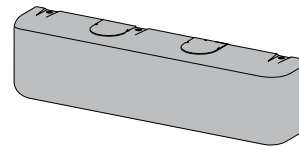


COVERS

COVER, 4030T-72MC

Non-handed metal cover.

72MC

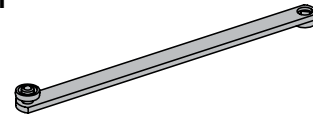


ARMS

STANDARD ARM, 4030T-3077T

Non-handed single lever arm mounts hinge side, top jamb or stop face. Track roller included with arm.

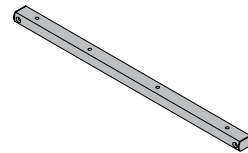
3077T



STANDARD TRACK, 4030T-3038

Standard, non hold-open, non-handed track mounts on either side of the door. Will accept hold-open clip.

3038
3038H



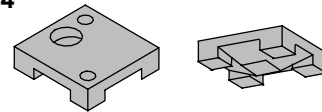
HOLD-OPEN TRACK, 4030T-3038H

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

HOLD-OPEN CLIP, 4030T-3054

Mounts in track to provide hold-open function. Hold-open point controlled by clip location.

3054

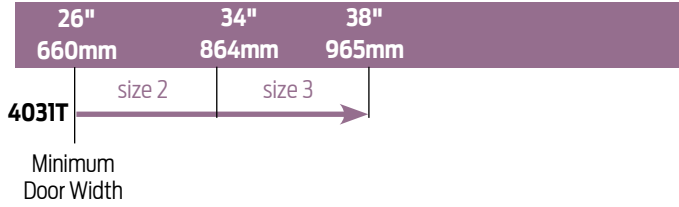


4030T SERIES

TABLE OF SIZES

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

INTERIOR DOOR WIDTH




→ Indicates recommended range of door width for closer size.

REDUCED OPENING FORCE 4030T 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.

HOW-TO-ORDER 4030T SERIES CLOSERS

1. SELECT FINISH

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

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.*

CLOSER OPTIONS

TRACK

- Hold-open (H)

FINISH

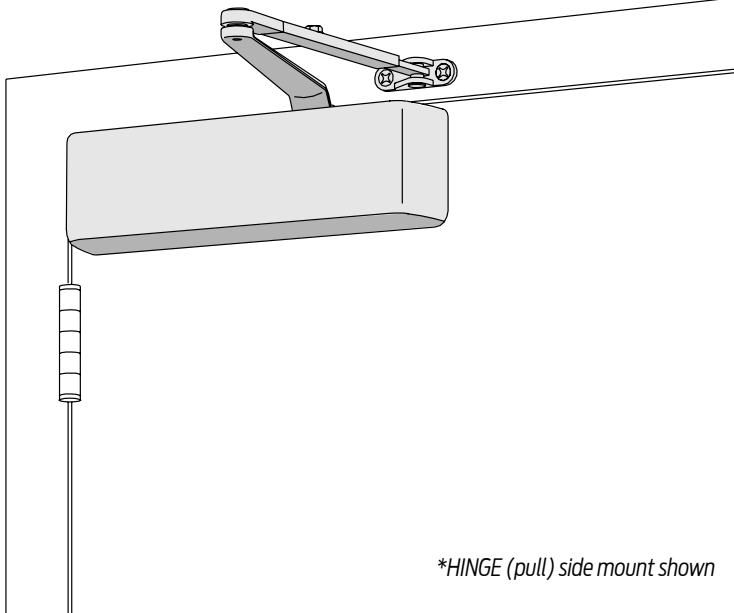
- Custom Powder Coat (RAL) _____
- Plated Finish, US _____
- SRI primer (use with powder coat finishes only)

SCREW PACK

- TB*; Wood & Machine Screws (TBWMS)

4040XP SERIES

CLOSER MOUNTS
***HINGE (PULL) SIDE**
TOP JAMB (PUSH SIDE)
PARALLEL ARM (PUSH SIDE)



*HINGE (pull) side mount shown

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

- Cast Iron
- Forged Steel Arm
- Double Heat Treated Steel Pinion
- All Weather Fluid
- Non-Handed
- LCN Patented Green Dial
- Peel-n-Stick Templates for Fast and Accurate Installation
- UL & cUL Listed
- 3/4" Journal Diameter Pinion
- Full Compliment Bearing

- Standard 4040XP Series closer shipped with regular arm, standard plastic cover, and self reaming and tapping screws.
- Non-sized cylinder is adjustable for interior doors to 5'0" and exterior doors to 4'0".
- Closer mounts hinge side, top jamb, and parallel arm on either right or left swinging doors.
- Closers to meet ADA requirements.
- Standard or optional custom powder coat finish.
- Optional plated finish on cover, arm, and fasteners.
- Optional SRI primer for installations in corrosive conditions. (Available with powder coat finishes only.)
- UL and cUL listed for self-closing doors without hold-open.
- Tested and certified under ANSI Standard A156.4, grade one.



The 4040XP Series includes the **LCN® "Green Dial" Spring Force Indicator**

MOUNTING					FINISH		COVER		CYLINDER				**ARM FUNCTION								
HINGE (PULL) SIDE	TOP JAMB (PULL)	TOP JAMB (PUSH)	PARALLEL ARM	STOP FACE	POWDER COAT	PLATED	PLASTIC	METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY	DELAYED ACTION***	AVB***	REGULAR (DOUBLE)	STANDARD (SINGLE)	HOLD-OPEN	FUSIBLE LINK	EDA/MEDA	CUSH/HCUSH	SCUSH/SHCUSH	DOUBLE EGRESS
●	○	●	●	○	●	●	●	●	●	○	♿	●	○	120°	○	120°	○	180°	110°	110°	○

● 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.
 **** Delayed Action Closer incorporates standard 4041 Delay Cylinder.

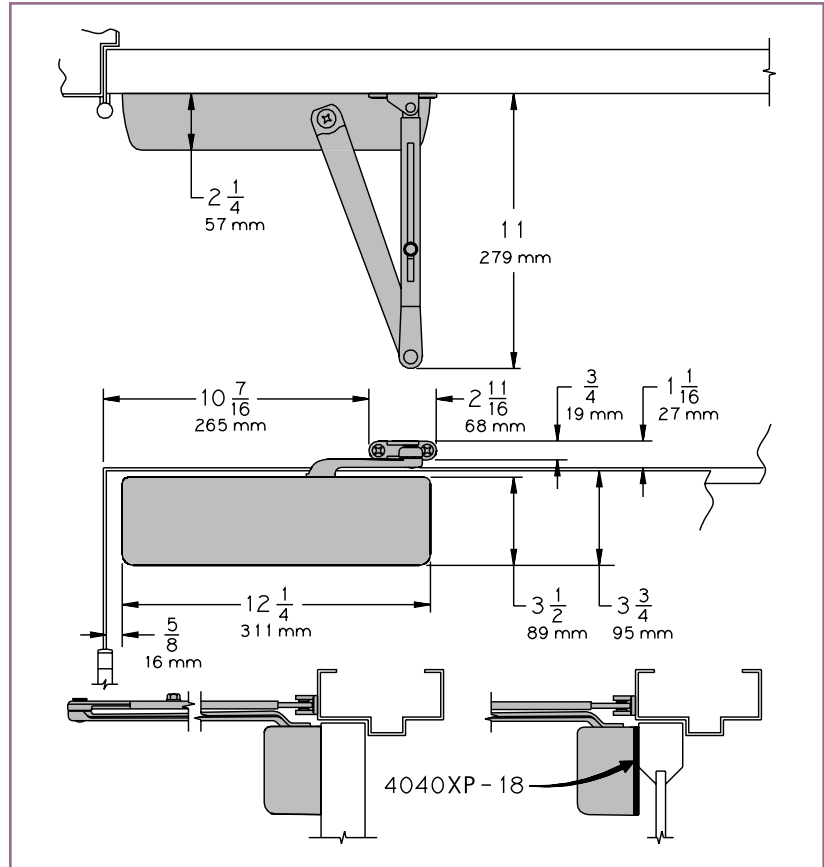
4040XP SERIES

HINGE (PULL) SIDE MOUNTING

MAXIMUM OPENING

Templating allows up to 120°.

Hold-open points 90° up to 120° with hold-open arm.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing beyond 120°.
- **Reveal** should not exceed 3/4" (19 mm) for regular arm or hold-open arm.
- **Top Rail** less than 3-3/4" (95 mm) requires PLATE, 4040XP-18. Plate requires 2" (51 mm) minimum.
- **Clearance** of 2-3/8" (60 mm) behind door required for 90° installation.
- ***Delayed Action** incorporates standard 4041 cylinder, without XP cylinder. Delays closing from 120° to 70°. Delay time adjustable up to approximately 1 minute.

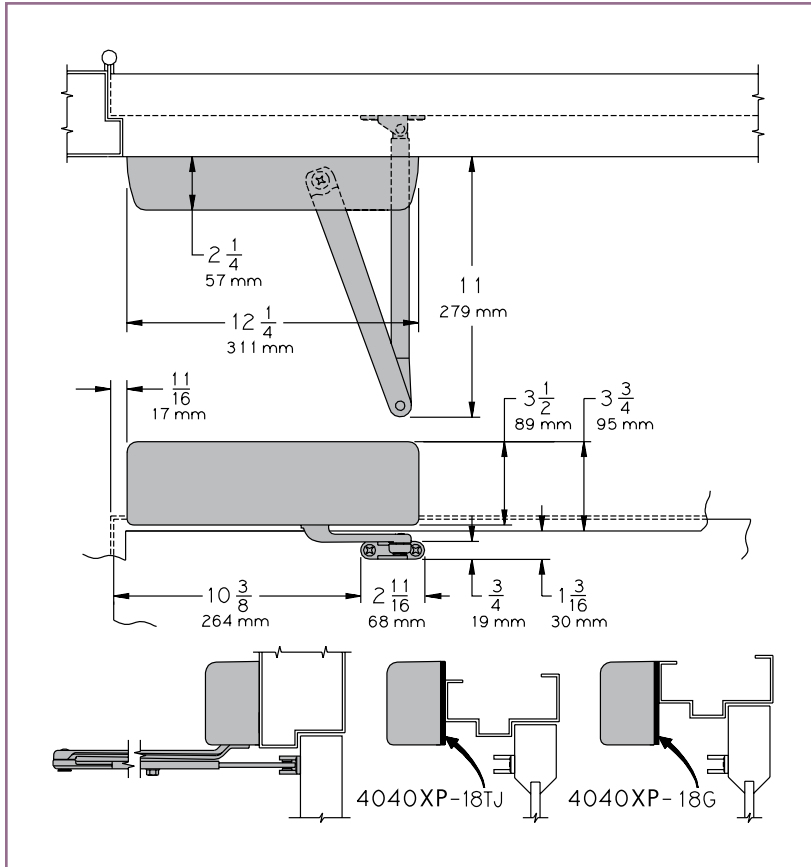
Options

- 4041 Delayed action cylinder*.
- Hold-open arm.
- Metal cover.

Special Templates

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

4040XP SERIES



TOP JAMB (PUSH SIDE) MOUNTING

MAXIMUM OPENING

Templating allows up to 120°.

Hold-open points 85° up to 120° with hold-open arm.

- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing beyond 120°.
- **Reveal** of 2-9/16" (65 mm) allows 120° opening for REGULAR ARM or standard Hold-open ARM. 4-13/16" (122 mm) allows up to 120° opening with LONG ARM where standard rod and shoe is replaced with optional LONG ROD AND SHOE 4040XP-79LR. Use H-LONG ARM with LONG HEAD AND TUBE, 4040XP-78HL for hold-open. 8" (203 mm) allows up to 120° opening with EXTRA LONG ARM where standard rod and shoe is replaced with optional EXTRA LONG ROD AND SHOE, 4040XP-79ELR.
- **Top Rail** requires 1-1/4" (32 mm) minimum. 2-1/4" (57 mm) minimum with closer on PLATE, 4040XP-18TJ. 3" (76 mm) minimum with closer on PLATE, 4040XP-18G.
- **Head Frame** less than 3-1/2" (89 mm) requires PLATE, 4040XP-18TJ. With flush ceiling, use PLATE, 4040XP-18G. Either plate requires 1-3/4" (44 mm) minimum.
- ***Delayed Action** Incorporates standard 4041 cylinder, without XP cylinder. Delays closing from 120° to 70°. Delay time adjustable up to approximately 1 minute.

Options

- 4041 Delayed action cylinder*
- Hold-open arm.
- Metal cover.

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

4040XP SERIES

MOUNTING DETAILS

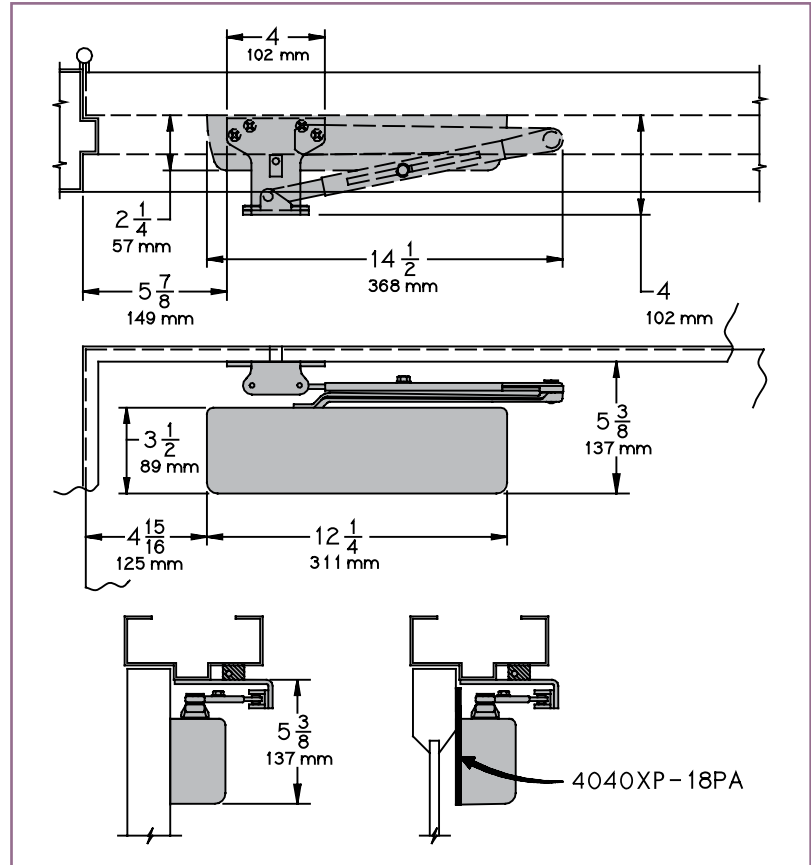
PARALLEL ARM (PUSH SIDE) MOUNTING

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.

MAXIMUM OPENING

180° opening/hold-open points with all except CUSH arms.

110° opening/hold-open with CUSH arms.



Options

- 4041 Delayed action cylinder*
- Hold-open, EDA, HEDA, CUSH, HCUSH, SPRING CUSH or SPRING HCUSH arm.
- Metal cover.

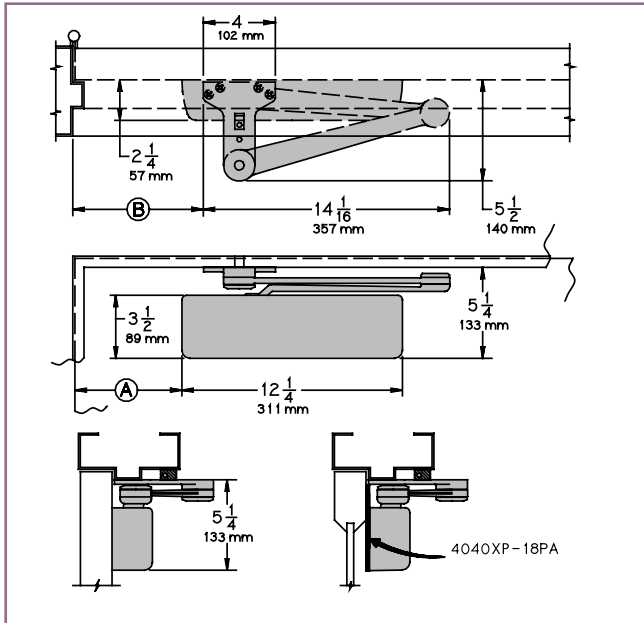
Special Templates

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

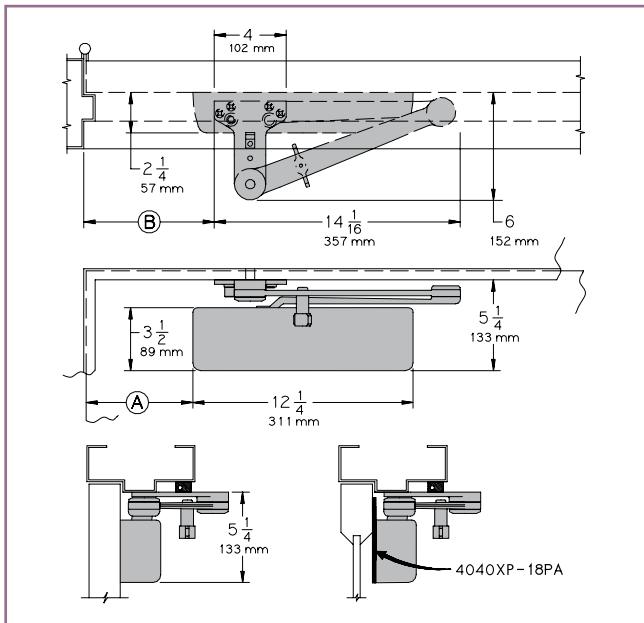
- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point, where the door cannot swing 180°, or where CUSH-N-STOP arm is not used.
- **Clearance** for 4040XP-62PA shoe is 4" (102 mm) from door face. EDA shoe projects 5-1/2" (140 mm) from door face. CUSH shoe projects 6" (152 mm) from door face.
- **Top Rail** less than 5-3/8" (137 mm) measured from the stop requires PLATE, 4040XP-18PA. Plate requires 2" (51 mm) minimum from the stop.
- **Head Frame** flush or rabbeted requires PA SHOE ADAPTER, 4040XP-419.
- **Stop Width** minimum 1" (25 mm). CUSH arm requires minimum 1-1/2" (38 mm).
- **Blade Stop** clearance requires 1/2" (13mm) BLADE STOP SPACER, 4040XP-61.
- ***Delayed Action** Incorporates standard 4041 cylinder, without XP cylinder. Delays closing from 120° to 70°. Delay time adjustable up to approximately 1 minute.

4040XP SERIES

4040XP SERIES EDA MOUNT



4040XP SERIES CUSH MOUNT



Mounting details are the same as 4040XP Series REGULAR or HOLD-OPEN except as listed below. 4040XP Series closers ordered with EDA or CUSH arms include 4040XP-201 FIFTH HOLE SPACER to support the shoe.

MAXIMUM OPENING

EDA arm can be templated for points at: 110°;

(A) = 6-3/8" (162 mm)

(B) = 7-3/4" (197 mm)

or 180°.

(A) = 2-7/8" (73 mm)

(B) = 4-1/4" (108 mm)

Hold-open points up to maximum opening with HEDA arm.

CUSH arms can be templated for opening/hold-open point at: 85°;

(A) = 7-15/16" (202 mm)

(B) = 9-1/8" (232 mm)

90°;

(A) = 7-3/16" (183 mm)

(B) = 8-1/2" (216 mm)

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)

Spring Cush dead stop points are approximately 5° more than templated stop point. Hold open at templated stop points.

- **Clearance** for 4040XP-62EDA is 5-1/2" (140 mm) from door face. 6" (152 mm) for CUSH.
- **Head Frame** flush or rabbeted requires CUSH FLUSH PANEL ADAPTER, 4040XP-419.
- **CUSH ARM** requires SHOE SUPPORT, 4040XP-30 for fifth screw anchorage for narrow frames.
- ***Delayed Action** Incorporates standard 4041 cylinder, without XP cylinder. Delays closing from maximum opening to ; 115° with 180° template, 95° with 110° template, 85° with 100° template, 75° with 90° template. Delay time adjustable up to approximately 1 minute.

4040XP SERIES

CYLINDERS

CYLINDER, 4040XP-3071

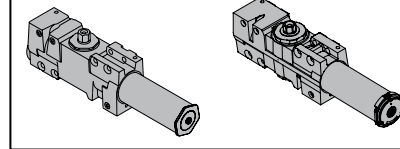
Heavy duty, non-handed cast iron cylinder assembly.

CYLINDER, 4041-3071 DEL

Cylinder used for delayed action options.

4041-3071 DEL

4040XP-3071



COVERS

COVER, 4040XP-72

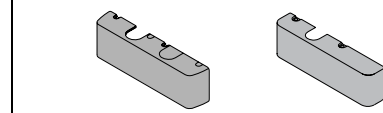
Standard, non-handed plastic cover.

METAL COVER, 4040XP-72MC

Optional, handed cover. Required for plated finishes and custom powder coat finishes.

72

72MC



ARMS

REGULAR ARM, 4040XP-3077

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

PA SHOE, 4040XP-62PA

Required for parallel arm mounting.

LONG ARM, 4040XP-3077L

Optional non-handed arm includes LONG ROD AND SHOE, 4040XP-79LR for top jamb mount.

EXTRA LONG ARM, 4040XP-3077ELR

Optional non-handed arm includes EXTRA LONG ROD AND SHOE, 4040XP-79ELR for top jamb mount with deep reveal.

HOLD-OPEN ARM, 4040XP-3049

Optional, non-handed arm mounts pull side or top jamb with shallow reveal, hold-open adjustable shoe. 4040XP closer includes 4040XP-62PA shoe required for parallel arm mounting.

LONG HOLD-OPEN ARM, 4040XP-3049L

Optional non-handed arm includes LONG HEAD AND TUBE, 4040XP-3048L for top jamb mount.

EXTRA DUTY ARM, 4040XP-3077EDA

Non-handed parallel arm features forged, solid steel main and forearm for potentially abusive installations.

HOLD-OPEN EXTRA DUTY ARM, 4040XP-3049EDA

Handed parallel arm features forged, solid steel main and forearm for potentially abusive installations. Hold-open function is adjusted at the shoe.

EXTRA DUTY ARM WITH 62G, 4040XP-3077EDA/62G

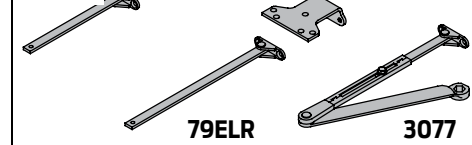
Non-handed parallel arm features forged, solid steel main and forearm for potentially abusive installations. 62G shoe provides additional blade stop clearance.

HOLD-OPEN EXTRA DUTY ARM WITH 62G, 4040XP-3049EDA/62G

Handed parallel arm 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.

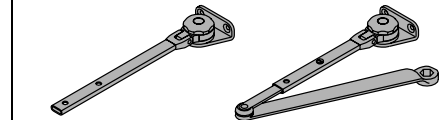
79LR

62PA

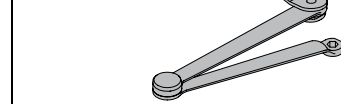


3048L

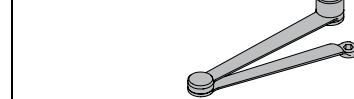
3049



3049EDA
3077EDA



3049EDA/62G
3077EDA/62G

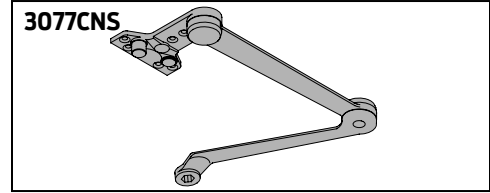


4040XP SERIES

ARMS CONT.

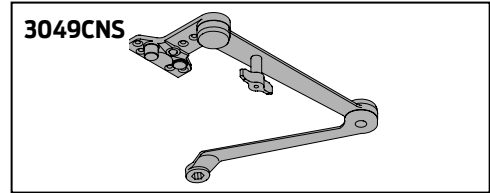
CUSH-N-STOP® ARM, 4040XP-3077CNS

Optional, non-handed parallel arm features solid forged steel main arm and forearm with stop in soffit shoe.



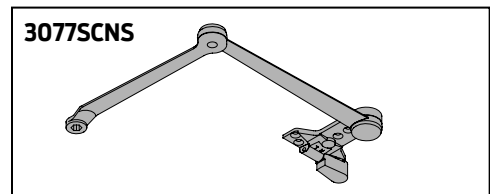
HCUSH ARM, 4040XP-3049CNS

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



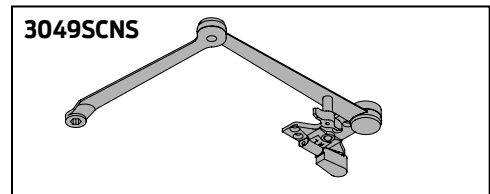
SPRING CUSH ARM, 4040XP-3077SCNS

Optional, non-handed parallel arm for abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe.



SPRING HCUSH ARM, 4040XP-3049SCNS

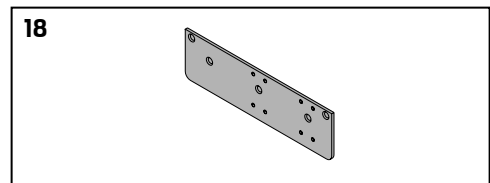
Optional, non-handed parallel arm for abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe. Handle controls hold-open function.



INSTALLATION ACCESSORIES

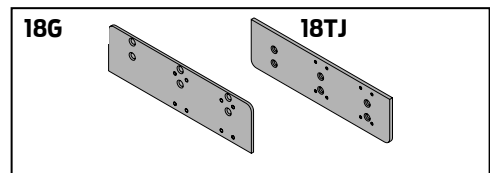
PLATE, 4040XP-18

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



PLATE, 4040XP-18G

Locates top jamb mounted closer flush with top of head frame face in flush ceiling condition. Plate requires 1-3/4" (44 mm) minimum head frame.

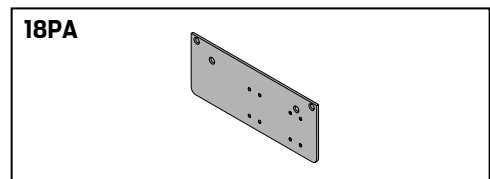


PLATE, 4040XP-18TJ

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.

PLATE, 4040XP-18PA

Required for parallel arm mounting where top rail is less than 5-1/2" (140 mm), measured from the stop. Plate requires 2" (51 mm) minimum top rail.



4040XP SERIES

INSTALLATION ACCESSORIES CONT.

CUSH SHOE SUPPORT, 4040XP-30

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

BLADE STOP SPACER, 4040XP-61

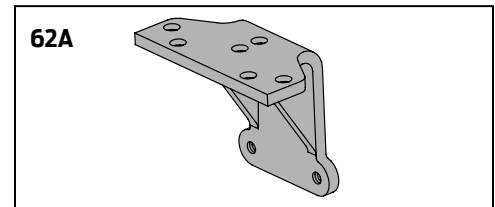
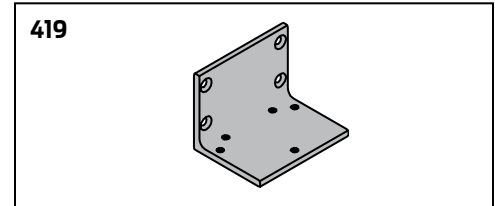
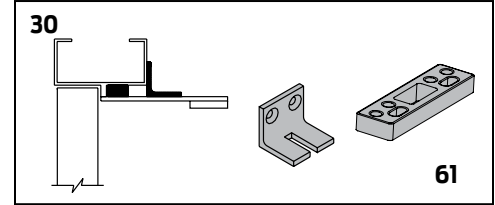
Required to lower parallel arm shoe to clear 1/2" (13 mm) blade stop.

PA FLUSH PANEL ADAPTER, 4040XP-419

Provides horizontal mounting surface for parallel arm shoe on single rabbetted or flush frame.

AUXILIARY SHOE, 4040XP-62A

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



4040XP SERIES

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

	24" 610mm	30" 762mm	36" 914mm	42" 1067mm	48" 1219mm
*4040XP	size 3	size 4	size 5	size 6	

Minimum Door Width

INTERIOR DOOR WIDTH

	24" 610mm	34" 864mm	38" 965mm	48" 1219mm	54" 1372mm	60" 1524mm
*4040XP	size 2	size 3	size 4	size 5	size 6	

Minimum Door Width

→ Indicates recommended range of door width for closer size.

* Adjustable Size 1 thru 6.

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 CLIP-ON COVER
- SPECIFY ARM WHEN ORDERING
- 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- _____

PHONE 877-671-7011
FAX 800-248-1460
www.allegion.com/us
2/14

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.

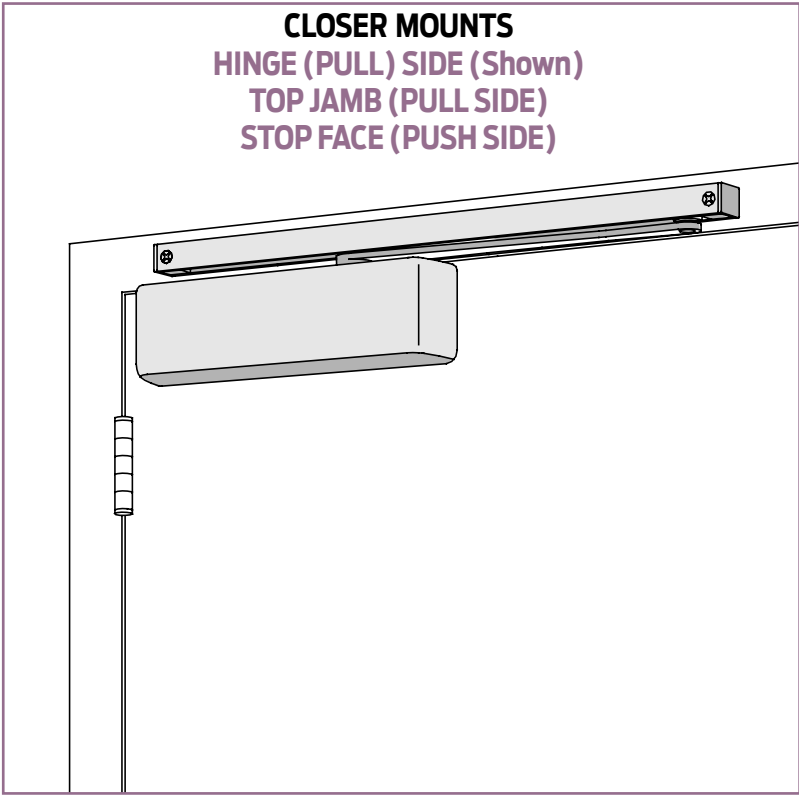
Refer to POWER OPERATORS section for information on systems that meet reduced opening force requirements without effecting closing power.

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

* Maximum opening force.

4040XPT SERIES

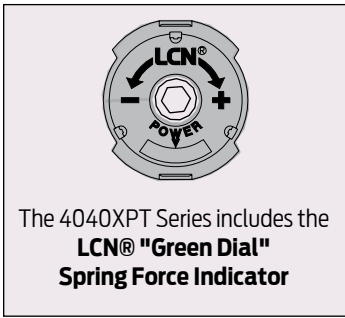
CLOSER MOUNTS
HINGE (PULL) SIDE (Shown)
TOP JAMB (PULL SIDE)
STOP FACE (PUSH SIDE)



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

- Cast Iron
- Forged Steel Arm
- Double Heat Treated Steel Pinion
- All Weather Fluid
- Non-Handed
- UL & cUL Listed
- 3/4" Journal
- 5/8" Bearing
- Peel-n-Stick Templates for Fast and Accurate Installations
- LCN Patented Green Dial

- Standard 4040XPT Series closer is shipped with standard arm, standard track, track roller, standard plastic cover, and self reaming and tapping screws. See 4040XPT Series pages 51 & 52 for options.
- Non-sized cylinders for interior doors to 4'0".
- Closer mounts pull side on door, pull side top jamb or push side on door.
- Standard or optional custom powder coat finish.
- Optional plated finish on metal cover, arm and fasteners.
- Optional SRI primer for installations in corrosive conditions is available with powder coat only.
- Consult factory for double egress applications.
- Optional designer series metal cover.
- The 4040XPT Series is UL and cUL listed with a standard track for self-closing doors.
- Tested and certified under ANSI Standard A156.4, grade one.



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***	XP	REGULAR (DOUBLE)	STANDARD (SINGLE)	HOLD-OPEN	FUSIBLE LINK	EDA/MEDA	CUSH/H/CUSH	SCUSH/SHCUSH	DOUBLE EGRESS	
●	○	●	●	○	●	●	●	●	●	○	○	○	●	○	○	○	○	○	○	○	○	○	○

● AVAILABLE
 ○ NOT AVAILABLE

♿ Closer available with less than 5.0 lbs. opening force on 36" door.
 ** Maximum opening/hold-open point with standard template.
 *** Delayed Action Closer incorporates standard 4041 Delay Cylinder.

4040XPT SERIES

MOUNTING DETAILS

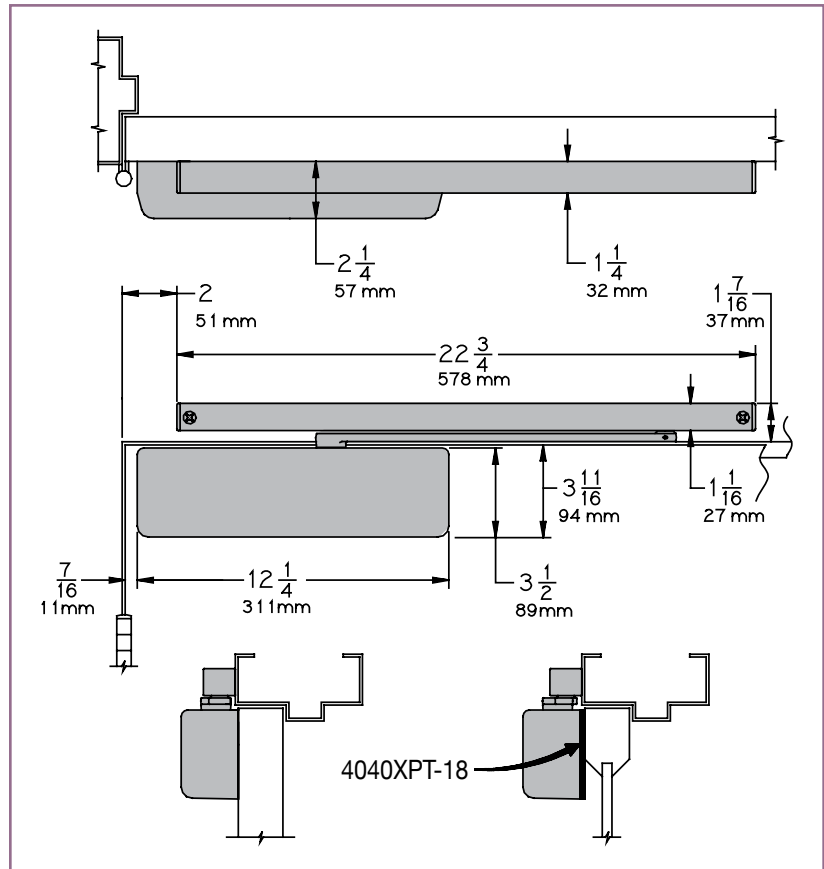
HINGE (PULL) SIDE MOUNTING

MAXIMUM OPENING

Templating allows 120° with standard arm, limited to 110° when optional bumper is installed.

Hold-open points at 85°, 90°, 95°, 100°, 105°, or 110°, depending on the clip location in track.

Please note that many track style door closers are capable of allowing 180° of door swing. Be aware that the majority of track style closers are at their weakest closing force in the 180° – 130° range. Consult factory for applications where an exterior or large/heavy door must swing 180°.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 120°. Optional track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop.
- **Reveal** should not exceed 1/8" (3 mm) for standard arm.
- **Top Rail** less than 3-3/4" (95 mm) requires PLATE, 4040XPT-18. Plate requires 1-13/16" (44 mm) minimum.
- **Head Frame** requires 1-1/4" (32 mm) minimum.
- **Clearance** of 2-1/4" (57 mm) behind door required for 90° installation.

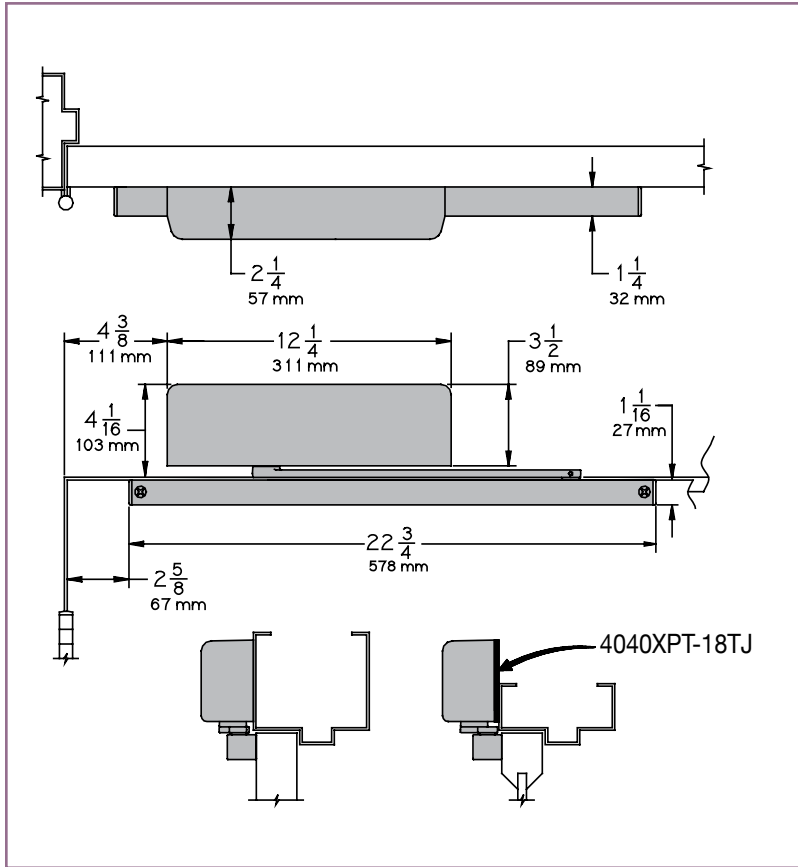
Options

- Standard track with bumper, hold-open track, hold-open track with bumper.
- Metal cover.
- ST required for double egress applications. Consult factory.

Special Templates

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

4040XPT SERIES



TOP JAMB (PULL SIDE) MOUNTING

MAXIMUM OPENING

Templating allows 180° with standard track arm, limited to 110° with optional bumper installed.

Consult factory if door will be held open at 180°.

Hold-open points at 85°, 90°, 95°, 100°, 105° or 110° with hold-open tracks.

Please note that many track style door closers are capable of allowing 180° of door swing. Be aware that the majority of track style closers are at their weakest closing force in the 180° – 130° range. Consult factory for applications where an exterior or large/heavy door must swing 180°.

- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 180°. Optional track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop.
- **Reveal** should not exceed 1/8" (3 mm).
- **Head Frame** less than 3-7/8" (98 mm), requires PLATE, 4040XPT-18TJ. Plate requires 1-3/4" (44 mm) minimum.
- **Clearance** of 1-1/4" (32 mm) behind door required for 180° installation.

Options

- Standard track with bumper, hold-open track, hold-open track with bumper.
- Metal cover.

Special Templates

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

4040XPT SERIES

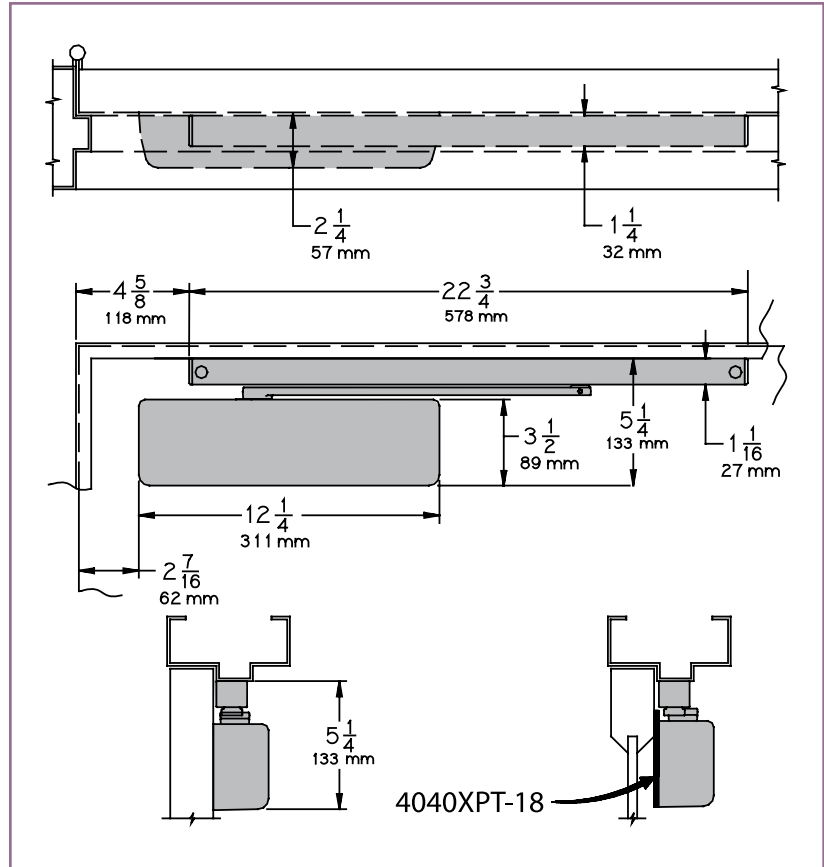
STOP FACE (PUSH SIDE) MOUNTING

MAXIMUM OPENING

Templating allows 120° with standard track arm, limited to 110° with optional bumper tracks.

Hold-open points at 85°, 90°, 95°, 100°, 105° or 110° with hold-open tracks.

Please note that many track style door closers are capable of allowing 180° of door swing. Be aware that the majority of track style closers are at their weakest closing force in the 180° – 130° range. Consult factory for applications where an exterior or large/heavy door must swing 180°.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 120°. Optional track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop.
- **Clearance** projects 2-1/4" (57 mm) from face of door.
- **Top Rail** less than 5-1/4" (133 mm) measured from the stop, requires PLATE, 4040XPT-18. Plate requires 3-1/2" (89 mm) minimum.
- **Stop Width** minimum 1-1/4" (32 mm).

Options

- Standard track with bumper, hold-open track, hold-open track with bumper.
- Metal cover.

Special Templates

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

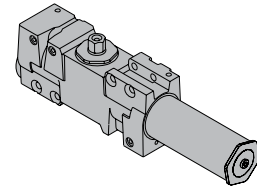
4040XPT SERIES

CYLINDERS

CYLINDER, 4040XPT-3071

Standard, non-handed cast iron cylinder assembly.

3071

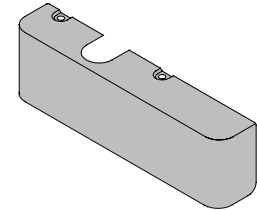


COVERS

COVER, 4040XPT-72

Standard, non-handed plastic clip-on cover.

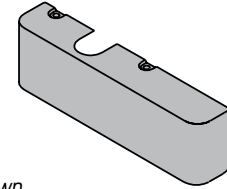
72



METAL COVER, 4040XPT-72MC

Optional, handed cover. Required for plated finishes and custom powder coat finishes.

72MC



Left Hand Shown

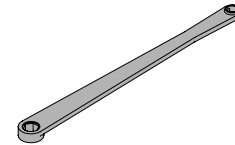
ARMS

STANDARD ARM, 4040XPT-3077T

Non-handed arm.

Arm does not include track roller.

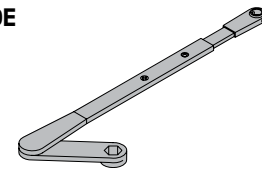
3077T



DOUBLE EGRESS ARM, 4040XPT-3077DE

Optional, handed arm for double egress doors and frames. Arm does not include track roller. Maximum reveal is 2-11/16" (68mm).

3077TDE



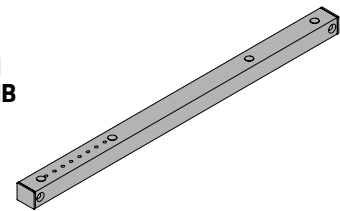
TRACKS

STANDARD TRACK, 4040XPT-3038

Standard, non hold-open, non-handed track.

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

3038
3038B
3038H
3038HB



STANDARD TRACK with BUMPER, 4040XPT-3038B

Optional non hold-open, non-handed track with bumper assembly installed. Will accept hold-open clip.

HOLD-OPEN TRACK, 4040XPT-3038H

Optional, non-handed track with hold-open clip installed.

Will accept bumper assembly.

HOLD-OPEN TRACK with BUMPER, 4040XPT-3038HB

Optional, non-handed track with hold-open clip and bumper assembly installed.

4040XPT SERIES

INSTALLATION ACCESSORIES

PLATE, 4040XPT-18

Required for pull side (door mount) installations where top rail is less than 3-3/4" (95 mm).

Plate 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. Plate requires minimum 3-1/2" (89 mm) top rail.

PLATE, 4040XPT-18TJ

Required for pull side top jamb installations where head frame is less than 3-7/8" (98 mm). Plate requires minimum 1-3/4" (44 mm) head frame.

TRACK BUMPER, 4040XPT-169

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

HOLD-OPEN CLIP, 4040XPT-3054

Mounts in track to provide hold-open function.

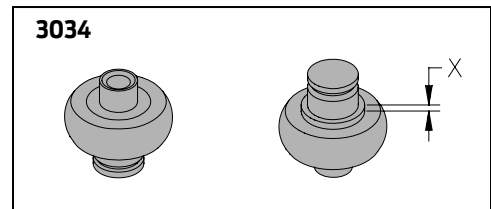
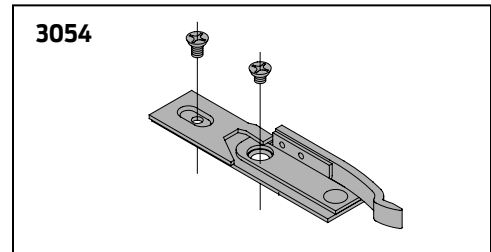
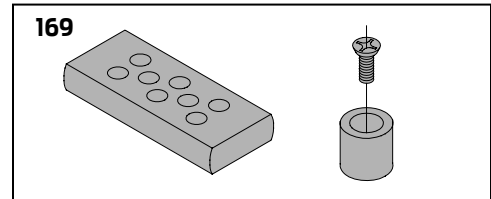
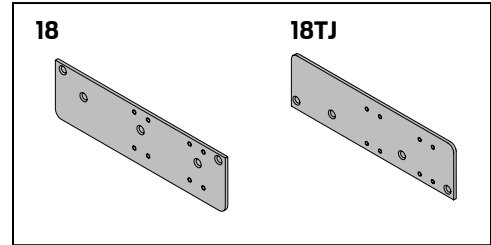
Hold-open point controlled by clip location.

Consists of clip and mounting screws.

TRACK ROLLER, 4040XPT-3034

Quiet, low friction roller assembly.

Shoulder dimension "X" = 1/8" (3mm).

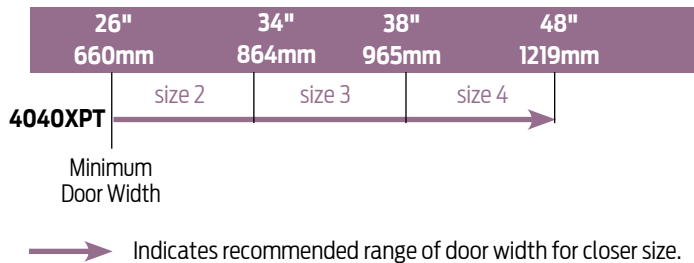


4040XPT SERIES

TABLE OF SIZES

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

INTERIOR DOOR WIDTH



HOW-TO-ORDER 4040XPT SERIES CLOSERS

1. 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 (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)

SPECIFY 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 ACCESSORY

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


SPECIAL TEMPLATE

- ST- _____

REDUCED OPENING FORCE 4040XPT 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.

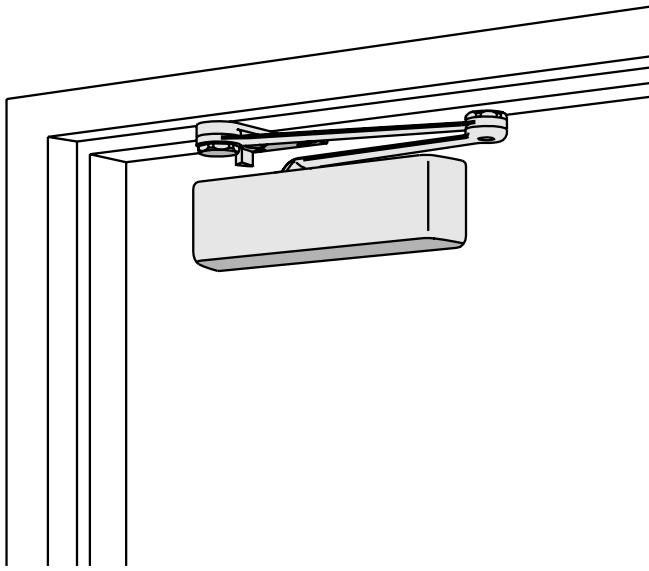
	DOOR WIDTH	36"	42"	48"
	8.5* lbs.	N/A	N/A	N/A
	5.0* lbs.	4040XPT	4040XPT	4040XPT

* Maximum opening force.

4110 SERIES

FEATURES

*PARALLEL ARM (PUSH SIDE) MOUNT



*4110 HCUSH mount shown

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

- Cast Iron
- Extra Duty Forged Steel Arm Standard
- Double Heat Treated Steel Pinion
- All Weather Fluid
- Advanced Variable Backcheck
- LCN Patented Green Dial
- UL & cUL Listed
- Peel-n-Stick Templates for Fast and Accurate Installations

- Standard 4110 Series closer is shipped with Extra Duty arm, standard plastic cover, 4110-201 FIFTH SCREW SPACER and self reaming and tapping screws. See 4110 Series pages 57 & 58 for options.
- Sized cylinders adjustable for interior doors to 5'0" and exterior doors to 4'0".
- Non-sized cylinder adjustable for interior doors to 4'6" and exterior doors to 3'6".
- Closer mounts parallel arm, specify right or left swinging door.
- 4111 cylinder meets ADA requirements. See 4110 Series page 59.
- Standard or optional custom powder coat finish.
- Optional plated finish on metal cover, arm and fasteners.
- Optional SRI primer for installations in corrosive conditions is available with powder coat only.
- The 4110 Series is UL and cUL listed for self-closing doors without hold-open.
- Tested and certified under ANSI Standard A156.4, grade one.



MOUNTING					FINISH		COVER			CYLINDER		**ARM FUNCTION									
HINGE (PULL/SIDE)	TOP JAMB (PULL)	TOP JAMB (PUSH)	PARALLEL ARM	STOP FACE	POWDER COAT	PLATED	PLASTIC	METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY	DELAYED ACTION	AVB***	REGULAR (DOUBLE)	STANDARD (SINGLE)	HOLD-OPEN	FUSIBLE LINK	EDA/HEDA	CUSH/HCUSH	SCUSH/SHCUSH	DOUBLE EGRESS
○	○	○	●	○	●	●	●	●	○	●	♿	●	●	○	○	○	180°	180°	110°	110°	○

● 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.

4110 SERIES

PARALLEL ARM (PUSH SIDE) MOUNTING

MAXIMUM OPENING

EDA or Fusible Link arm can be templated for

100°

Ⓐ = 5-15/16" (151 mm)

Ⓑ = 7-1/4" (184 mm)

140°

Ⓐ = 4-7/16" (113 mm)

Ⓑ = 5-3/4" (146 mm)

or 180°

Ⓐ = 2-15/16" (75 mm)

Ⓑ = 4-1/4" (108 mm)

Hold-open points up to maximum opening with HEDA or Fusible Link arm.

CUSH arm can be templated for maximum opening at

85°

Ⓐ = 8-5/16" (211 mm)

Ⓑ = 9-5/8" (244 mm)

90°

Ⓐ = 7-11/16" (195 mm)

Ⓑ = 9" (229 mm)

100°

Ⓐ = 6-7/16" (164 mm)

Ⓑ = 7-3/4" (197 mm)

or 110°

Ⓐ = 5-9/16" (141 mm)

Ⓑ = 6-7/8" (175 mm)

Hold-open point at maximum opening with HCUSH arm.

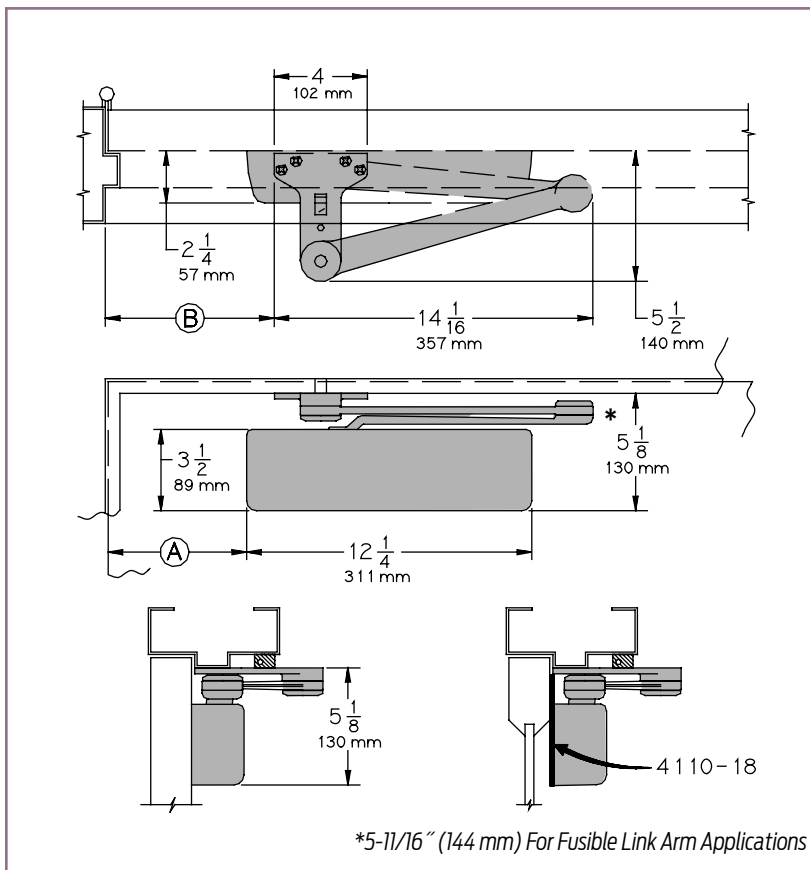
Spring Cush hold-open points are approximately 5° less than templated stop point.

Options

- Size 6 or non-sized cylinder.
- Delayed Action and/or Advanced Variable Backcheck cylinder.
- HEDA, CUSH, HCUSH, SPRING CUSH, SPRING HCUSH or Fusible Link arm.
- Metal cover.

Special Templates

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



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point, where a door cannot swing 180°, or where CUSH-N-STOP arm is not used.
- **Clearance** for EDA, or CUSH shoe is 5-1/2" (140 mm) from door face.
- **Top Rail** less than 5-1/8" (130 mm) measured from stop requires PLATE, 4110-18. Plate requires 2" (51 mm) minimum measured from the stop.
- **Stop Width** minimum 1" (25 mm).
- **Head Frame** flush or rabbeted requires CUSH FLUSH PANEL ADAPTER, 4110-419.
- **Reveal** less than 2-3/4" (70 mm), use CUSH SHOE SUPPORT, 4110-30 with CUSH arms.
- **Blade Stop Spacer**, 4110-61 required to clear 1/2" (13 mm) blade stop.
- **Cush Arm** requires CUSH SHOE SUPPORT, 4110-30 for fifth screw anchorage with CUSH arms.
- **Delayed Action** Add suffix "DEL" to selected cylinder (eg. 4111 DEL). Not available with 4116 cylinder. Delays closing from maximum opening to approximately 70°. Delay time adjustable up to approximately 1 minute.
- **Advanced Variable Backcheck** cylinder starts backcheck at approximately 45° instead of the normal 75°. Add suffix "AVB" to selected cylinder.

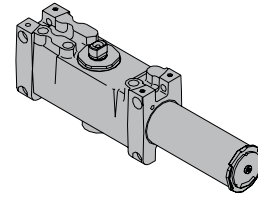
4110 SERIES

CYLINDERS

CYLINDER, 4110-3071

Standard, handed cast iron cylinder assembly.
For various applications see "Table of Sizes" on 4110 Series page 59.

3071

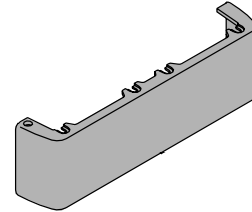


COVERS

COVER, 4110-72

Standard, non-handed plastic cover.

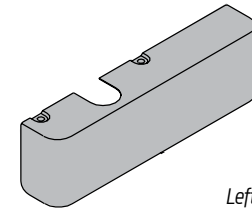
72



METAL COVER, 4110-72MC

Optional, handed cover. Required for plated finishes and custom powder coat finishes.

72MC



Left Hand Shown

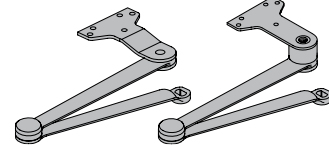
ARMS

EXTRA DUTY ARM, 4110-3077EDA, 4110-3077EDAG

Non-handed parallel arm features forged, solid steel main and forearm for potentially abusive installations.
Optional 4110-62G thick hub shoe for blade stop clearance.

3077

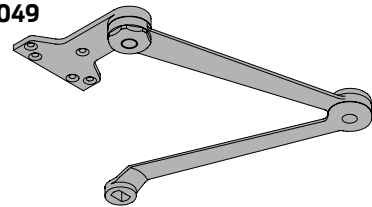
3077EDAG



HOLD-OPEN ARM 4110-3049EDA

Optional handed arm provides hold-open function, adjustable at shoe.

3049



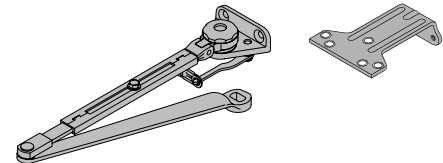
FUSIBLE LINK ARM, 4110-3049FL

Optional, handed arm releases hold-open function adjustable at shoe when exposed to temperatures above 165° F.

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

3049FL

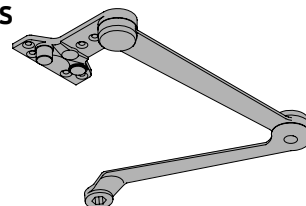
62FL



CUSH-N-STOP ARM, 4110-3077CNS

Non-handed parallel arm features solid forged steel main arm and forearm with built-in stop in soffit shoe.

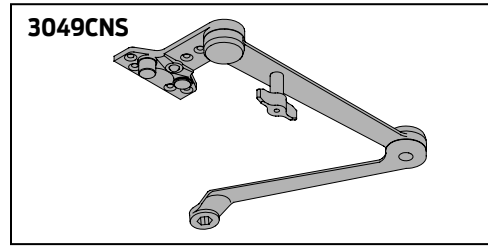
3077CNS



4110 SERIES

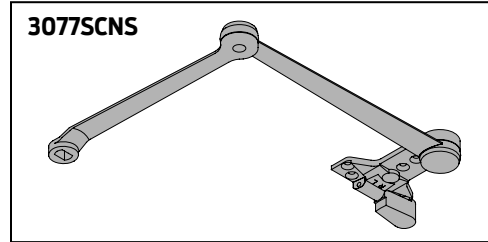
H-CUSH ARM 4110-3049CNS

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



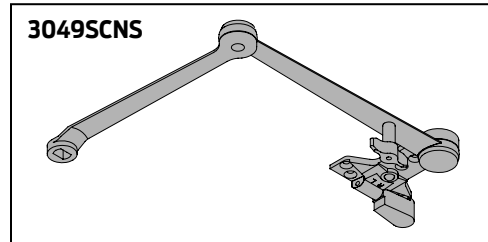
SPRING CUSH ARM, 4110-3077SCNS

Optional, non-handed parallel arm for abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe.



SPRING H-CUSH ARM, 4110-3049SCNS

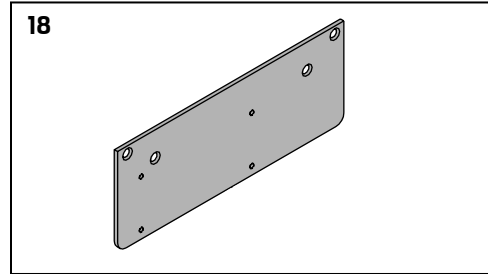
Optional, non-handed parallel arm for abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe. Handle controls hold-open function.



INSTALLATION ACCESSORIES

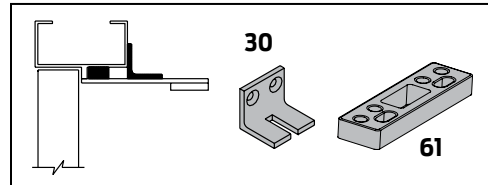
PLATE, 4110-18

Required for push side mount where top rail is less than 5-1/8" (130 mm), measured from the stop. Plate requires minimum 2" (51 mm) minimum top rail. Plate also used with CUSH Arm installations.



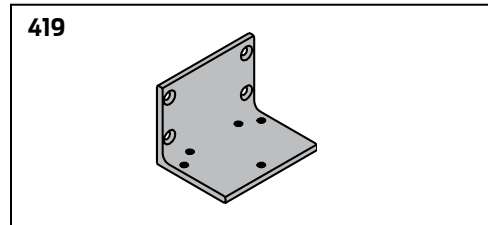
CUSH SHOE SUPPORT, 4110-30

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



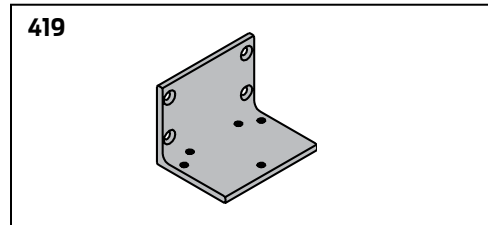
BLADE STOP SPACER, 4110-61

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



PA FLUSH PANEL ADAPTER, 4110-419

Provides horizontal mounting surface for CUSH shoe on single rabbeted or flush frame.



4110 SERIES

TABLE OF SIZES

Select closer based on width of door.

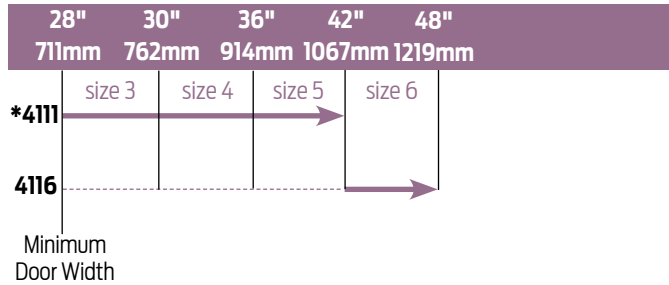
The spring power of non-sized 4111 cylinder is adjustable from size 1 through size 5 and is shipped set to size 3.

Sized 4116 series cylinders 6.

Delayed action not available with 4116 cylinder

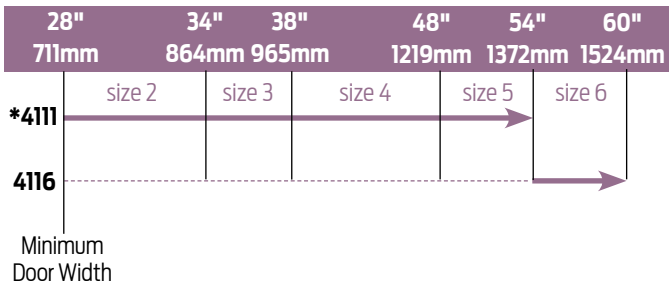
H - CUSH and SPRING H-CUSH arm not available with 4116 cylinder.

EXTERIOR (and VESTIBULE) DOOR WIDTH



* Adjustable Size 1 thru 5

INTERIOR DOOR WIDTH



→ Indicates recommended range of door width for closer size.

* Adjustable Size 1 thru 5.

REDUCED OPENING FORCE 4110 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.

HOW-TO-ORDER 4110 SERIES CLOSERS

1. SELECT 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 COVER,
- FIFTH SCREW SPACER,
- EDA ARM,
- SELF-REAMING and TAPPING SCREWS
unless options listed below are selected.

4110 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 PACK

- 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

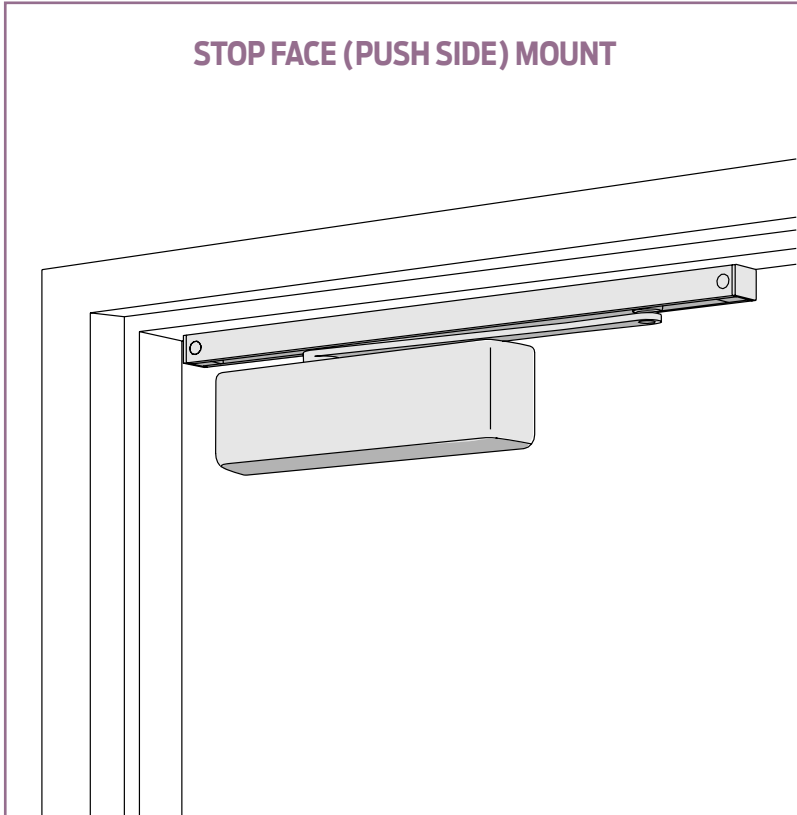
- Plate, 4110-18
- CUSH Shoe Support, 4110-30
- Blade Stop Spacer, 4110-61
- PA Flush Panel Adapter, 4110-419

SPECIAL TEMPLATE

- ST- _____

4110T SERIES

FEATURES



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

- Cast Iron
- Forged Steel Main Arm
- Double Heat Treated Steel Pinion
- All Weather Fluid
- UL & cUL Listed
- Peel-n-Stick Templates for Fast and Accurate Installations

- Standard 4110T Series closer is shipped with standard arm, standard track, track roller, standard plastic cover and self reaming and tapping screws. See 4110T Series pages 63 & 64 for options.
- Sized cylinders for interior doors to 4' 0".
- Closer mounts stop face side, specify right or left swinging door.
- Standard or optional custom powder coat finish.
- Optional plated finish on metal cover, arm and fasteners.
- Optional SRI primer for installations in corrosive conditions is available with powder coat only.
- The 4110T Series is UL and cUL listed with a standard track for self-closing doors.
- Tested and certified under ANSI Standard A156.4, grade one.

MOUNTING					FINISH		COVER		CYLINDER				**ARM FUNCTION									
HINGE (PULL) SIDE	TOP JAMB (PULL)	TOP JAMB (PUSH)	PARALLEL ARM	STOP FACE	POWDER COAT	PLATED	PLASTIC	METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY	DELAYED ACTION	AVB***	REGULAR (DOUBLE)	STANDARD (SINGLE)	HOLD-OPEN	FUSIBLE LINK	EDA/MEDA	CUSH/HCUSH	SCUSH/SHCUSH	DOUBLE EGRESS	
○	○	○	○	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
														○	○	○	○	○	○	○	○	○

● 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.

4110T SERIES

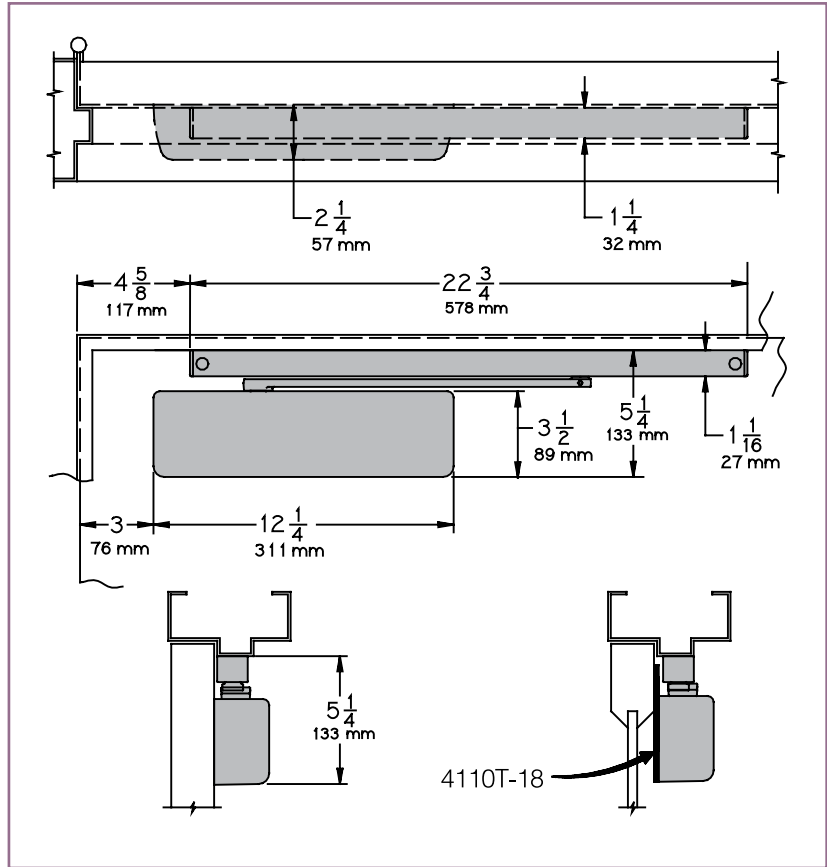
STOP FACE (PUSH SIDE) MOUNTING

MAXIMUM OPENING

Templating allows 110° with standard track arm, limited to 100° with optional bumper tracks.

Hold-open points at 85°, 90°, 95°, or 100° with hold-open tracks.

Please note that many track style door closers are capable of allowing 180° of door swing. Be aware that the majority of track style closers are at their weakest closing force in the 180° – 130° range. Consult factory for applications where an exterior or large/heavy door must swing 180°.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 110°. Optional track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop.
- **Clearance** projects 2-1/4" (57 mm) from face of door.
- **Top Rail** less than 5-1/4" (133 mm) measured from stop, requires PLATE, 4110T-18. Plate requires 2-1/4" (57 mm) minimum.
- **Stop Width** minimum 1-1/4" (32 mm).

Options

- Standard track with bumper, hold-open track, hold-open track with bumper.
- Metal cover.

Special Templates

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

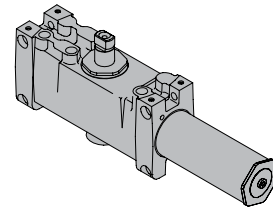
4110T SERIES

CYLINDERS

CYLINDER, 4110T-3071

Standard, handed cast iron cylinder assembly. For various applications see "Table of Sizes" on 4110T Series page 65.

3071

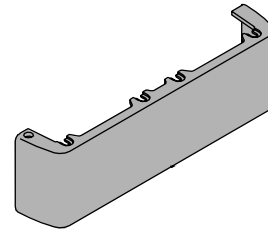


COVERS

COVER, 4110T-72

Standard, non-handed plastic cover.

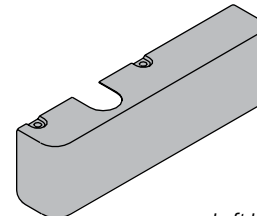
72



METAL COVER, 4110T-72MC

Optional, handed cover. Required for plated finishes and custom powder coat finishes.

72MC



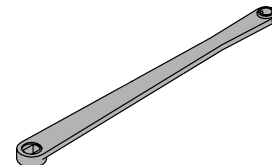
Left Hand Shown

ARM

STANDARD ARM, 4110T-3077T

Handed arm. Roller not included with arm.

3077T



TRACKS

STANDARD TRACK, 4110T-3038

Standard, non hold-open, non-handed track.
Will accept hold-open clip and/or bumper assembly.

STANDARD TRACK with BUMPER, 4110T-3038B

Optional non hold-open, non-handed track with bumper assembly installed. Will accept hold-open clip.

HOLD-OPEN TRACK, 4110T-3038H

Optional, non-handed track with hold-open clip installed. Will accept bumper assembly.

HOLD-OPEN TRACK with BUMPER, 4110T-3038HB

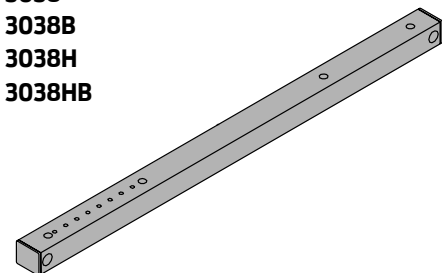
Optional, non-handed track with hold-open clip and bumper assembly installed.

3038

3038B

3038H

3038HB

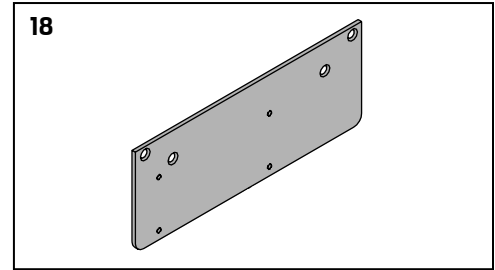


4110T SERIES

INSTALLATION ACCESSORIES

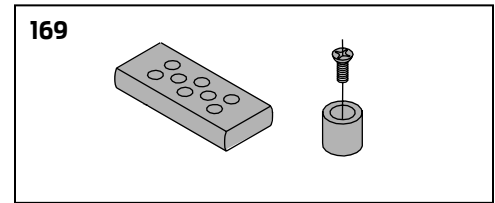
PLATE, 4110T-18

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



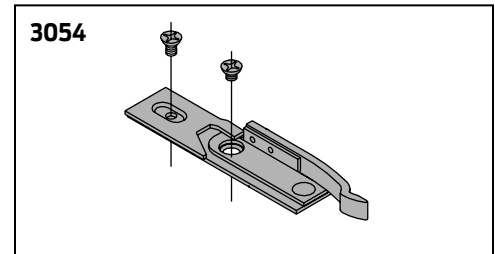
TRACK BUMPER, 4110T-169

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



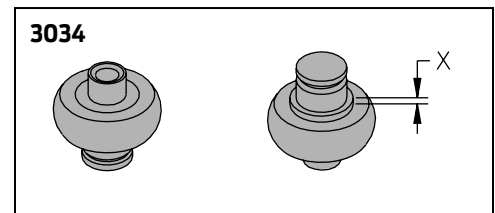
HOLD-OPEN CLIP, 4110T-3054

Mounts in track to provide hold-open function. Hold-open point controlled by clip location. Consists of clip and mounting screws.



TRACK ROLLER, 4110T-3034

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



4110T SERIES

TABLE OF SIZES

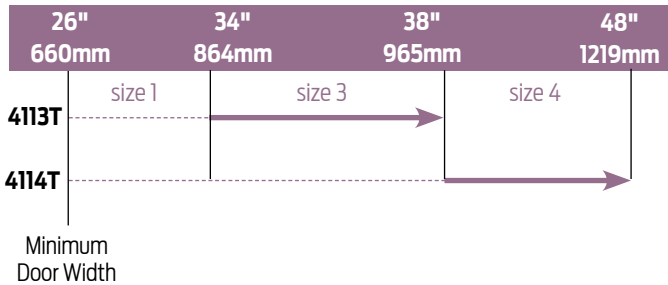
Select closer based on width of door.

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.

INTERIOR DOOR WIDTH




→ Indicates recommended range of door width for closer size.

REDUCED OPENING FORCE 4110T 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.

HOW-TO-ORDER 4110T SERIES CLOSERS

1. SELECT 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 PACK

- 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- _____

4000T SERIES

FEATURES



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

- Cast Iron
- Forged Steel Arm
- Double Heat Treated Steel Pinion
- All Weather Fluid
- UL & cUL Listed

- 4000T Series closer is shipped with standard arm, standard track, track roller, standard plastic cover, and wood and machine screw pack. See 4000T Series page 69 for options.
- Sized cylinders for interior fire/smoke barrier doors to 4' 0".
- Closer mounts in a wall pocket, hinge side, on either right or left hand door.
- Standard or optional custom powder coat finish.
- Optional plated finish on metal cover, arm and fasteners.
- Optional SRI primer for installations in corrosive conditions is available with powder coat only.
- The 4000T Series is UL and cUL listed with a standard arm for self-closing doors.
- Tested and certified under ANSI Standard A156.4, grade one.

MOUNTING					FINISH		COVER		CYLINDER			**ARM FUNCTION										
HINGE (PULL SIDE)	TOP JAMB (PULL)	TOP JAMB (PUSH)	PARALLEL ARM	STOP FACE	POWDER COAT	PLATED	PLASTIC	METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY	DELAYED ACTION	AVB***	REGULAR (DOUBLE)	STANDARD (SINGLE)	HOLD-OPEN	FUSIBLE LINK	EDA/HEDA	CUSH/HCUSH	SCUSH/SHCUSH	DOUBLE EGRESS	
●	○	○	○	○	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● AVAILABLE
○ NOT AVAILABLE

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

*** Advanced Variable Backcheck.

4000T SERIES

WALL POCKET MOUNTING

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

MAXIMUM OPENING

Templating allows 90° only.
Hold-open point 90° with magnet.

Dimension 1 is the distance from the centerline of the closer shaft to the centerline of the hinge or pivot.

For pocket pivot or total door hinge, 9-1/2" (241 mm).

For butt hinge 8" (203 mm).

For center pivot 10" (254 mm).

Dimension 2 is the distance from the centerline of the pivot or hinge to the cylinder mounting surface.

For pocket pivot 4-1/2" (114 mm).

For total door hinge 3-7/8" (98mm)

For butt hinge 2-7/8" (73 mm).

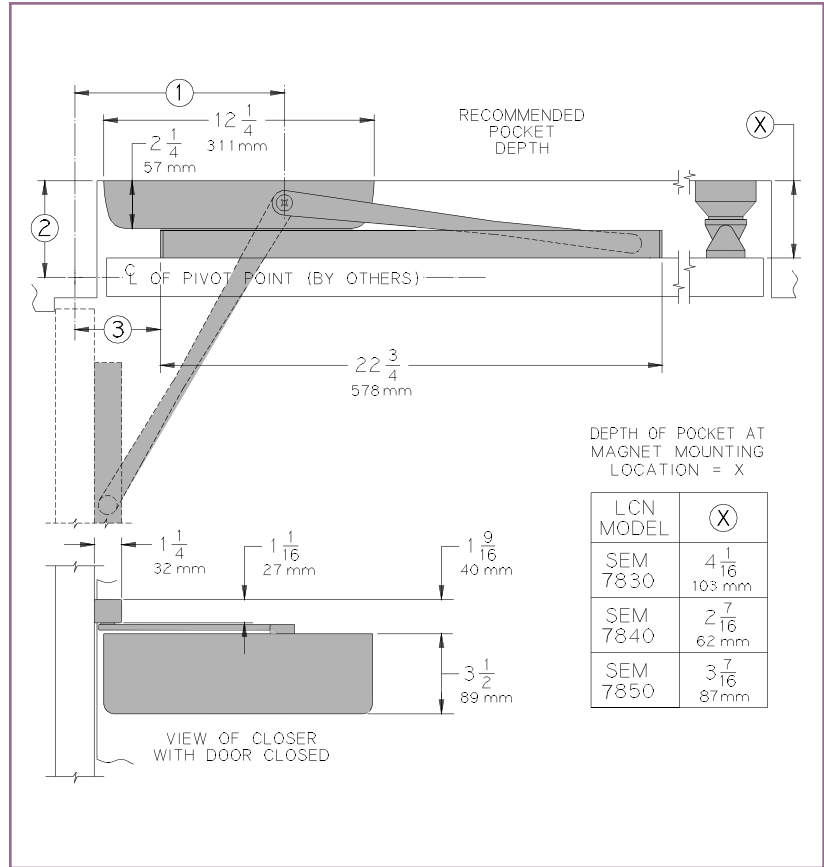
For center pivot 4-1/2" (114 mm).

Dimension 3 is the distance from the centerline of the pivot or hinge to end of the track.

For pocket pivot or total door hinge, 3-7/8" (98mm).

For butt hinge 2-3/8" (60mm).

For center pivot 4-5/8" (117mm).



- **Butt Hinges**, Pocket Pivot, Total Door Hinge or Center Pivot are door mounting options.
- **Butt Hinges** should not exceed 5" (127 mm).
- **Pocket Depth**, See above table for distance required between door and closer mounting location. This dimension is measured from the cylinder mounting surface to the pull side face of the door at 90°.
- **Wall Magnet** SEM 7850 is recommended. Use of other magnets may require special construction to alter the depth of the pocket at the magnet location. See Fire Life Safety Section.

Options

- Metal cover.

Special Templates

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

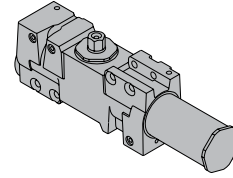
4000T SERIES

CYLINDERS

CYLINDER, 4000T-3071

Standard, non-handed cast iron cylinder assembly.

3071

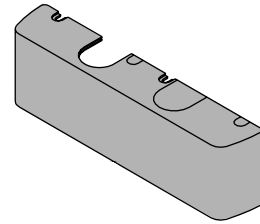


COVERS

COVER, 4000T-72

Standard, non-handed plastic cover.

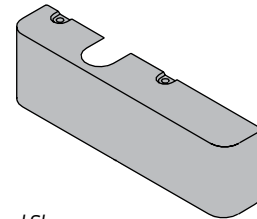
72



METAL COVER, 4000T-72MC

Optional, handed cover. Required for plated and custom powder coat finishes.

72MC



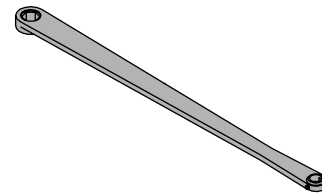
Right Hand Shown

ARM

STANDARD ARM, 4000T-3077T

Non-handed arm.

3077T

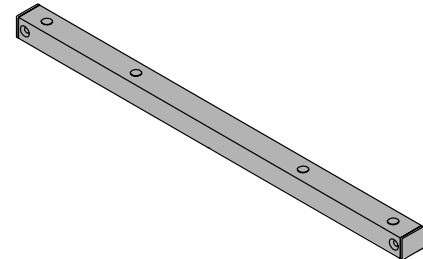


TRACK

STANDARD TRACK, 4000T-3038

Standard, non hold-open, non-handed track.
Will not accept hold-open clip or bumper assembly.

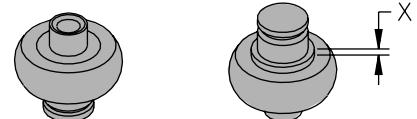
3038



TRACK ROLLER, 4000T-3034

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

3034



4000T SERIES

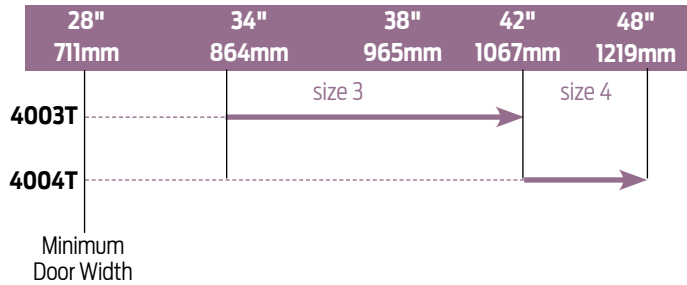
TABLE OF SIZES

Select closer based on width of door.

4000T Series cylinders available in size 3 or 4.

Closing power of 4000T Series closers is not adjustable.

INTERIOR DOOR WIDTH



→ Indicates recommended range of door width for closer size.

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 COVER,
- STANDARD ARM,
- TRACK ROLLER,
- STANDARD TRACK,
- WOOD and MACHINE SCREW PACK
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)

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".*

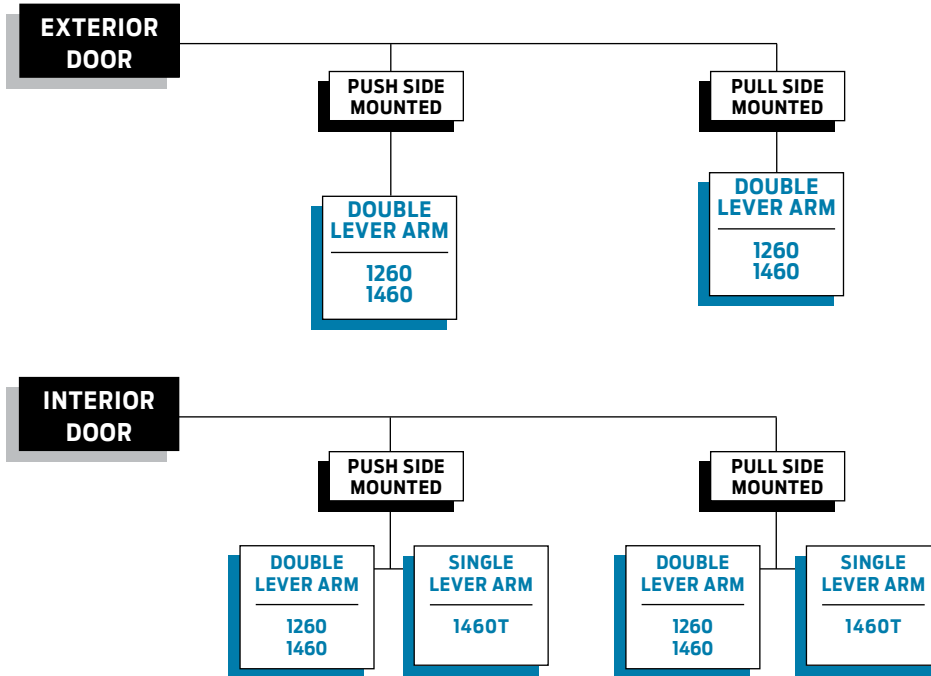
SPECIAL TEMPLATE

- ST- _____

1000 SERIES SURFACE MOUNTED CLOSERS

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	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
1260	●	○	●	●	○	●	○	●	○	○	●	●	○	○	180°	○	○	180°	120°	110°	110°
1460	●	○	●	●	○	●	○	●	○	○	●	●	○	○	180°	○	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 for over 85 years. 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

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

SPECIFICATIONS

Refer to "SPECIFICATIONS" section for suggested architectural specifications.

MATERIALS

- High strength **cast iron** cylinder.
- **Forged steel** main arm for all EDA, Cush, 1460HD and 1460T Arms.
- One piece **forged steel** piston.
- Heat treated pinion.
- **All weather fluid** eliminates seasonal adjustments.
- **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.

- For installations where a higher level of corrosion 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 for the 1460 Series closers.

LISTINGS & APPROVALS

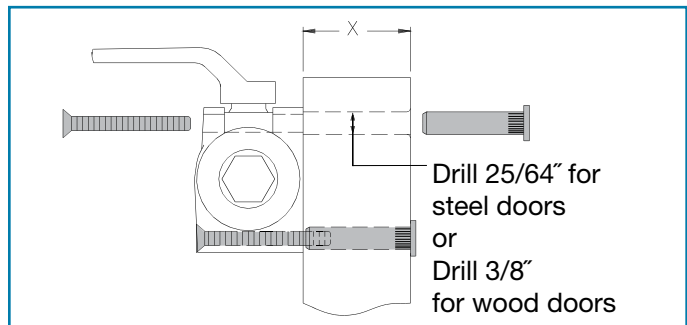
UL listed for self-closing doors without hold-open under "SWINGING DOOR CLOSERS" (GVEV) file R 1943. Tested and certified under ANSI Standard A156.4 grade one. Consult factory for details. Consult factory for other listings such as; cUL, California State Fire Marshal, Bureau of Standards and Appeals.

POSITIVE PRESSURE

LCN closers have been certified for three hours by UL to be in compliance with UBC 7-2 (1997) and 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. 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.



Note 1: For Thru Bolts, specify door thickness if other than 1-3/4" (44 mm). Represented in diagram as dimension "X".

Note 2: Phillips head, metric machine screws are available, please specify.

Note 3: LCN recommends the use of wood screws in wood door applications.

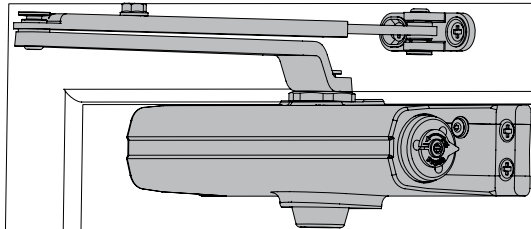
MAINTENANCE

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

1260 SERIES

FEATURES

CLOSER MOUNTS
***HINGE (PULL) SIDE**
TOP JAMB (PUSH SIDE)
PARALLEL ARM (PUSH SIDE)



*HINGE (pull) side mount shown

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.

- Cast Iron
- All weather fluid
- Non-handed
- Peel-n-stick templates for fast and accurate installation
- UL and cUL listed

- Standard 1260 Series closer shipped with regular arm, a shaft cover, and self reaming and tapping screws. See 1260 Series Pages 8-9 for options.
- Non-sized (1-5) cylinder is adjustable for interior doors to 4' 6" and exterior doors to 3' 6".
- Closer mounts hinge side, top jamb and parallel arm on either right or left swinging doors.
- Mounts to most common commercial footprint (3/4" x 9-1/16").
- Closer meets ADA requirements. See 1260 Series page 10.
- Optional Quick Fix™ bracket kit.
- Standard or optional custom powder coat finish.
- Optional SRI primer for installations in corrosive conditions. (Available with powder coat finishes only).
- Optional Slim Line cover.
- Tested and certified under ANSI Standard A156.4, grade one.

MOUNTING					FINISH		COVER		CYLINDER			*ARM FUNCTION								
●	●	○	●	○	●	○	●	○	●	●	○	●	180°	○	○	180°	120°	110°	110°	
HINGE (PULL) SIDE	TOP JAMB (PULL)	TOP JAMB (PUSH)	PARALLEL ARM	STOP FACE	POWDER COAT	PLATED	PLASTIC	METAL	DESIGNER SERIES	NON-HANDED	NON-SIZED	ACCESSIBILITY	DELATED ACTION	REGULAR (DOUBLE)	STANDARD (SINGLE)	HEAVY DUTY	HOLD-OPEN	EDA/MEDA	CUSH/HCUSH	SCUSH/SHCUSH

● 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

MAXIMUM OPENING

To 100°

Ⓐ = 6-9/16" (167 mm)

Ⓑ = 12-7/16" (316 mm)

or 101° to 120°

Ⓐ = 5-9/16" (141 mm)

Ⓑ = 11-7/16" (291 mm)

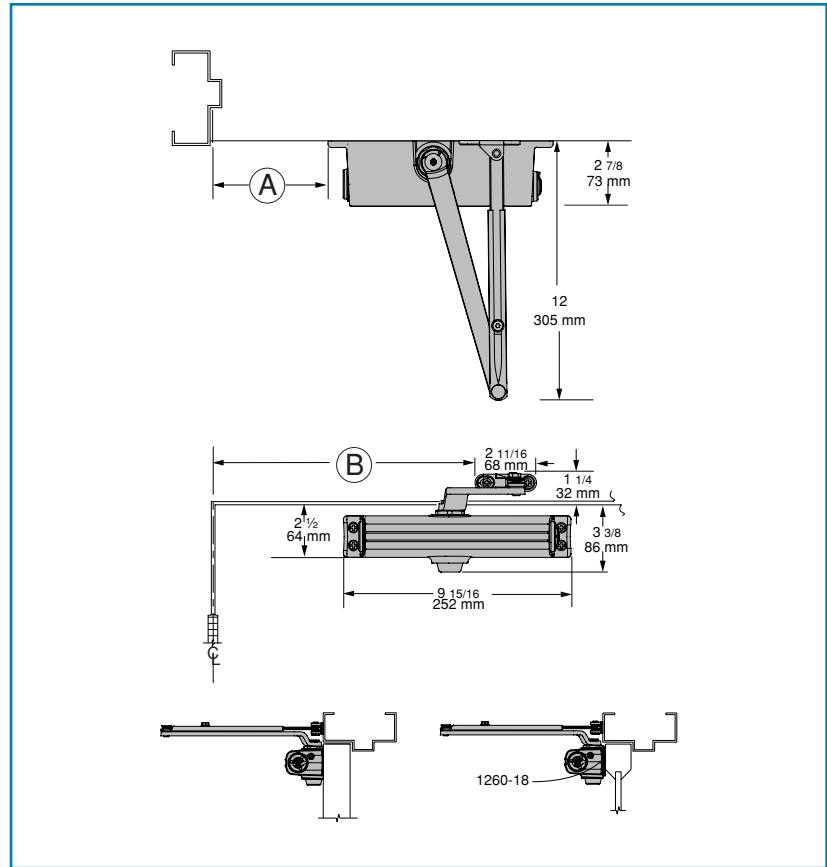
or *121° to 180°

Ⓐ = 3-1/16" (78 mm)

Ⓑ = 8-15/16" (227 mm)

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

*Frame and trim permitting.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 180°.
- **Reveal** should not exceed 3/4" (19 mm) for regular arm or 1/2" (13 mm) for hold-open arm.
- **Top Rail** less than 2-1/2" (64 mm) requires PLATE, 1260-18.
- **Clearance** of 2-7/8" (73 mm) behind door required for installation.

Options

- Hold-open arm.
- Slim Line cover (SLIM).

Special Templates

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

1260 SERIES

TOP JAMB (PUSH SIDE) MOUNTING

MAXIMUM OPENING

To 100°

Ⓐ = 7-1/16" (179 mm)

Ⓑ = 12-15/16" (329 mm)

or 101° to 120°

Ⓐ = 5-9/16" (141 mm)

Ⓑ = 11-7/16" (291 mm)

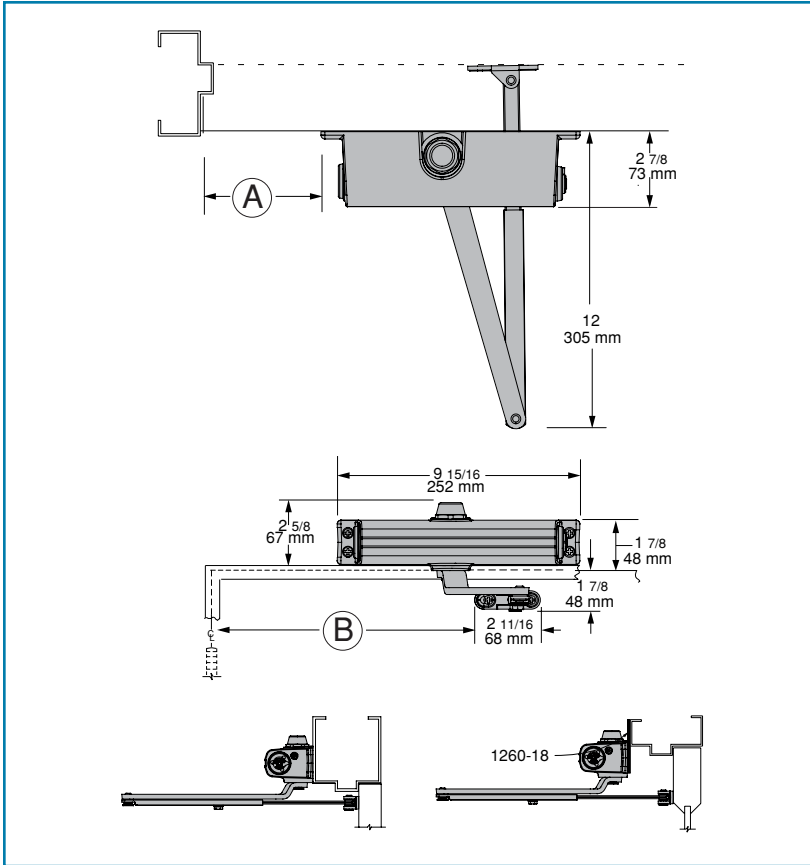
or *121° to 180°

Ⓐ = 3-1/16" (78 mm)

Ⓑ = 8-15/16" (227 mm)

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

**Frame and trim permitting.*



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 180°.
- **Reveal**

Arm Type	Maximum Reveal	Opening
Regular Arm	3-1/2"	Up to 120°
Regular Arm	2-1/4"	121° to 180°
Long Arm	7-1/2"	Up to 120°
Long Arm	3-1/2"	121° to 180°
Hold-Open Arm	2"	Up to 120°
Hold-Open Arm	2-1/4"	121° to 180°
Long Hold-Open Arm	4-1/2"	Up to 120°
Long Hold-Open Arm	4-1/2"	121° to 160°

- **Top Rail** requires 1-3/4" (44 mm) minimum. 2-1/2" (64 mm) minimum with closer on PLATE, 1260-18.
- **Head Frame** less than 1-3/4" (44 mm) requires PLATE, 1260-18. For flush ceiling condition with 2" (51 mm) headframe, use PLATE, 1260-18. (Plate requires 1-3/8" (35 mm) minimum.)

Options

- Long arm, hold-open arm.
- Long hold-open arm.
Slim Line cover (SLIM).

Special Templates

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

1260 SERIES

PARALLEL ARM (PUSH SIDE) MOUNTING

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.

MAXIMUM OPENING

Regular or hold-open arm can be templated to 100°

Ⓐ = 7-3/16" (183 mm)

Ⓑ = 8-5/8" (219 mm)

or 101° to 130°

Ⓐ = 5-11/16" (144 mm)

Ⓑ = 7-1/8" (181 mm)

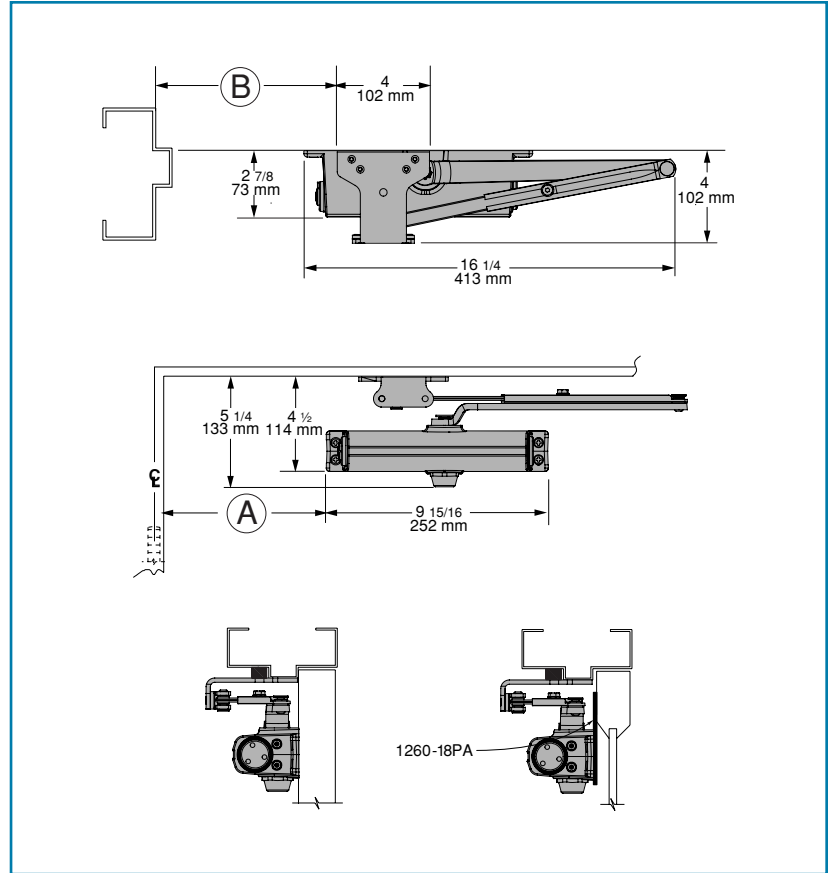
or *131° to 180°

Ⓐ = 3-11/16" (94 mm)

Ⓑ = 5-1/8" (130 mm)

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

**Frame and trim permitting.*



1260 REGULAR OR HOLD-OPEN MOUNT

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

Options

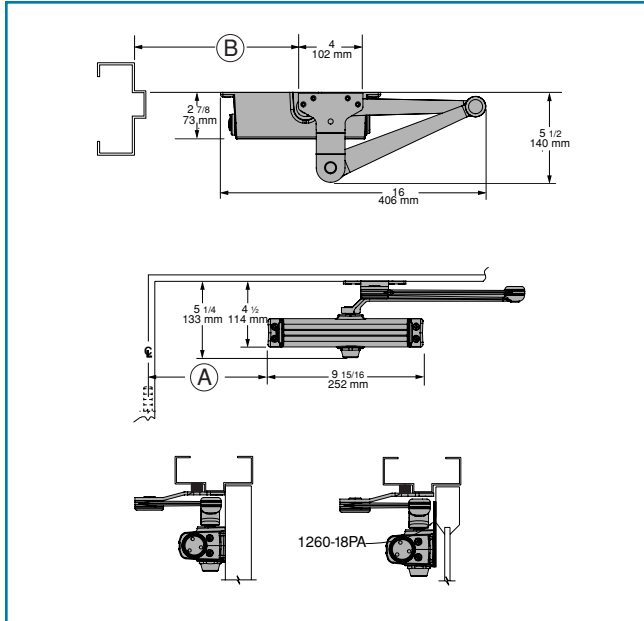
- Slim Line cover (SLIM).
- Hold-open PA, HEDA, EDA, CUSH, HCUSH arm.

Special Templates

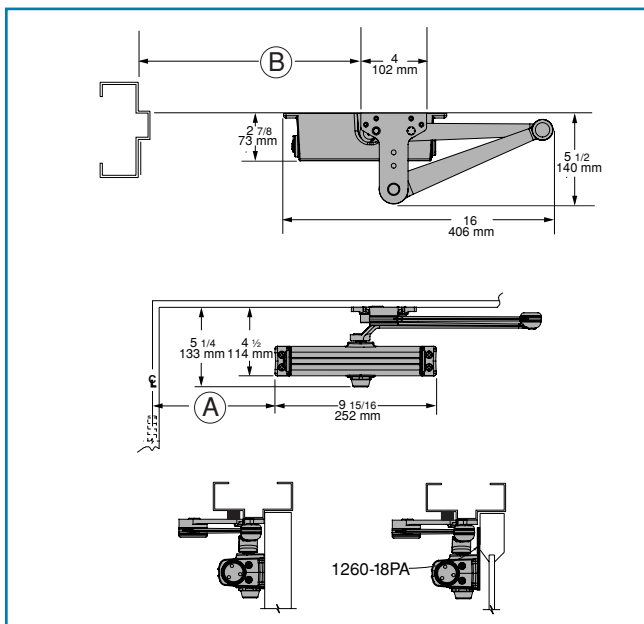
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.

1260 SERIES

1260 EDA MOUNT



1260 CUSH MOUNT



1260 EDA OR CUSH-N-STOP MOUNTING

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

MAXIMUM OPENING

EDA template allows 120°. Hold-open point up to maximum opening.

- 90°,
 (A) = 4-13/16" (122 mm)
 (B) = 9-1/2" (241 mm)
 or 120°,
 (A) = 3-5/16" (84 mm)
 (B) = 8" (203 mm)

CUSH arms can be templated for maximum opening/hold-open point at 85°.

- (A) = 5-5/16" (135 mm)
 (B) = 10" (254 mm)
 90°,
 (A) = 4-11/16" (119 mm)
 (B) = 9-3/8" (238 mm)
 100°,
 (A) = 3-9/16" (90 mm)
 (B) = 8-1/4" (210 mm)
 or 110°,
 (A) = 2-13/16" (71 mm)
 (B) = 7-1/2" (191 mm)

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

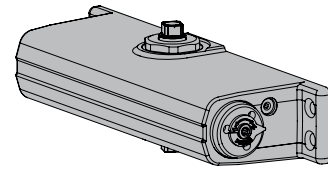
1260 SERIES

CYLINDERS

CYLINDER, 1261-3071

Standard, non-handed cast iron cylinder assembly.

3071



ARMS

REGULAR ARM, 1260-3077

Non-handed arm mounts hinge side or top jamb. Parallel Arm includes PA SHOE, 1260-62PA required for parallel arm mounting.

PA SHOE, 1260-62PA

Required for parallel arm mounting.

LONG ARM, 1260-3077L

Optional, non-handed arm includes LONG ROD AND SHOE, 1260-79LR for top jamb mount with deep reveals.

HOLD-OPEN ARM, 1260-3049

Optional, non-handed arm mounts hinge side, top jamb or parallel arm (62PA required). Hold-open adjustable at shoe.

LONG HOLD-OPEN ARM, 1260-3049L

Optional non-handed arm includes LONG HEAD AND TUBE, 1260-3048L for top jamb mount with deep reveals.

EXTRA DUTY ARM, 1260-3077EDA, 1260-3077EDA/G,

Optional, non-handed parallel arm features solid forged steel main and forearm for potentially abusive installations. Optional 1260-3077EDA/G for blade stop clearance.

HEDA ARM, 1260-3049EDA

Optional handed arm, provides hold-open function adjustable at shoe.

CUSH-N-STOP® ARM, 1260-3077CNS

Optional, non-handed parallel arm features solid forged steel main arm and forearm with stop in soffit shoe.

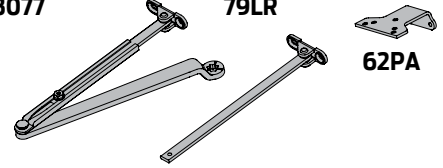
HCUSH ARM, 1260-3049CNS

Optional non-handed arm, provides hold-open function with templated stop/hold-open points. Handle controls hold-open function.

3077

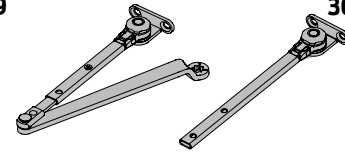
79LR

62PA



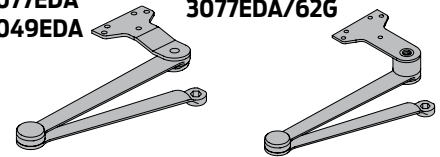
3049

3048L

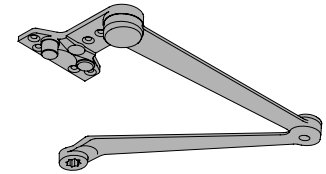


3077EDA
3049EDA

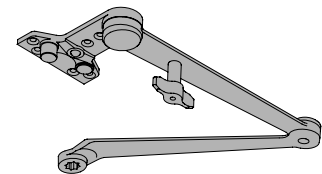
3077EDA/62G



3077CNS



3049CNS



1260 SERIES

ACCESSORIES

COVER

COVER, 1260-72

Optional, non-handed, slim line plastic cover.

INSTALLATION ACCESSORIES

PLATE, 1260-18

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.

Plate requires minimum 1-1/2" (38 mm) minimum top rail or 1-1/4" (32 mm) head frame.

PLATE, 1260-18PA

Required for parallel arm mounting where top rail is less than 4-3/8" (111 mm), measured from the stop.

Plate requires 1-3/4" (44 mm) minimum top rail.

QUICK FIX™ BRACKET KIT, 1260-18QF

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

CUSH SHOE SUPPORT, 1260-30

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

BLADE STOP SPACER, 1260-61

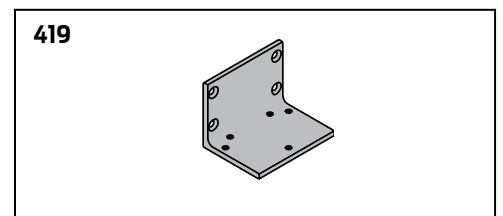
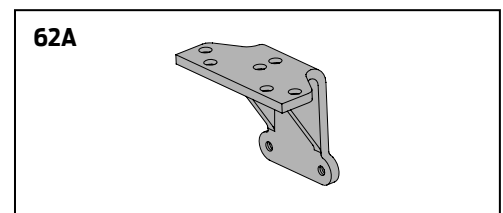
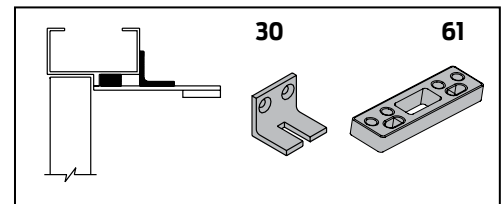
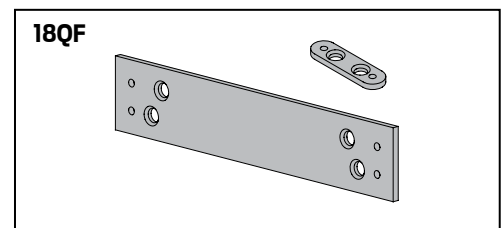
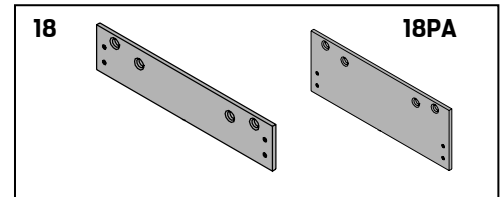
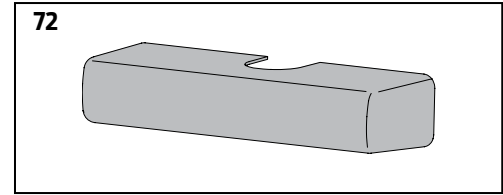
Lowers parallel arm shoe to clear 1/2" (13 mm) blade stop.

AUXILIARY SHOE, 1260-62A

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

PA FLUSH PANEL ADAPTER, 1260-419

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

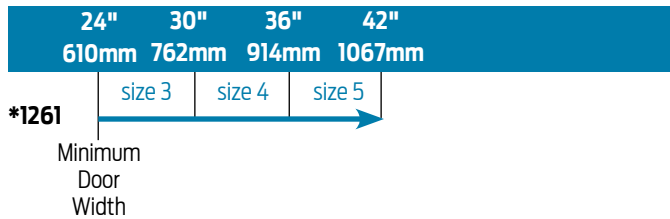


1260 SERIES

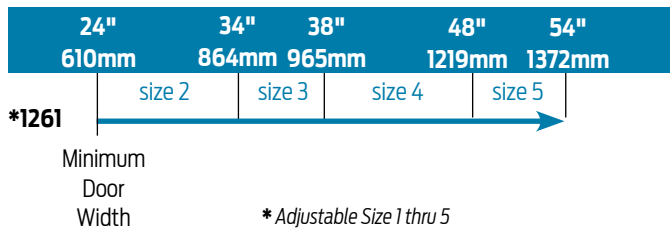
TABLE OF SIZES

Select closer based on width of door.
The spring power of a 1261 cylinder is field adjustable from size 1 through size 5 and is shipped adjusted to size 3.

EXTERIOR (and VESTIBULE) DOOR WIDTH



INTERIOR DOOR WIDTH




→ Indicates recommended range of door width for closer size.

REDUCED OPENING FORCE 1260 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.

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

* Maximum opening force.

HOW-TO-ORDER 1260 SERIES CLOSERS

1. 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)
- EDA (optional -62G)
- HEDA (specify right or left hand),
(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".

SPECIAL TEMPLATE

- ST- _____

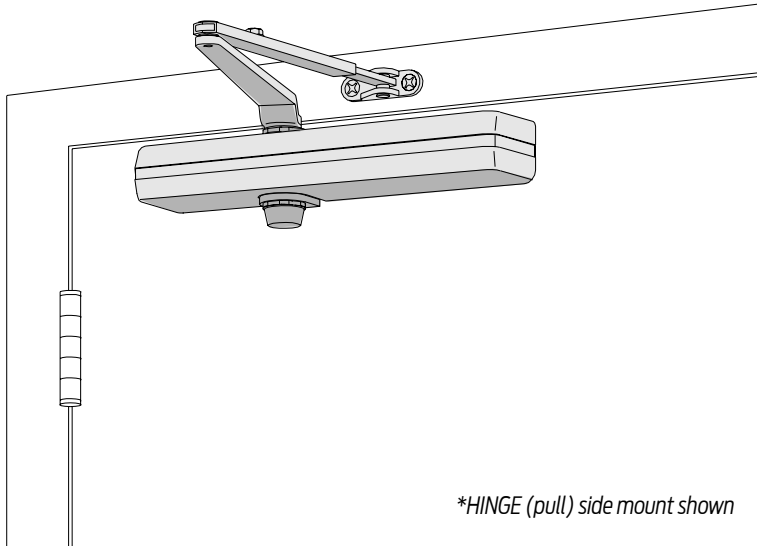
INSTALLATION ACCESSORIES

- 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

1460 SERIES

FEATURES

CLOSER MOUNTS
***HINGE (PULL) SIDE**
TOP JAMB (PUSH SIDE)
PARALLEL ARM (PUSH SIDE)



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.

- Cast Iron
- All weather fluid
- Non-handed
- Peel-n-stick templates for fast and accurate installation
- UL and cUL listed

- Standard 1460 series closer shipped with regular arm, a slim line plastic cover, and self reaming and tapping screws. See 1460 Series Pages 16 & 17 for options.
- Multiple cover options include; Standard (Slim line), Full and Designer Series.
- Non-sized (1-6) cylinder is adjustable for interior doors to 5'0" and exterior doors to 4'0".
- Closer mounts hinge side, top jamb and parallel arm on either right or left swinging doors.
- Closer meets ADA requirements. See 1460 Series page 18.
- Standard or optional custom powder coat finish.
- Optional plated finish on Designer Series metal cover, arm and fasteners. (Available with powder coat finishes only.)
- Optional SRI primer for installations in corrosive conditions.
- Tested and certified under ANSI Standard A156.4, grade one.

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

● AVAILABLE
 ○ NOT AVAILABLE

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

1460 SERIES

HINGE (PULL) SIDE MOUNTING

MAXIMUM OPENING

110°

- Ⓐ = 5-7/8" (149 mm)
- Ⓑ = 10-7/8" (276 mm)

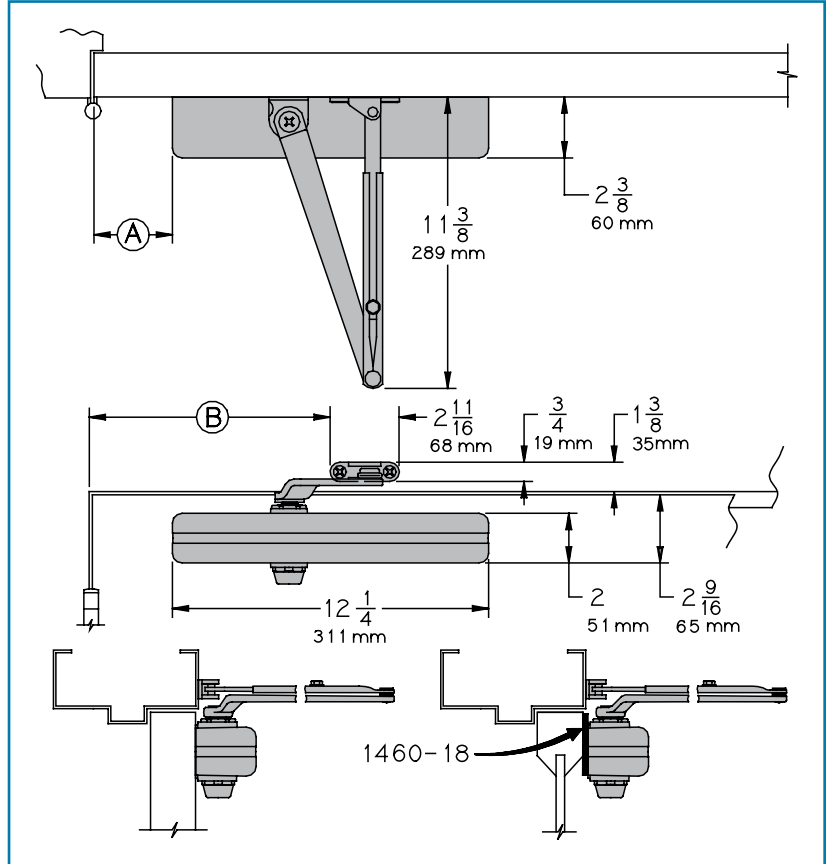
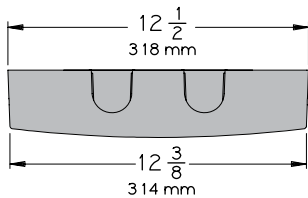
or *180°

- Ⓐ = 2-7/8" (73 mm)
- Ⓑ = 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



Options

- Delayed action cylinder.
- Hold-open arm.
- ▶ Full cover. (FC)
- Designer Series metal cover.(DS)

Special Templates

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

- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 180°.
- **Reveal** should not exceed 3/4" (19 mm) for regular arm or 1/2" (13 mm) for hold-open arm.
- **Top Rail** less than 2-1/2" (64 mm) requires PLATE, 1460-18. With Full cover, use PLATE, 1460-18FC. Plate requires 1-1/2" (38 mm) minimum. With Designer Series metal cover, use PLATE, 1460-18DS1.
- ▶ **Clearance** of 2-3/8" (60 mm) behind door required for installation.
- **Delayed Action** Add suffix "DEL" to selected cylinder (eg. 1461 DEL). Delays closing from 110° to 65° or 160° to 75° depending on templating. Delay time adjustable up to approximately 1 minute.

1460 SERIES

TOP JAMB (PUSH SIDE) MOUNTING

MAXIMUM OPENING

110°

Ⓐ = 6-3/4" (169 mm)

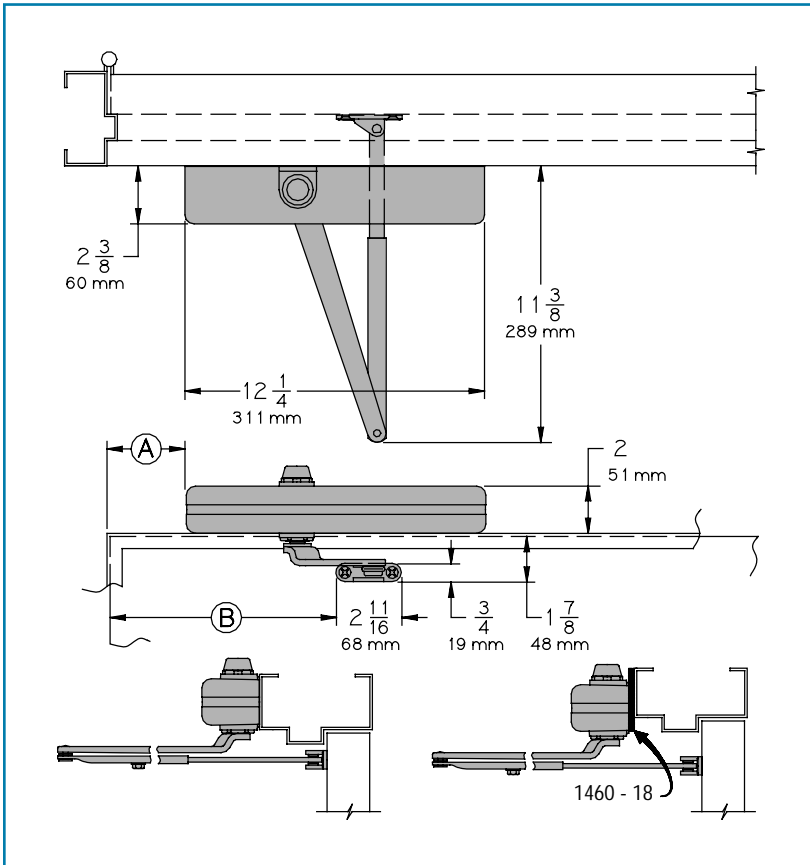
Ⓑ = 11-1/4" (286 mm)

180°

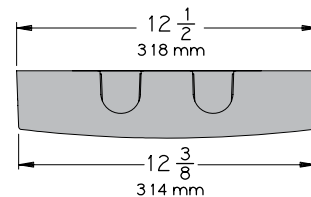
Ⓐ = 3" (76 mm)

Ⓑ = 7-1/2" (191 mm)

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



Optional, Non-handed Designer Series Metal Cover



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 180°.
- **Reveal** of 2-1/2" (64 mm) allows 180° opening with REGULAR HOLD-OPEN ARM. 3-1/2" (89 mm) allows up to 180° opening with REGULAR ARM or 180° with optional LONG HOLD-OPEN ARM when standard head and tube is replaced with optional LONG HEAD AND TUBE, 1460-78HL. 4-7/8" (124 mm) allows up to 140° with REGULAR ARM or LONG HOLD-OPEN ARM. 7" (178 mm) allows up to 140° opening with LONG ARM when standard rod and shoe is replaced with optional LONG ROD AND SHOE, 1460-79LR.
- **Top Rail** requires 1-7/8" (48 mm) minimum. 2-3/4" (70 mm) minimum with closer on PLATE, 1460-18.
- **Head Frame** less than 1-3/4" (44 mm) requires PLATE, 1460-18. For flush ceiling condition with 2" (51 mm) headframe, use PLATE, 1460-18.
- **Delayed Action** Add suffix "DEL" to selected cylinder (eg. 1460 DEL). Delays closing from 110° to 75° or 180° to 95° depending on templating. Delay time adjustable up to approximately 1 minute.

Options

- Delayed action cylinder.
- Long arm, hold-open arm, long hold-open arm.
- Full cover. (FC)
- Designer Series metal cover. (DS)

Special Templates

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

1460 SERIES

PARALLEL ARM (PUSH SIDE) MOUNTING

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.

MAXIMUM OPENING

Regular or hold-open arm can be templated for 100°

Ⓐ = 4-1/4" (108 mm)

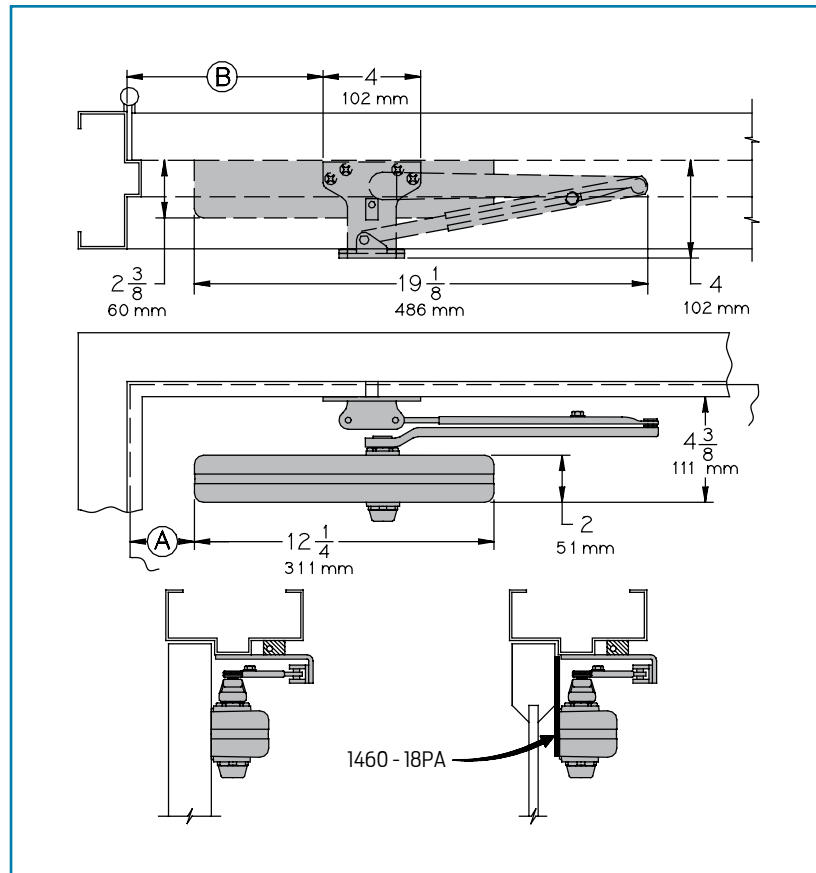
Ⓑ = 9-1/4" (235 mm)

or 180°

Ⓐ = 1-3/4" (44 mm)

Ⓑ = 6-3/4" (171 mm)

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



1460 REGULAR OR HOLD-OPEN MOUNT

- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point, where a door cannot swing 180°, or where CUSH-N-STOP arm is not used.
- **Clearance** for 1460-62PA shoe is 4" (102 mm) from door face.
- **Top Rail** less than 4-3/8" (111 mm) measured from the stop requires PLATE, 1460-18PA. With Full cover, use PLATE, 1460-18PAFC. Plate requires 1-3/4" (44 mm) minimum. Plate requires 1-1/4" (32 mm) minimum. With Designer Series metal cover, use PLATE, 1460-18PADS1.
- **Head Frame** flush or single rabbeted requires PA SHOE ADAPTER, 1460-418.
- **Stop Width** minimum 1" (25 mm).
- **Blade Stop** clearance, requires 1/2" (13 mm) BLADE STOP SPACER, 1460-61.
- **Auxiliary Shoe**, 1460-62A allows installation of regular arm with overhead holder/stop. Special templating required.
- **Delayed Action** Add suffix "DEL" to selected cylinder (eg. P1460 DEL). Delays closing from maximum opening to approximately 75°. Delay time adjustable up to approximately 1 minute.

Options

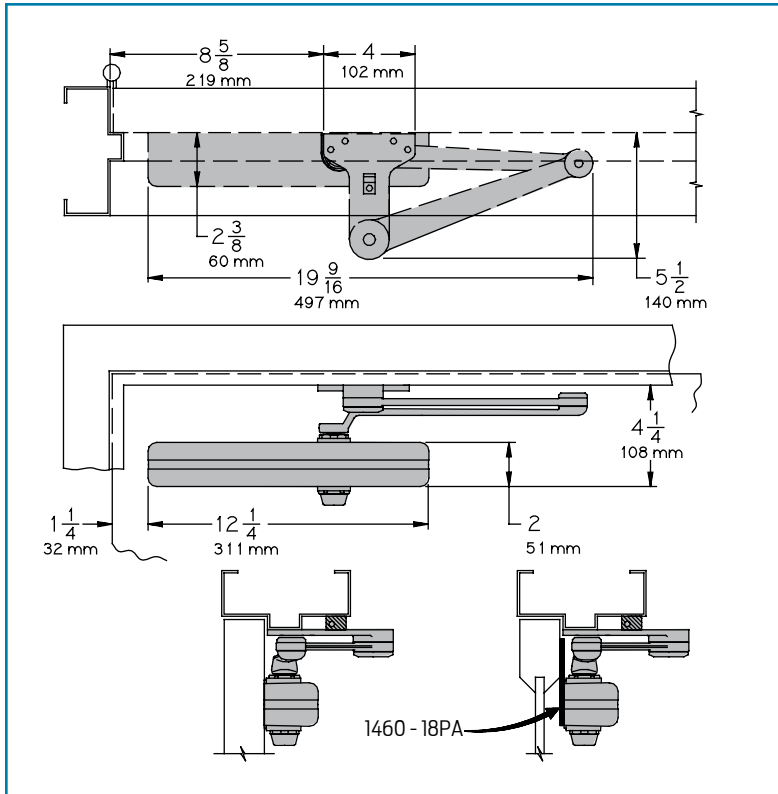
- Delayed action cylinder.
- Hold-open, EDA, HEDA, CUSH, HCUSH, SPRING CUSH, or SPRING HCUSH arms.
- Full cover. (FC)
- Designer Series metal cover. (DS)

Special Templates

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

1460 SERIES

1460 EDA MOUNT



1460 EDA OR CUSH-N-STOP MOUNTING

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

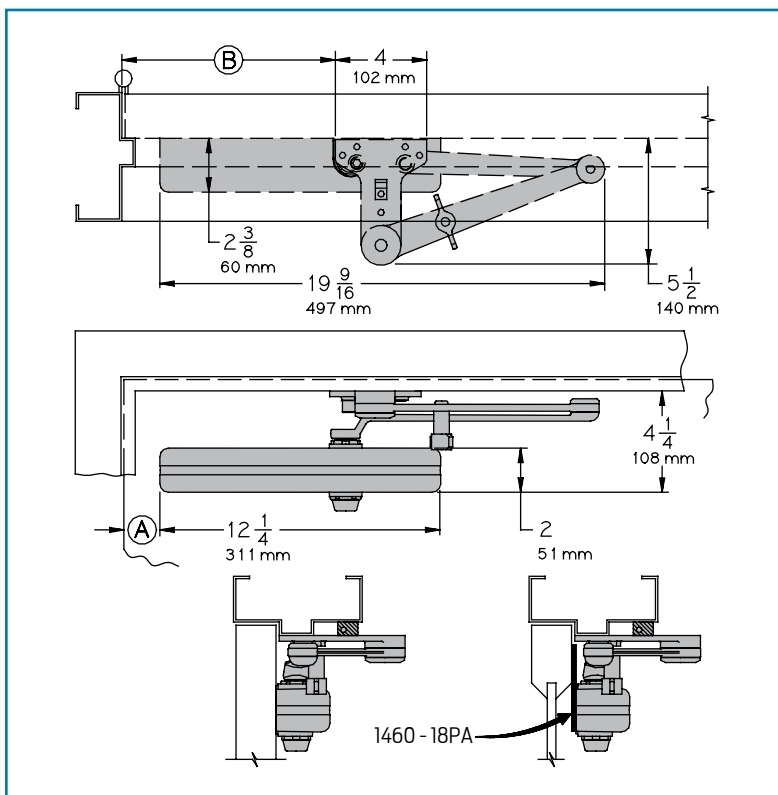
MAXIMUM OPENING

EDA template allows 110°.
Hold-open point up to maximum opening.

CUSH arms can be templated for maximum opening/hold-open point at 85°.

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

1460 CUSH MOUNT



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

1460 SERIES

CYLINDERS

CYLINDER, 1461-3071

Standard, non-handed cast iron cylinder assembly.

ARMS

REGULAR ARM, 1460-3077

Non-handed arm mounts hinge side or top jamb.

P1460 closer includes PA SHOE, 1460-62PA required for parallel arm mounting.

PA SHOE, 1460-62PA

Required for parallel arm mounting.

LONG ARM, 1460-3077L

Optional, non-handed arm includes LONG ROD AND SHOE, 1460-79LR for top jamb mount with deep reveals.

HEAVY DUTY REGULAR ARM 1460-3077HD

Optional, heavy duty, forged, non-handed arm, mounts hinge side, top jamb or parallel arm.

HEAVY DUTY LONG ARM 1460-3077HDL

Optional, heavy duty, forged, non-handed arm. Includes long rod and shoe, 1460-79LR for top jamb mounts with deep reveals.

HOLD-OPEN ARM, 1460-3049

Optional, non-handed arm mounts hinge side, top jamb or parallel arm (62PA required). Hold-open adjustable at shoe.

LONG HOLD-OPEN ARM, 1460-3049L

Optional non-handed arm includes LONG HEAD AND TUBE, 1460-3048L for top jamb mount with deep reveals.

EXTRA DUTY ARM, 1460-3077EDA, 1460-3077EDA/G

Optional, non-handed parallel arm features solid forged steel main and forearm for potentially abusive installations. Optional 1460-3077EDA/G for blade stop clearance.

HEDA ARM, 1460-3049EDA

Optional handed arm, provides hold-open function adjustable at shoe.

CUSH-N-STOP® ARM, 1460-3077CNS

Optional, non-handed parallel arm features solid forged steel main arm and forearm with stop in soffit shoe.

HCUSH ARM, 1460-3049CNS

Optional non-handed arm, provides hold-open function with templated stop/hold-open points. Handle controls hold-open function.

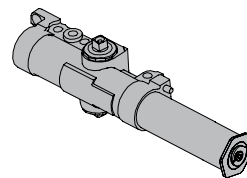
SPRING CUSH ARM, 1460-3077SCNS

Optional, non-handed parallel arm for abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe.

SPRING HCUSH ARM, 1460-3049SCNS

Optional, non-handed parallel arm for abusive applications features solid forged steel main arm and forearm with spring loaded stop in the soffit shoe. Handle controls hold-open function.

3071

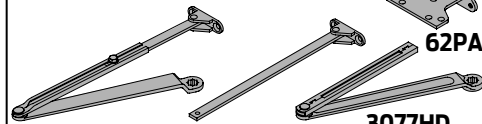


3077

79LR

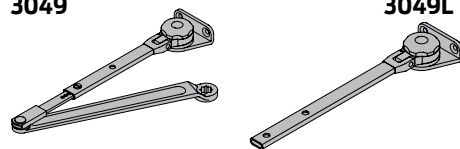
62PA

3077HD

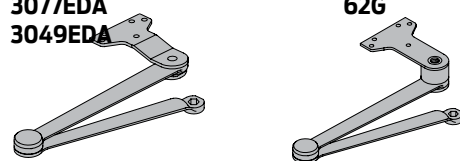


3049

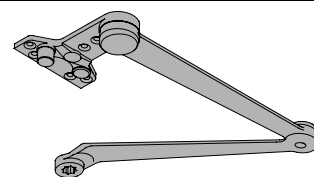
3049L

3077EDA
3049EDA

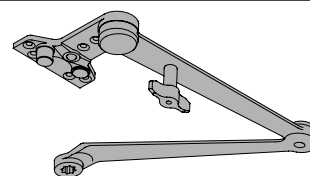
62G



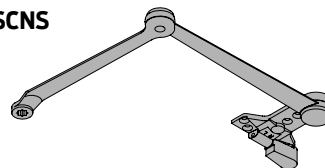
3077CNS



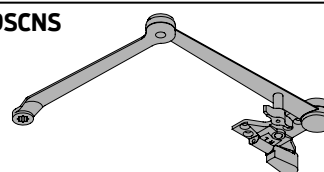
3049CNS



3077SCNS



3049SCNS



1460 SERIES

COVERS

COVER, 1460-72

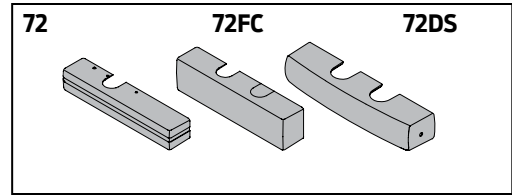
Standard, non-handed, slim line plastic cover with feature strip.

FULL COVER, 1460-72FC

Optional, non-handed, plastic cover provides complete enclosure.

DESIGNER SERIES METAL COVER, 1460-72DS

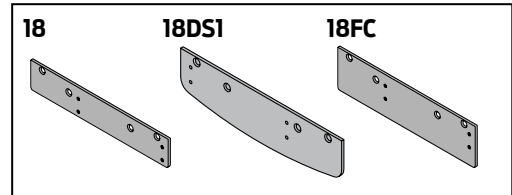
Optional, non-handed designer series metal full cover provides complete enclosure with a stylish look. Required for plating and custom powder coat option.



INSTALLATION ACCESSORIES

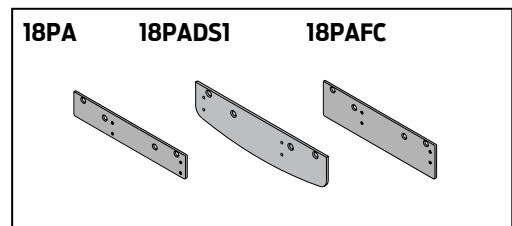
PLATE, 1460-18/1460-18DS1/1460-18FC

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. Plate 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.



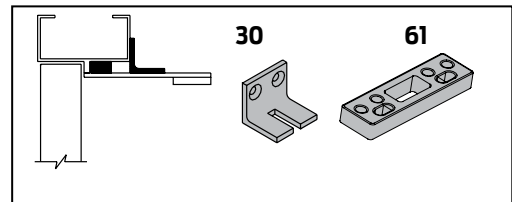
PLATE, 1460-18PA/1460-18PADS1/1460-18PAFC

Required for parallel arm mounting where top rail is less than 4-3/8" (111 mm), measured from the stop. Plate 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.



CUSH SHOE SUPPORT, 1460-30

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

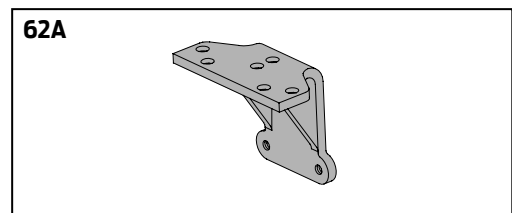


BLADE STOP SPACER, 1460-61

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

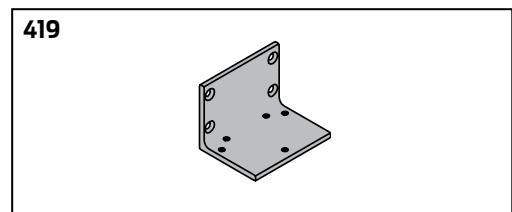
AUXILIARY SHOE, 1460-62A

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



PA FLUSH PANEL ADAPTER, 1460-419

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



1460 SERIES

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

24"	30"	36"	42"	48"
610mm	762mm	914mm	1067mm	1219mm



Minimum Door Width

INTERIOR DOOR WIDTH

24"	34"	38"	48"	54"	60"
610mm	610mm	965mm	1219mm	1372mm	1524mm



Minimum Door Width

* Adjustable Size 1 thru 6

→ Indicates recommended range of door width for closer size.

REDUCED OPENING FORCE 1460 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.

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

* Maximum opening force.

HOW TO ORDER 1460 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 (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)
- EDA (optional -62G)
- HEDA (specify right or left hand), (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".

SPECIAL TEMPLATE

- ST- _____

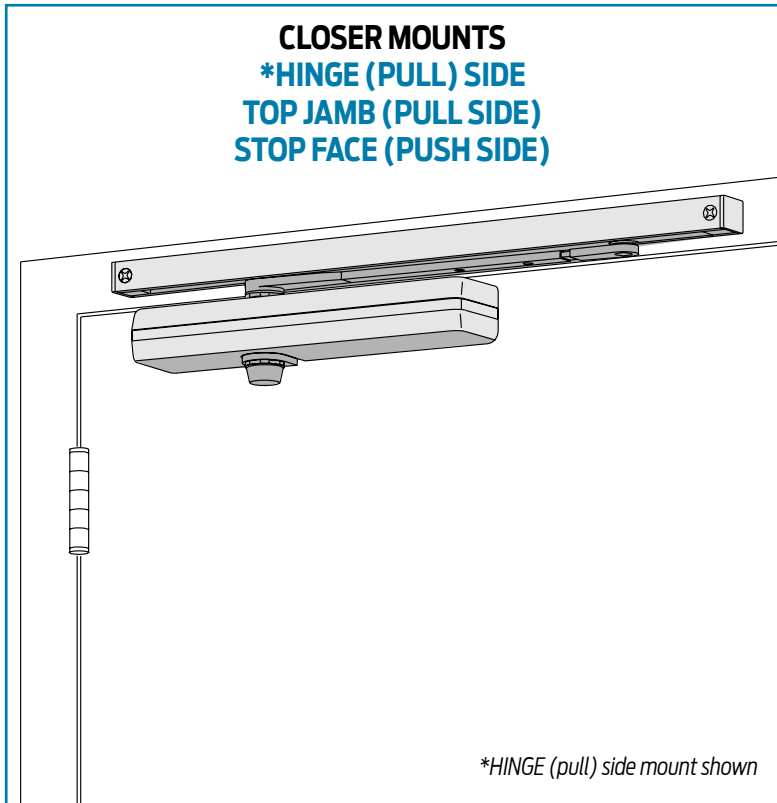
INSTALLATION ACCESSORIES

- 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

PHONE 877-671-7011
FAX 800-248-1460
www.allegion.com/us
2/14

1460T SERIES

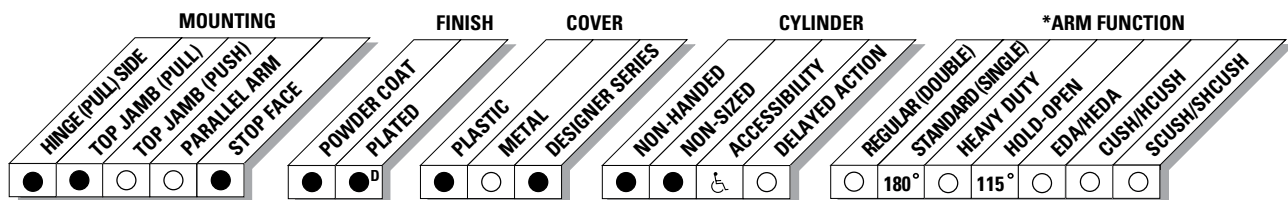
FEATURES



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

- Cast Iron
- All weather fluid
- Non-handed
- UL and cUL listed

- Standard 1460T series closer shipped with a standard arm, a slim line plastic cover, a standard track, a track roller, and self reaming and tapping screws. See 1460T Series page 23 & 24 for options.
- Multiple cover options include; Standard (Slim line), Full and Designer Series.
- Non-sized (2-4) cylinders adjustable for interior doors to 4' 0".
- Non-handed closer mounts hinge side, top jamb (pull side), and stop face on either right or left swinging doors.
- Standard or optional custom powder coat finish.
- Optional plated finish on Designer Series metal cover, arm and fasteners. (Available with powder coat finishes only).
- Optional SRI primer for installations in corrosive conditions.
- Tested and certified under ANSI Standard A156.4, grade one.



● AVAILABLE
○ NOT AVAILABLE

* Maximum opening/hold-open point with standard template. Hinge side mount
D = For designer series only.

1460T SERIES

MOUNTING DETAILS

HINGE (PULL) SIDE MOUNTING

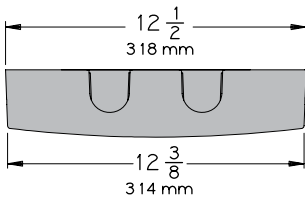
MAXIMUM OPENING

Templating allows up to 180°, trim and frame permitting, limited to 115° when optional bumper is installed.

Consult factory if door will be held open at 180°.

Hold-open points at 85°, 90°, 95°, 100°, 110° or 115° with hold-open tracks. Please note that many track style door closers are capable of allowing 180° of door swing. Be aware that the majority of track style closers are at their weakest closing force in the 180°-130° range. Consult factory for applications where an exterior or large/heavy door must swing 180°.

Optional, Non-handed Designer Series Metal Cover

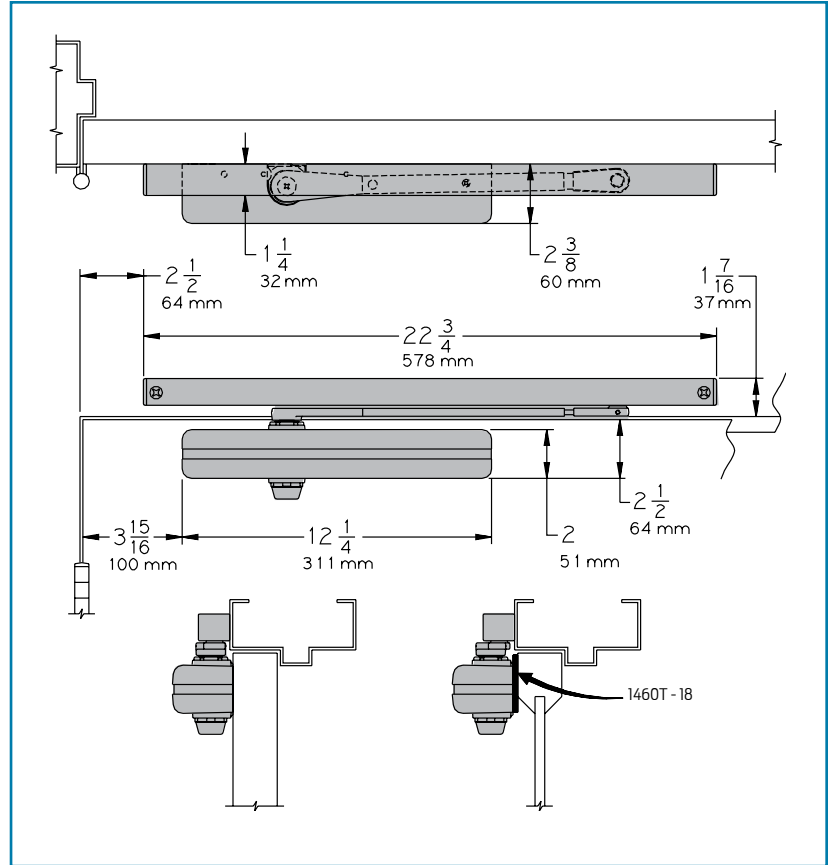


Options

- Regular track with bumper.
- Hold-open track.
- Hold-open track with bumper.
- Full cover. (FC)
- Designer Series metal cover. (DS)

Special Templates

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



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended where a door cannot swing 180°. Optional track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop.
- **Reveal** should not exceed 1/8" (3 mm).
- **Top Rail** less than 2-1/2" (64 mm) requires PLATE, 1460T-18. Plate requires 1-1/2" (38 mm) minimum. With Full cover, use PLATE, 1460T-18FC. With Designer Series metal cover, use PLATE, 1460T-18DS.
- **Clearance** of 2-3/8" (60 mm) behind door required for installation.

1460T SERIES

TOP JAMB (PULL SIDE) MOUNTING

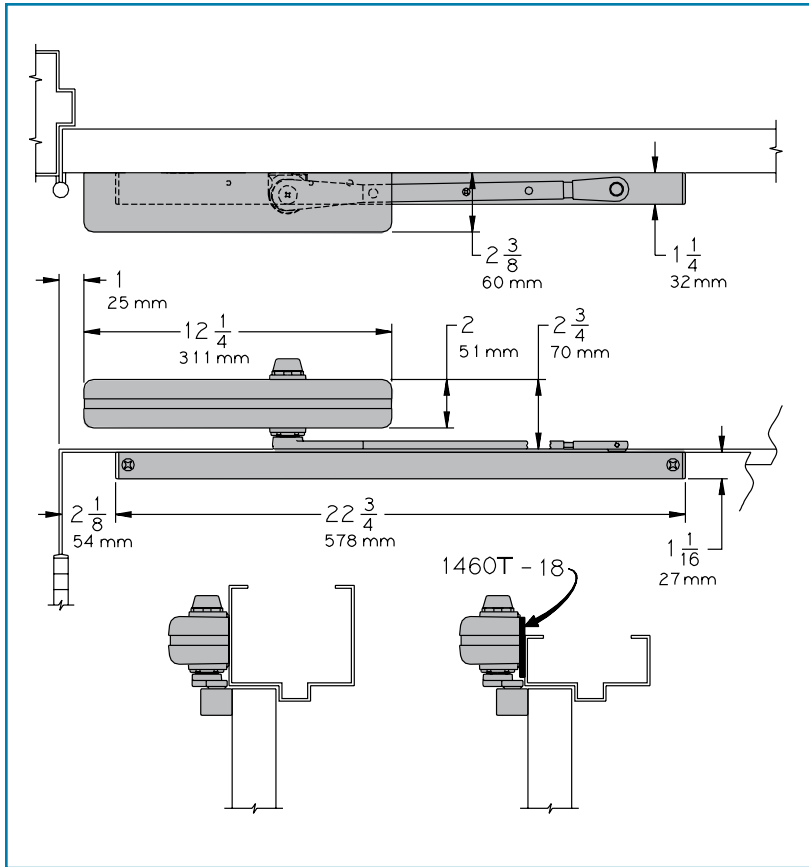
MAXIMUM OPENING

Templating allows up to 180°, limited to 115° when optional bumper is installed.

Consult factory if door will be held open at 180°.

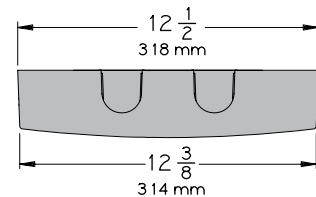
Hold-open points at 85°, 90°, 95°, 100°, 110° or 115° with hold-open tracks.

Please note that many track style door closers are capable of allowing 180° of door swing. Be aware that the majority of track style closers are at their weakest closing force in the 180° – 130° range. Consult factory for applications where an exterior or large/heavy door must swing 180°.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended where a door cannot swing 180°. Track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop.
- **Head Frame** less than 2-3/4" (70 mm) requires PLATE, 1460T-18. Plate requires 1-3/4" (44 mm) minimum. With full cover, use PLATE, 1460T-18FC. With Designer Series metal cover, use PLATE, 1460T-18DS.
- **Reveal** (hinge side) should not exceed 1/8" (3 mm).
- **Top Rail** minimum 1-1/4" (32 mm).
- **Clearance** 1-1/4" (32 mm) behind door for installations.

Optional, Non-handed Designer Series Metal Cover



Options

- Regular track with bumper.
- Hold-open track.
- Hold-open track with bumper.
- Full cover. (FC)
- Designer Series metal cover. (DS)

Special Templates

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

1460T SERIES

MOUNTING DETAILS

STOP FACE (PUSH SIDE) MOUNTING

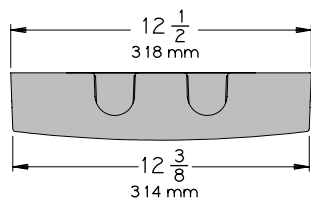
MAXIMUM OPENING

Templating allows 110°, limited to 100° when optional bumper is installed.

Hold-open points at 85°, 90°, 95°, or 100° with hold-open tracks.

Please note that many track style door closers are capable of allowing 180° of door swing. Be aware that the majority of track style closers are at their weakest closing force in the 180° – 130° range. Consult factory for applications where an exterior or large/heavy door must swing 180°.

Optional, Non-handed Designer Series Metal Cover

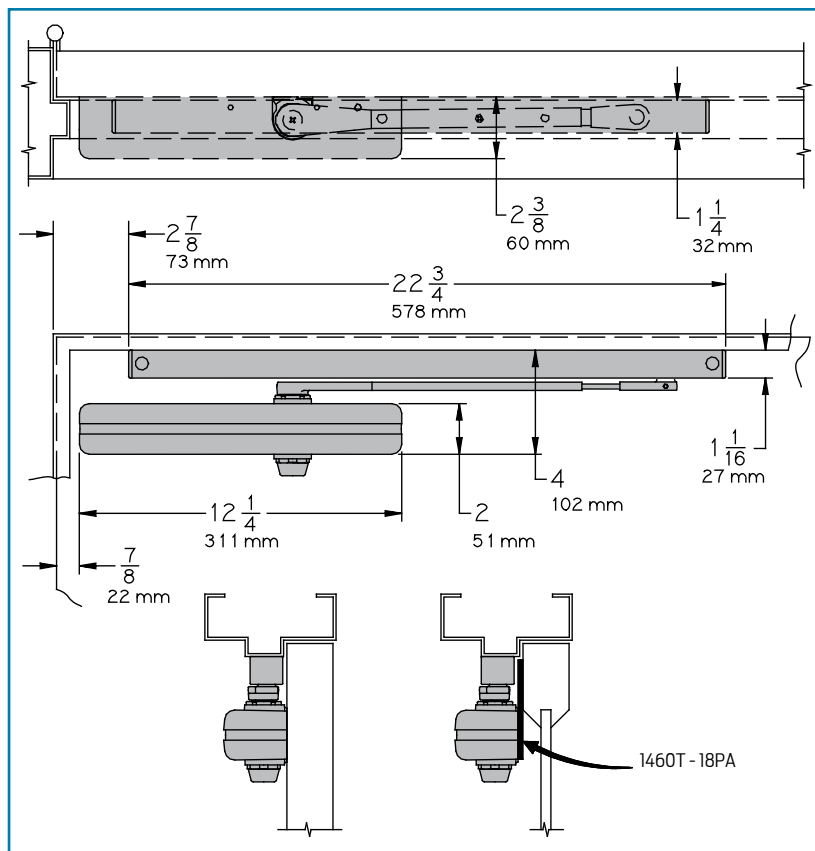


Options

- Regular track with bumper.
- Hold-open track.
- Hold-open track with bumper.
- Full cover. (FC)
- Designer Series metal cover. (DS)

Special Templates

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



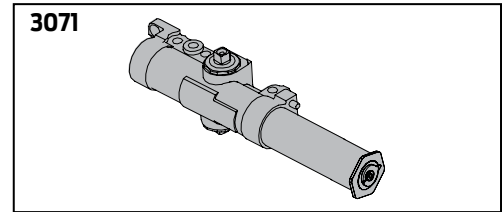
- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended where a door cannot swing 110°. Track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop.
- **Clearance** 1460T projects 2-3/8" (60 mm) from door face.
- **Top Rail** less than 4" (102 mm) measured from the stop face requires PLATE, 1460T-18PA. Plate requires 1-1/2" (38 mm) minimum. With Full cover, use PLATE, 1460T-18PAFC. With Designer Series metal cover, use PLATE, 1460T-18PADS.
- **Stop Width** minimum 1-1/4" (32 mm).

1460T SERIES

CYLINDERS

CYLINDER, 1460T-3071

Standard, non-handed cast iron cylinder assembly. For various applications see "Table of Sizes" on 1460T Series.



COVERS

COVER, 1460T-72

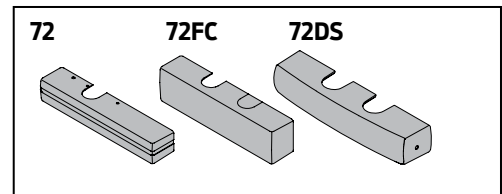
Standard, non-handed, slim line plastic cover with feature strip.

FULL COVER, 1460T-72FC

Optional, non-handed, plastic cover provides complete enclosure.

DESIGNER METAL COVER, 1460T-72DS

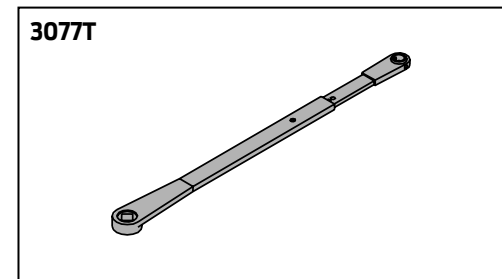
Optional, non-handed designer series metal full cover provides complete enclosure with a stylish look. Required for plating option and custom powder coat finishes.



ARM

STANDARD ARM, 1460T-3077T

Non-handed single lever arm mounts hinge side, top jamb, or stop face. Track roller not included with arm.



TRACKS

STANDARD TRACK, 1460T-3038

Standard, non hold-open, non-handed track mounts on either side of the door. Will accept hold-open clip and/or bumper assembly.

STANDARD TRACK with BUMPER, 1460T-3038B

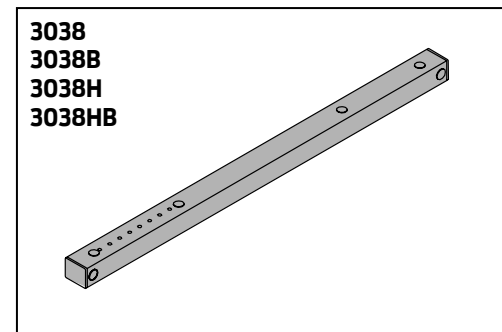
Optional, non hold-open, non-handed track with bumper mounts on either side of the door. Will accept hold-open clip.

HOLD-OPEN TRACK, 1460T-3038H

Optional, non-handed hold-open track mounts on either side of the door. Will accept bumper assembly.

HOLD-OPEN TRACK with BUMPER, 1460T-3038HB

Optional, non-handed hold-open track with bumper mounts on either side of the door.

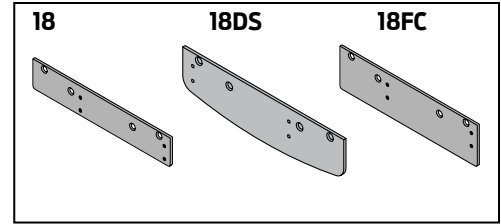


1460T SERIES

INSTALLATION ACCESSORIES

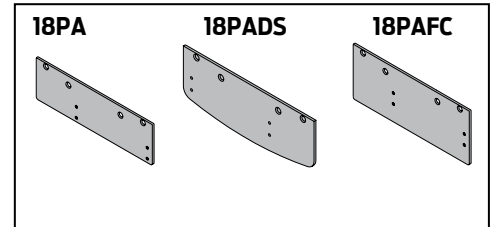
PLATE, 1460T-18,1460T-18DS,1460T-18FC

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). Plate 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.



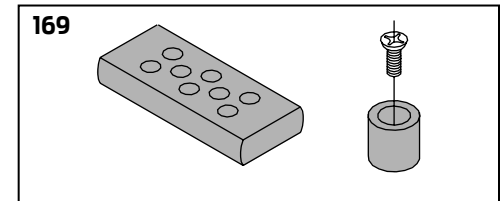
PLATE, 1460T-18PA,1460T-18PADS,1460T-18PAFC

Required for stop face mounting where top rail is less than 4" (102 mm), measured from the stop. Plate 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.



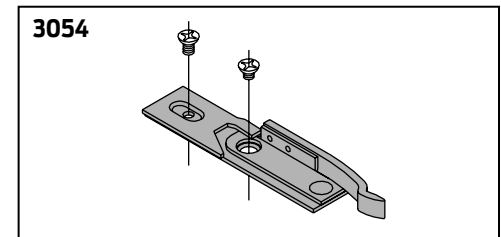
TRACK BUMPER, 1460T-169

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



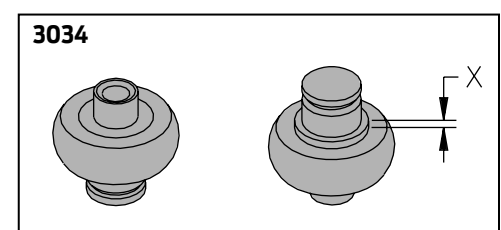
HOLD-OPEN CLIP, 1460T-3054

Mounts in track to provide hold-open function. Hold-open point controlled by clip location.



TRACK ROLLER, 1460T-3034

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

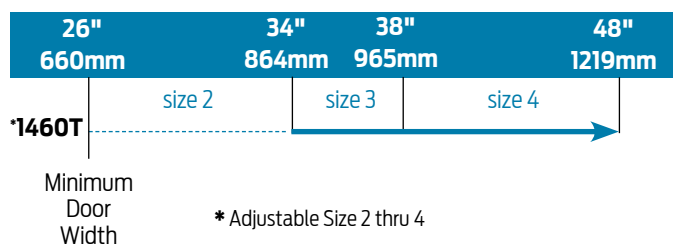


1460T SERIES

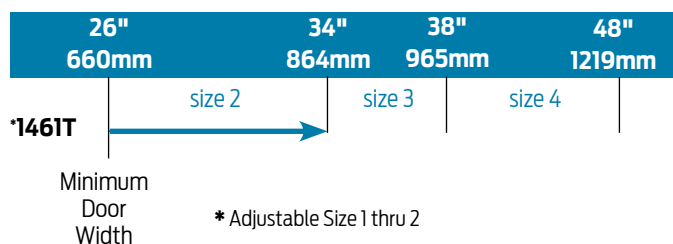
TABLE OF SIZES

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.

INTERIOR DOOR WIDTH



INTERIOR DOOR WIDTH



→ Indicates recommended range of door width for closer size.

REDUCED OPENING FORCE 1460T 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.

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

* Maximum opening force.

HOW-TO-ORDER 1460T SERIES CLOSERS

1. SELECT CYLINDER SIZE

- 1461T
- 1460T (adjustable from size 2 to 4)

2. SPECIFY 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)

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

SPECIAL TEMPLATE

- ST- _____

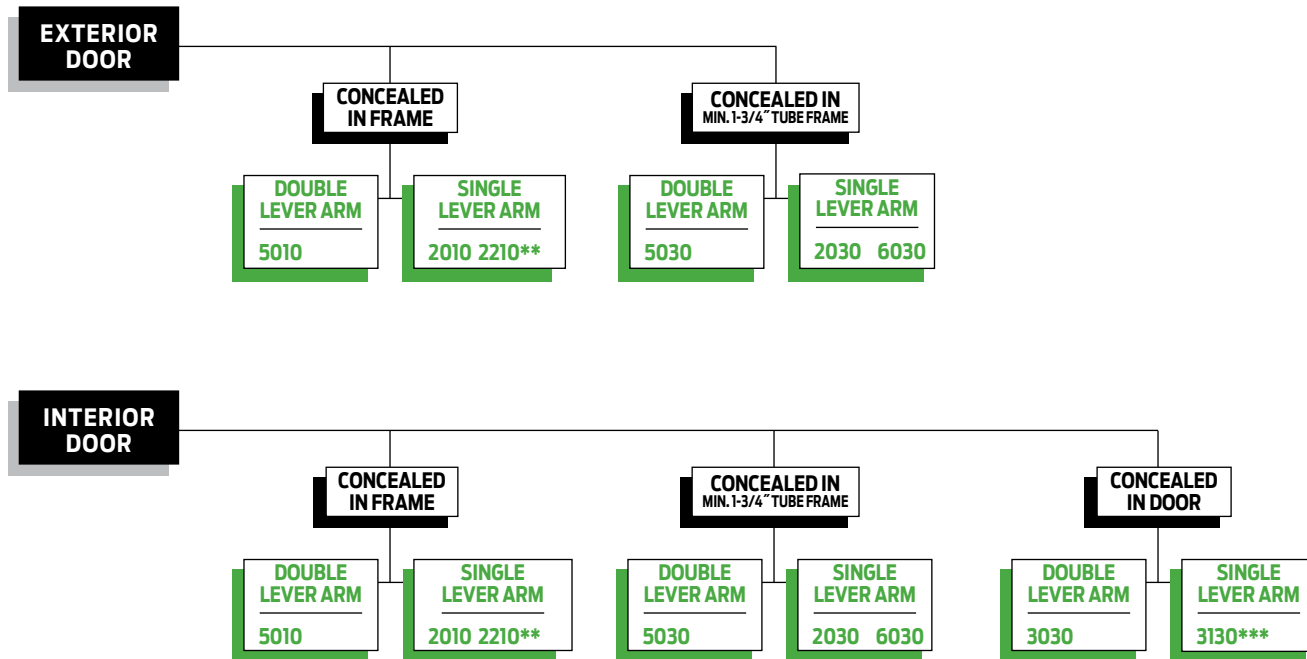
INSTALLATION ACCESSORIES

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

CONCEALED CLOSER SERIES

PRODUCT SELECTION GUIDE

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



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

*** INDICATES FIRE LIFE SAFETY OPTION AVAILABLE WITH HOLD OPEN CAPABILITY. 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°	180°
5030	○	●	○	●	●	●	○	○	○	○	●	○	180°	180°
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 for over 85 years. 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 Application Engineering.

WARRANTY

10 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 eliminates seasonal adjustments. From 120°F to -30°F.
- **High efficiency, full compliment**, 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.

LISTINGS & APPROVALS

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

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

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

POSITIVE PRESSURE

LCN closers have been certified for three hours by UL to be in compliance with UBC 7.2 (1997) and 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.

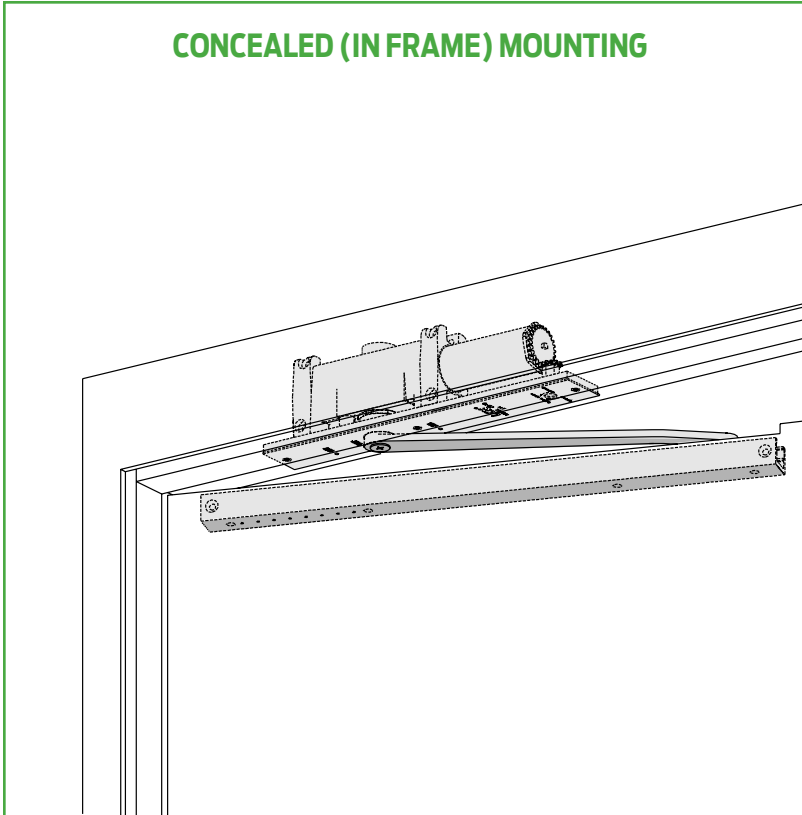
Note 1: Phillips head, metric machine screws are available, please specify.

MAINTENANCE

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

2010 SERIES

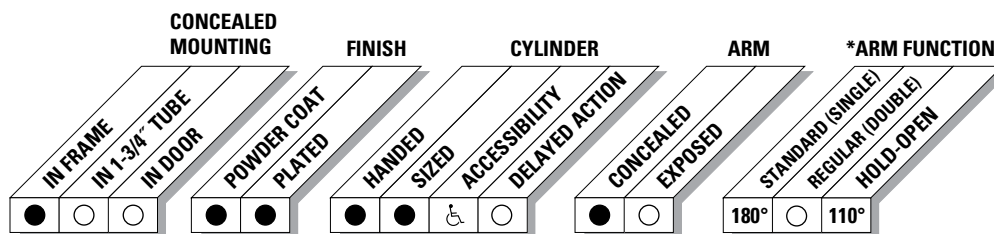
CONCEALED (IN FRAME) MOUNTING



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.

The 2010 Series is UL & cUL listed for self-closing doors without hold-open. Tested and certified under ANSI Standard A156.4, grade one.

- Standard 2010 Series closer shipped with standard arm, standard track, metal finish plate and wood and machine screw pack. See 2010 Series page 5 for options.
- Sized cylinders for interior doors to 5'0" and exterior doors to 4'0".
- Handed for right or left swinging doors.
- For aluminum, hollow metal, or wood, doors and frames.
- Aluminum frame requires minimum 4" x 4" (102 mm) tube.
- Closers to meet ADA requirements. See 2010 Series page 6.
- Standard or optional custom powder coat finish.
- Optional plated finish on arm, fasteners and finish plate.
- Optional SRI primer for installations in corrosive conditions. (Available with powder coat finishes only.)



● 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.

2010 SERIES

MOUNTING DETAILS

CONCEALED MOUNTING

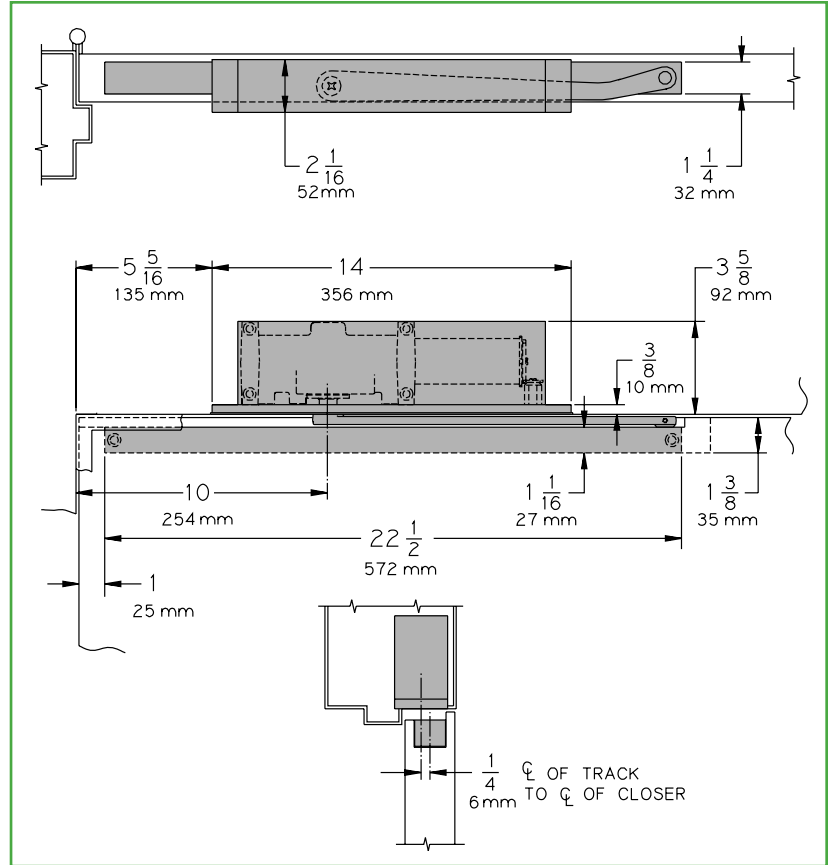
For interior or exterior doors.
Single acting cylinder in head frame.
Concealed arm and track in door top rail.

MAXIMUM OPENING

Butt hinge template allows 180°, trim permitting. Limited to 110° when optional bumper is installed.
Adjustable hold-open points from 85° to 110°, with hold-open track.

Offset pivot template allows 110°, trim permitting. Limited to 95° when optional bumper is installed.
Adjustable hold-open points from 75° to 95°, with hold-open track.

Center pivot template allows 120°, trim permitting. Limited to 95° when optional bumper is installed.
Adjustable hold-open points from 75° to 95°, with hold-open track.



- Butt Hinges should not exceed 5" (127 mm) in width.
- Auxiliary Stop is recommended where a door cannot swing 180°. Optional track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop.
- Top Rail 1-3/8" (35 mm) mortise required.
With Fire Shield, 1-13/32" (36 mm) mortise required.
5/16" (8 mm) cutout required at top of the door, stop face only.
- Door Thickness 1-3/4" (44 mm) minimum.
- Hollow Metal Frame Consult factory for installation instructions.

Options

- Standard track with Bumper.
- Hold-open track.
- Hold-open track with Bumper.
- Fire Shield.

Special Templates

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

CYLINDERS

CYLINDER, 2010-3071

Standard, handed, cast iron cylinder assembly with mounting plate.
For various applications see "Table of Sizes" on 2010 Series page 6.

ARM

STANDARD ARM, 2010-3077T

Handed arm.
Track roller not included with arm.

TRACKS

STANDARD TRACK, 2010-3038

Standard, non hold-open, non-handed track.
Will accept hold-open clip and/or bumper assembly.

STANDARD TRACK with BUMPER, 2010-3038B

Optional, non hold-open, non-handed track with bumper.
Will accept hold-open clip.

HOLD-OPEN TRACK, 2010-3038H

Optional, non-handed hold-open track.
Will accept bumper assembly.

HOLD-OPEN TRACK with BUMPER, 2010-3038HB

Optional, non-handed hold-open track with bumper.

INSTALLATION ACCESSORIES

FIRE SHIELD, 2010-420

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

TRACK BUMPER, 2010-169

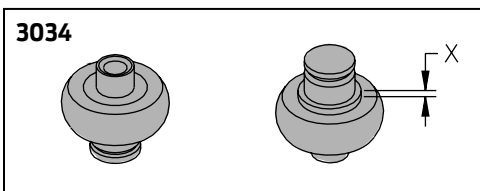
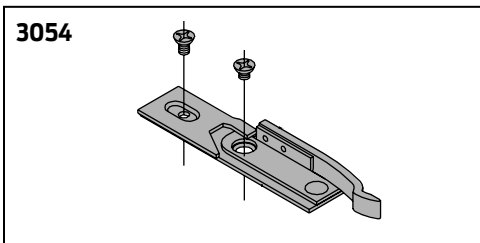
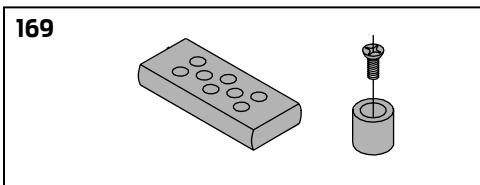
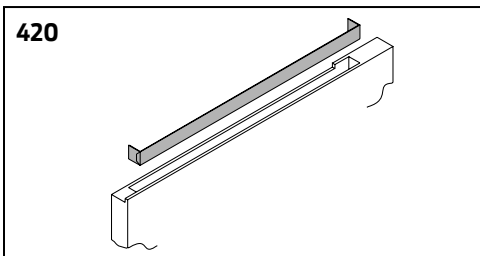
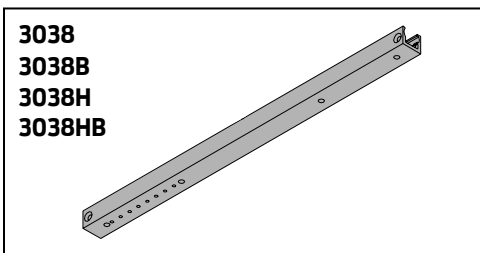
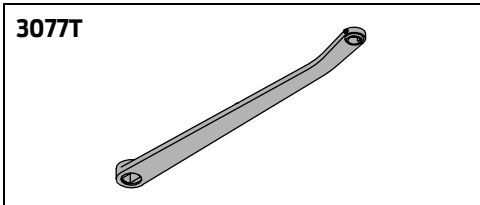
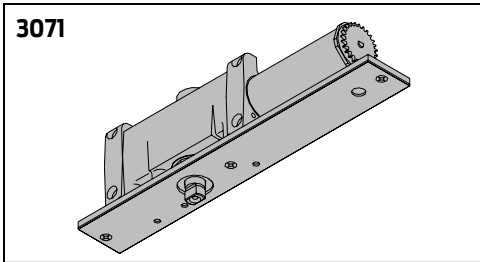
Mounts in track to assist backcheck. Limits maximum opening.
Consists of bumper, bumper post, and mounting screw.
NOTE: Track bumper does not replace auxiliary stop.

HOLD-OPEN CLIP, 2010-3054

Mounts in track to provide hold-open function.
Hold-open point controlled by clip location.

TRACK ROLLER, 2010-3034

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

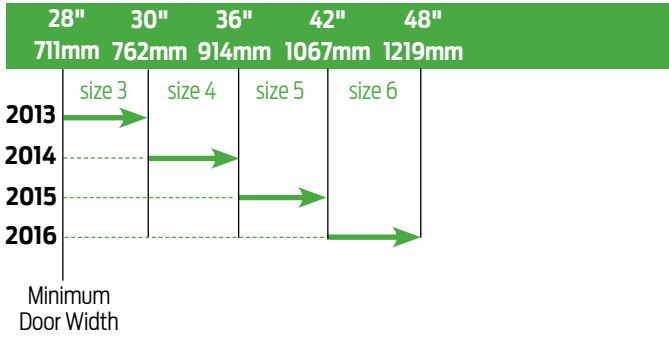


2010 SERIES

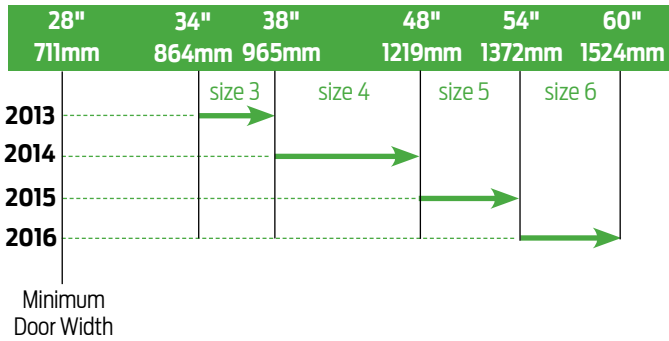
TABLE OF SIZES

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.

EXTERIOR (and VESTIBULE) DOOR WIDTH



INTERIOR DOOR WIDTH




→ Indicates recommended range of door width for closer size.

REDUCED OPENING FORCE 2010 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.

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

* Maximum opening force.

HOW-TO-ORDER 2010 SERIES CLOSERS

1. SELECT CYLINDER SIZE

- 2011 (ADA)
- 2013
- 2014
- 2015
- 2016

2. SPECIFY HAND

- RH
- LH

3. SPECIFY FINISH

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

Closer will be shipped with:

- FINISH PLATE,
- TRACK ARM,
- TRACK ROLLER,
- 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)

INSTALLATION ACCESSORIES

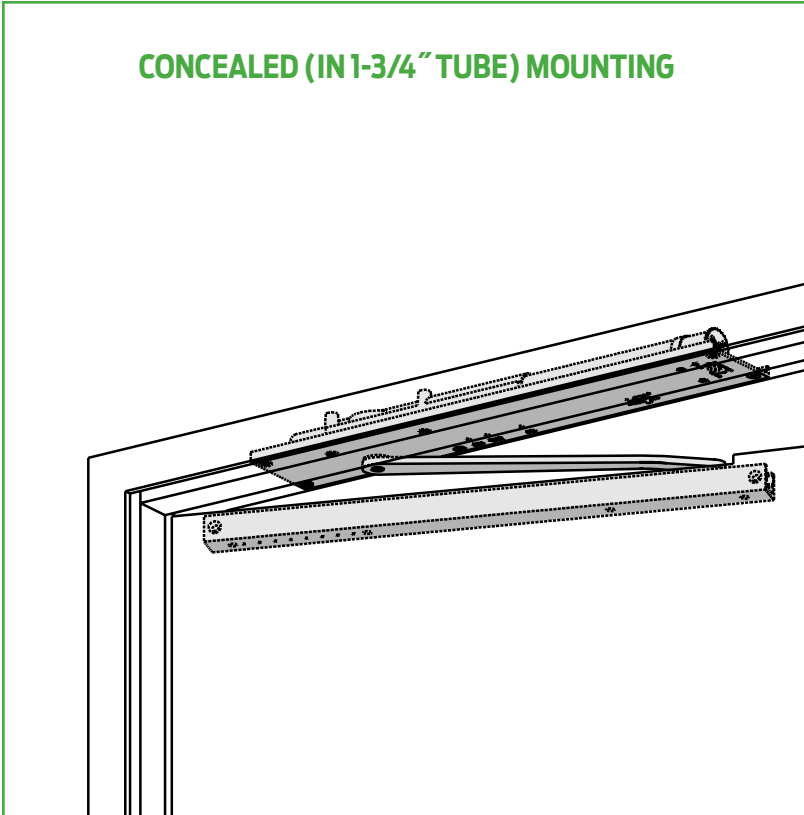
- Fire Shield, 2010-420

SPECIAL TEMPLATE

- ST- _____

2030 SERIES

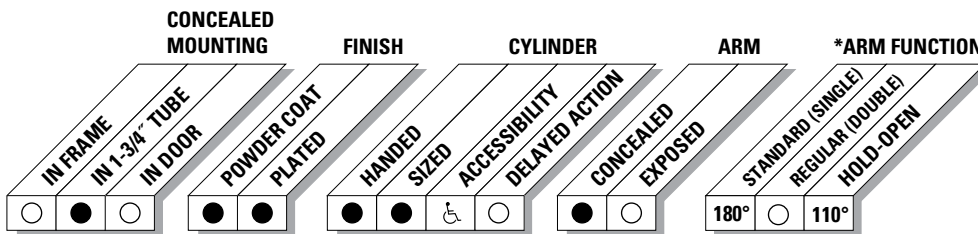
CONCEALED (IN 1-3/4" TUBE) MOUNTING



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.

The 2030 Series is UL & cUL listed for self-closing doors, without hold-open. Test and certified under ANSI Standard A156.4, grade one.

- Standard 2030 Series closer shipped with standard arm, standard track, mounting/finish plate, and wood and machine screw pack. See 2030 Series page 9 & 10 for options.
- Sized cylinders for interior doors to 4'6" and exterior doors to 3'6".
- Handed for right or left swinging doors.
- Aluminum frame requires minimum 1-3/4" (44 mm) x 4" (102 mm) tube.
- Closers to meet ADA requirements. See 2030 Series page 11.
- Standard or optional custom powder coat finish.
- Optional plated finish on arm, fasteners and finish plate.
- Optional SRI primer for installations in corrosive conditions. (Available with powder coat finishes only.)



● 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.

2030 SERIES

CONCEALED MOUNTING

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

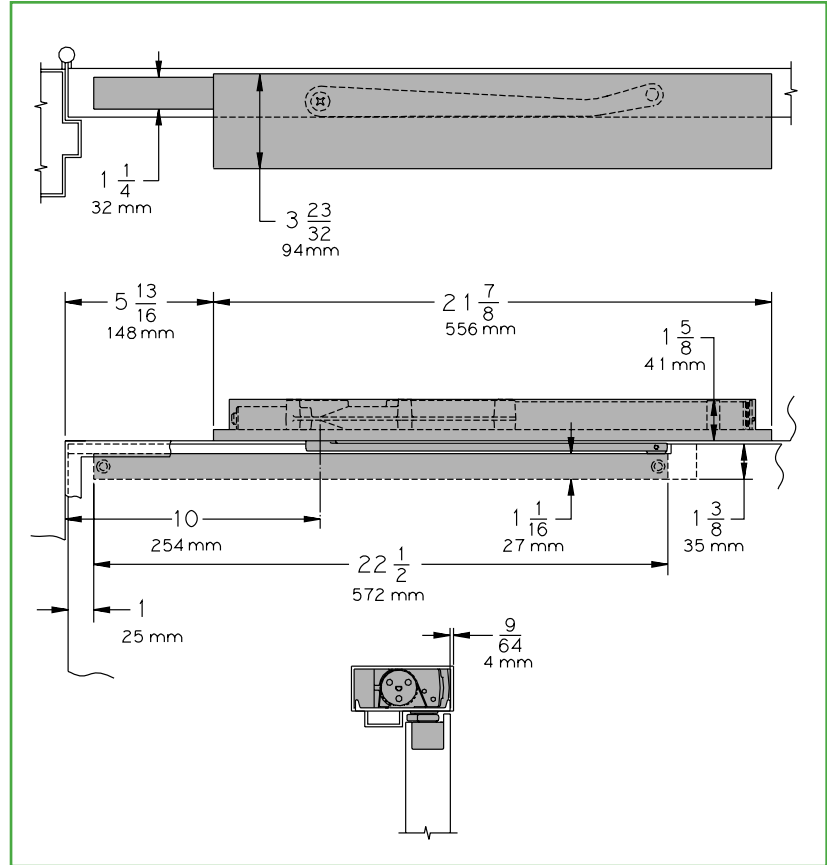
MAXIMUM OPENING

Butt hinge template allows 180°, trim permitting. Limited to 110° when optional bumper is installed.
Adjustable hold-open points from 85° to 110°, with hold-open track.

Consult factory if door will be held open at 180°.

Offset pivot template allows 115°, trim permitting. Limited to 95° when optional bumper is installed.
Hold-open points from 85°, with hold-open track.

Center pivot template allows 120°, trim permitting. Limited to 100° when optional bumper is installed.
Adjustable hold-open points from 85° to 100°, with hold-open track.



Options

- Standard track with Bumper.
- Hold-open track.
- Hold-open track with Bumper.
- Fire Shield.

Special Templates

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

- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended where a door cannot swing 180°. Optional track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop.
- **Top Rail** 1-3/8" (35 mm) mortise required. With Fire Shield, 1-13/32" (36 mm) mortise required. 5/16" (8 mm) cutout required at top of the door, stop face only.
- **Door Thickness** 1-3/4" (44 mm) minimum.
- **Hollow Metal Frame** Consult factory for installation instructions.
- **Wood Frame** installation simplified by WOOD MOUNTING CLIP SET 2030-416 for center pivoted or 2030-417 for offset pivoted and butt hung installations. Consult factory for preparation details.

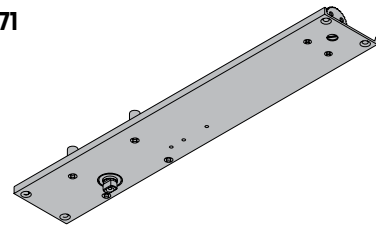
2030 SERIES

CYLINDERS

CYLINDER, 2030-3071

Standard, handed, cast iron cylinder assembly with mounting plate.
For various applications see "Table of Sizes" on 2030 Series page 11.

3071

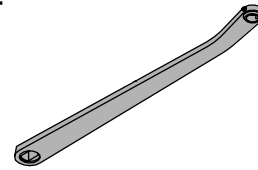


ARM

STANDARD ARM, 2030-3077T

Handed arm.
Track roller not included with arm.

3077T



TRACKS

STANDARD TRACK, 2030-3038

Standard, non hold-open, non-handed track.
Will accept hold-open clip and/or bumper assembly.

STANDARD TRACK with BUMPER, 2030-3038B

Optional, non hold-open, non-handed track with bumper.
Will accept hold-open clip.

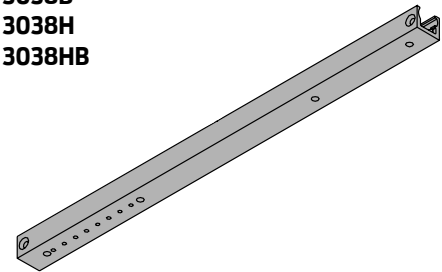
HOLD-OPEN TRACK, 2030-3038H

Optional, non-handed hold-open track.
Will accept bumper assembly.

HOLD-OPEN TRACK with BUMPER, 2030-3038HB

Optional, non-handed hold-open track with bumper.

3038
3038B
3038H
3038HB

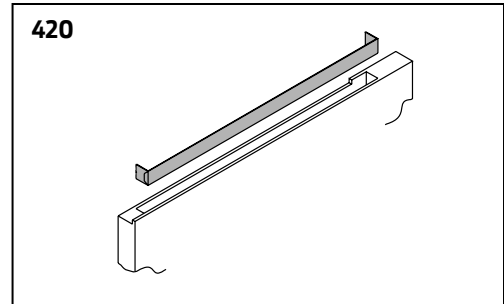


2030 SERIES

INSTALLATION ACCESSORIES

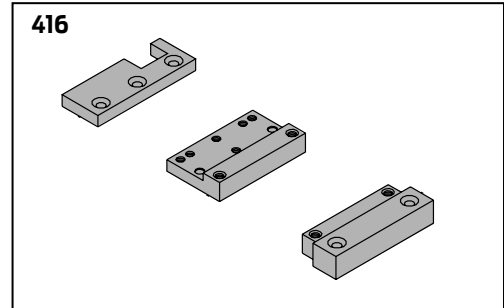
FIRE SHIELD, 2030-420

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



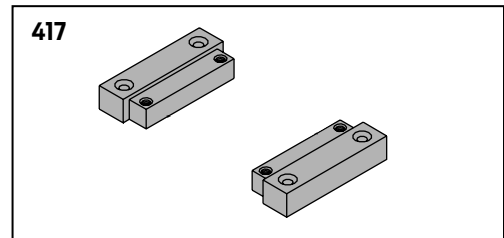
WOOD MOUNTING CLIP SET, 2030-416

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.



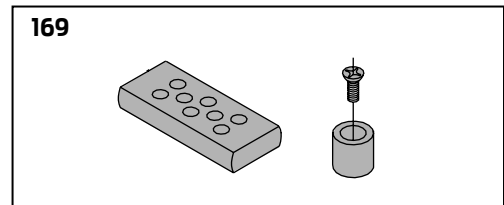
WOOD MOUNTING CLIP SET, 2030-417

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.



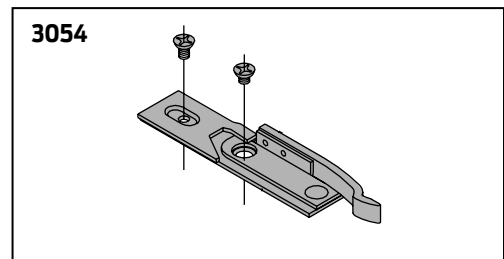
TRACK BUMPER, 2030-169

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.



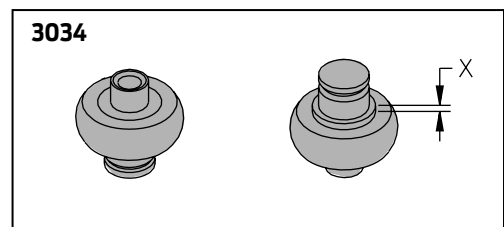
HOLD-OPEN CLIP, 2030-3054

Mounts in track to provide hold-open function. Hold-open point controlled by clip location.



TRACK ROLLER, 2030-3034

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

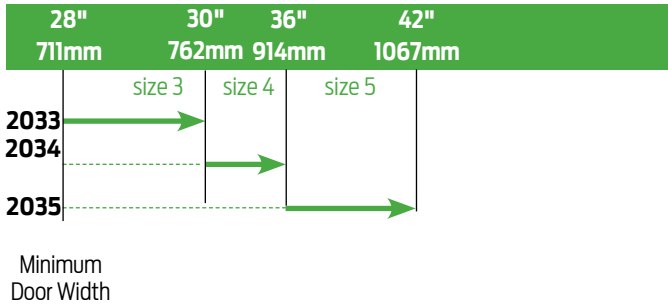


2030 SERIES

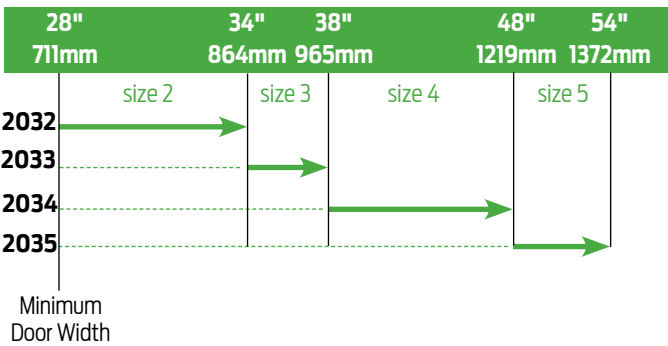
TABLE OF SIZES

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 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.

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

* Maximum opening force.

HOW-TO-ORDER 2030 SERIES CLOSERS

1. SELECT CYLINDER SIZE

- 2031(ADA)
- 2032
- 2033
- 2034
- 2035

2. SPECIFY HAND

- RH
- LH

3. SPECIFY FINISH

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

Closer will be shipped with:

- FINISH PLATE,
- TRACK ARM,
- TRACK ROLLER,
- 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)

INSTALLATION ACCESSORIES

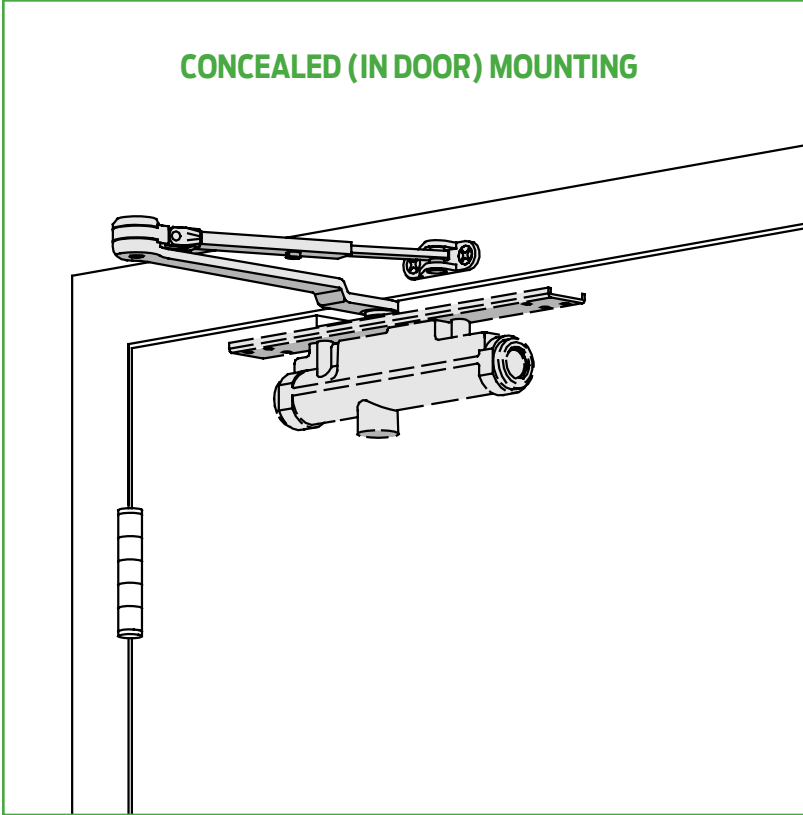
- Fire Shield, 2030-420
- Wood Clip Set, 2030-416
- Wood Clip Set, 2030-417

SPECIAL TEMPLATE

- ST- _____

3030 SERIES

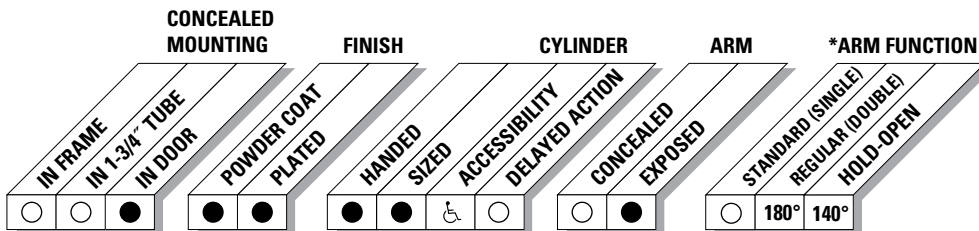
CONCEALED (IN DOOR) MOUNTING



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.

The 3030 Series is UL and cUL listed with regular arm for self-closing doors. Tested and certified under ANSI Standard A156.4, grade one.

- Standard 3030 Series closer shipped with regular arm and wood and machine screw pack. See 3030 Series page 15 for options.
- Sized cylinders for interior doors to 4'0".
- Handed for right or left swinging doors.
- Closers to meet ADA requirements. See 3030 Series page 16.
- Standard or optional custom powder coat finish.
- Optional plated finish on arm and fasteners.
- Optional SRI primer for installations in corrosive conditions. (Available with powder coat finishes only.)
- Consult factory for installations with pivots.



● 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.

3030 SERIES

CONCEALED MOUNTING

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

MAXIMUM OPENING

Can be templated for
110°,

- Ⓐ = 3-5/8" (92 mm)
- Ⓑ = 10-1/4" (260 mm)

130°,

- Ⓐ = 2-5/8" (67 mm)
- Ⓑ = 9-1/4" (235 mm)

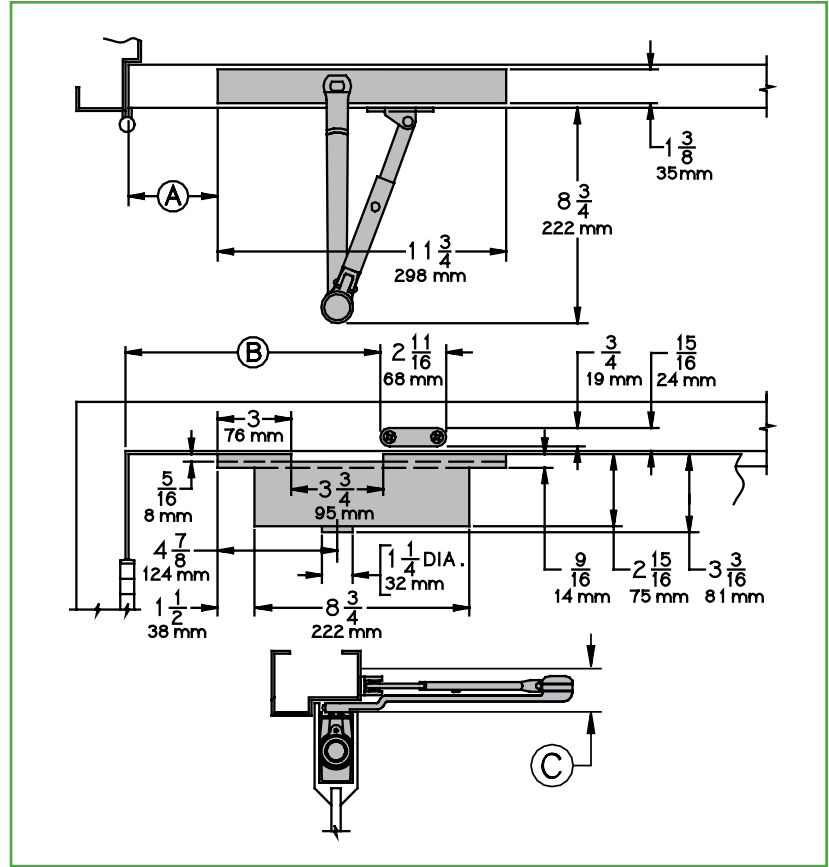
or 180°,

- Ⓐ = 1-5/8" (41 mm)
 - Ⓑ = 8-1/4" (210 mm)
- trim permitting.

Hold-open points up to maximum opening or 140°, whichever is less, with hold-open arm.

Arm clearance above door

- Ⓒ = 1-1/4" (32 mm) minimum.



Options

- Hold-open arm.
- Consult factory for installations with pivots.

Special Templates

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

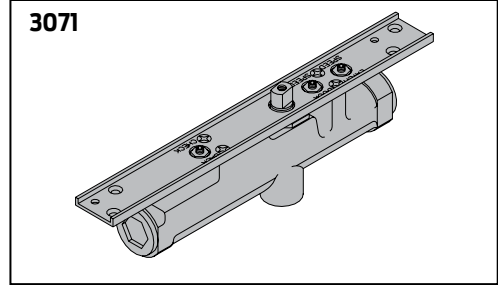
- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 180°.
- **Top Rail** minimum 4" (102 mm) required.
- **Door Thickness** 1-3/4" (44 mm) minimum. Please consult the door manufacturer to assure that the door integrity and warranty is maintained after installing the 3030 Series door closer in a 1-3/4" thick wood door.

3030 SERIES

CYLINDERS

CYLINDER, 3030-3071

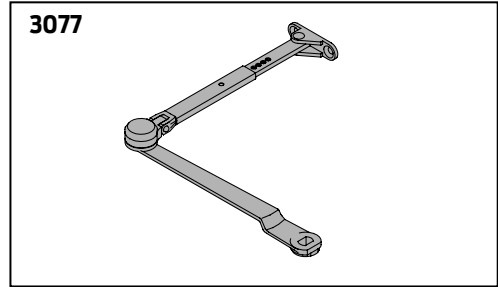
Standard, handed, cast iron cylinder assembly with mounting plate.
For various applications see "Table of Sizes" on 3030 Series page 16.



ARMS

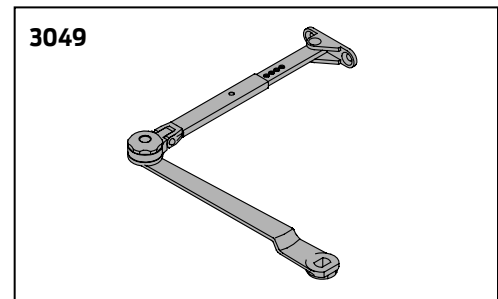
REGULAR ARM, 3030-3077

Non-handed arm.



HOLD-OPEN ARM, 3030-3049

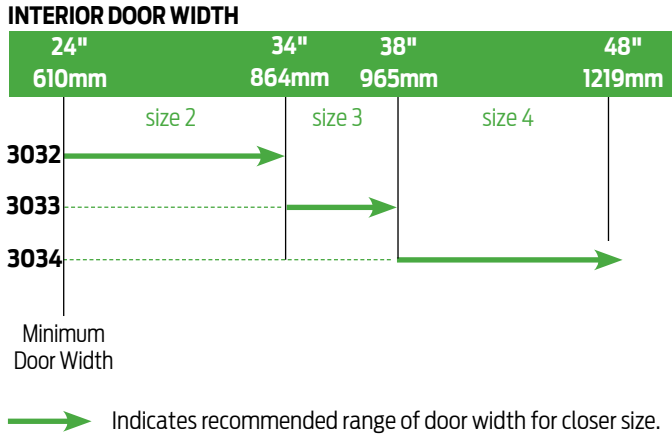
Optional, handed arm provides hold-open function, adjustable at elbow.



3030 SERIES

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%.



HOW-TO-ORDER 3030 SERIES CLOSERS

1. SELECT CYLINDER SIZE

- 3031 (ADA)
- 3032
- 3033
- 3034

2. SPECIFY HAND

- RH
- LH

3. SPECIFY FINISH

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

Closer will be shipped with:

- 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- _____

REDUCED OPENING FORCE 3030 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.

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

* Maximum opening force.

3130 SERIES

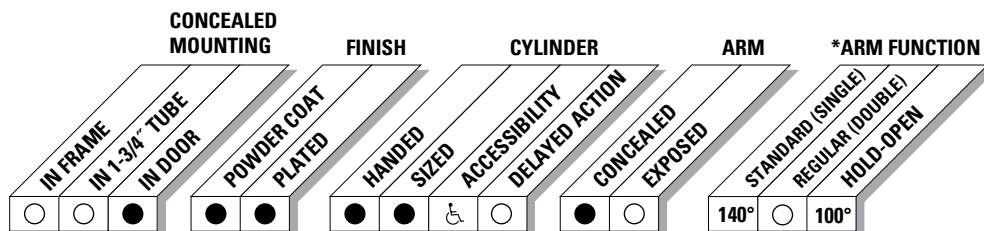
CONCEALED (IN DOOR) MOUNTING



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.

The 3130 Series is UL and cUL listed without hold-open for self-closing doors. Tested and certified under ANSI Standard A156.4, grade one.

- Standard 3130 Series closer shipped with standard arm, standard track and wood and machine screw pack. See 3130 Series page 19 for options.
- Sized cylinders for interior doors to 3' 2".
- Handed for right or left swinging doors.
- Closers to meet ADA requirements. See 3130 Series page 20.
- Standard or optional custom powder coated finish.
- Optional plated finish on arm and fasteners.
- Optional SRI primer for installations in corrosive conditions. (Available with powder coat finishes only.)
- Consult factory for installation with pivots.



● 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.

3130 SERIES

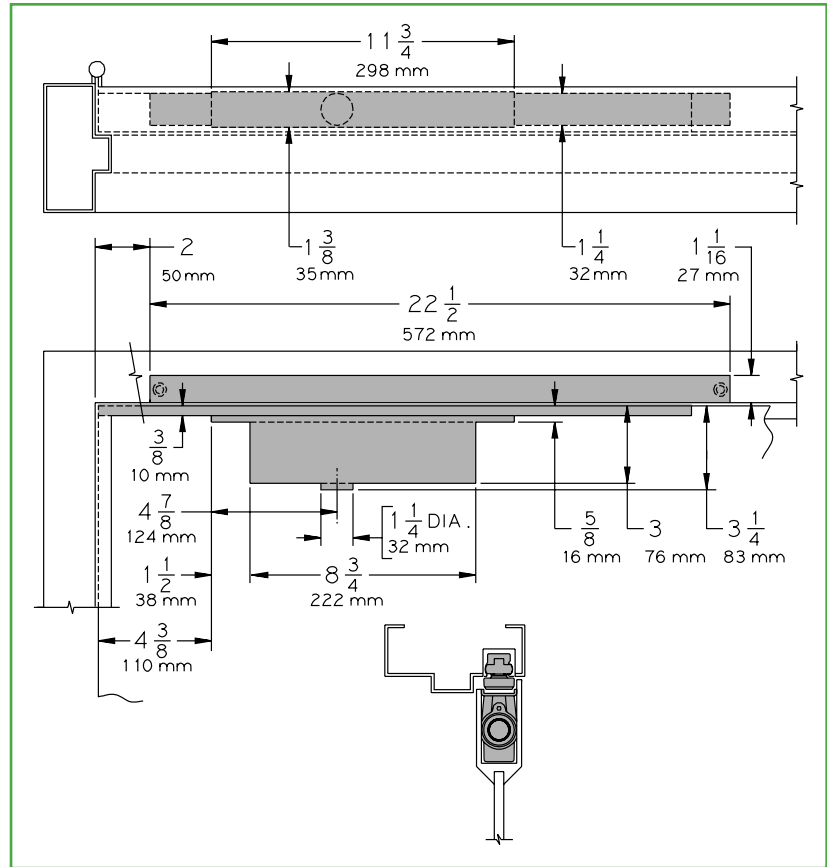
CONCEALED MOUNTING

For interior doors.
Single acting cylinder and standard arm
in top rail of door.
Concealed track in head frame.

MAXIMUM OPENING

Templating allows 140°, trim
permitting. 100° with optional bumper
installed.

Adjustable hold-open points from 85° to
100°, with hold-open track.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 140°. Optional track bumper assembly assists backcheck in cushioning the opening swing of the door. It is not intended to replace an auxiliary stop.
- **Top Rail** minimum 4" (102 mm) required.
- **Door Thickness** 1-3/4" (44 mm) minimum. Please consult the door manufacturer to assure that the door integrity and warranty is maintained after installing the 3130 Series door closer in a 1-3/4" thick wood door.
- **Door Width** 2' 2" (660 mm) minimum.

Options

- Standard track with Bumper.
- Hold-open track.
- Hold-open track with Bumper.
- Consult factory for installations with pivots.

Special Templates

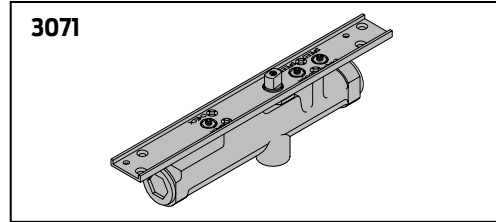
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.

3130 SERIES

CYLINDERS

CYLINDER, 3130-3071

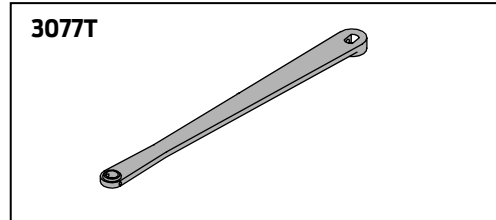
Standard, handed, cast iron cylinder assembly with mounting plate.
For various applications see "Table of Sizes" on 3130 Series page 20.



ARMS

STANDARD ARM, 3130-3077T

Handed arm.
Track roller not included with arm.



TRACKS

STANDARD TRACK, 3130-3038

Standard, non hold-open, non-handed track.
Will accept hold-open clip and/or bumper assembly.

STANDARD TRACK with BUMPER, 3130-3038B

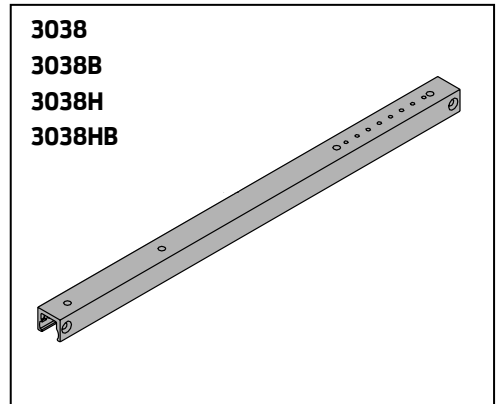
Optional, non hold-open, non-handed track with bumper.
Will accept hold-open clip.

HOLD-OPEN TRACK, 3130-3038H

Optional, non-handed hold-open track.
Will accept bumper assembly.

HOLD-OPEN TRACK with BUMPER, 3130-3038HB

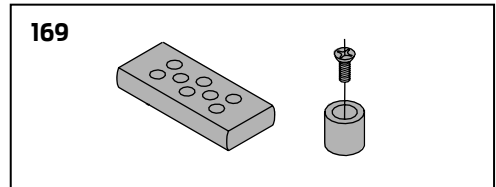
Optional, non-handed hold-open track with bumper.



INSTALLATION ACCESSORIES

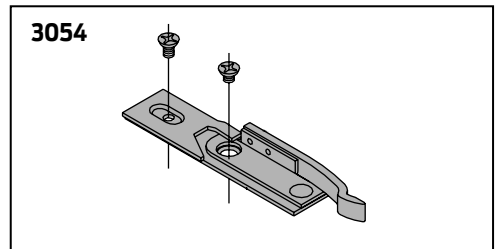
TRACK BUMPER, 3130-169

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



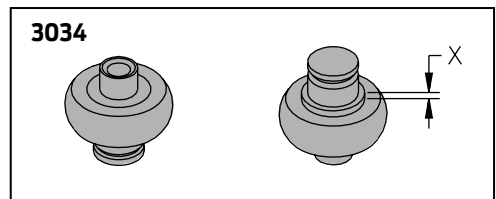
HOLD-OPEN CLIP, 3130-3054

Mounts in track to provide hold-open function.
Hold-open point controlled by clip location.



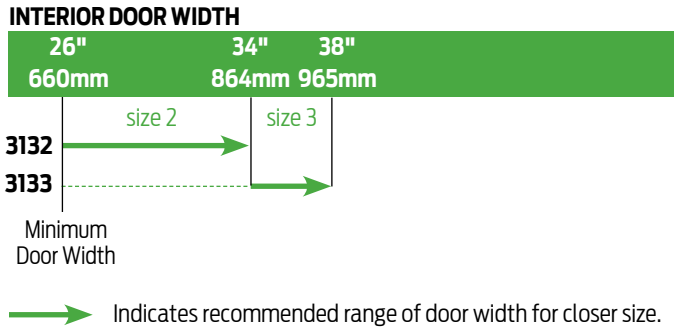
TRACK ROLLER, 3130-3034

Quiet, low friction roller assembly.
Shoulder dimension "X" = 1/8" (2mm).



3130 SERIES

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.



HOW-TO-ORDER 3130 SERIES CLOSERS

1. SELECT CYLINDER SIZE

- 3131 (ADA)
- 3132
- 3133

2. SPECIFY HAND

- RH
- LH

3. SPECIFY FINISH

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

Closer will be shipped with:

- FINISH PLATE,
- TRACK ROLLER,
- 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- _____

REDUCED OPENING FORCE 3130 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.

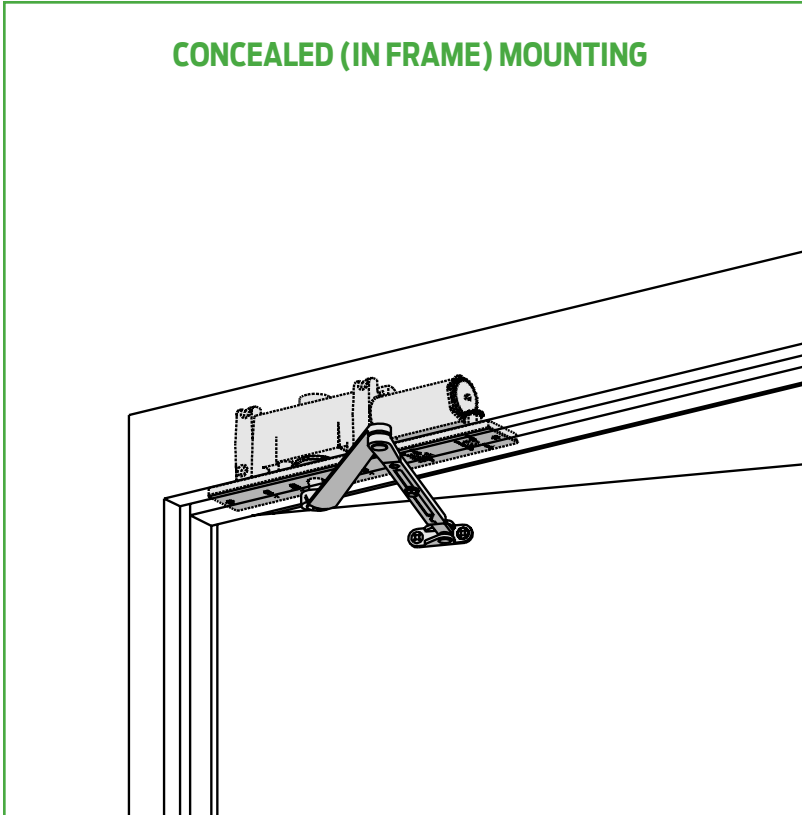
Refer to POWER OPERATORS section for information on systems that meet reduced opening force requirements without affecting closing power.

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

* Maximum opening force.

5010 SERIES

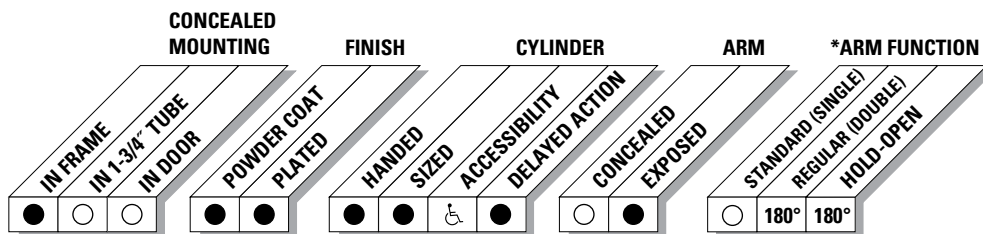
CONCEALED (IN FRAME) MOUNTING



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.

The 5010 Series is UL and cUL listed with regular arms for self-closing doors. Tested and certified under ANSI Standard A156.4, grade one.

- Standard 5010 Series closer shipped with regular arm, metal finish plate, and wood and machine screw pack. See 5010 Series page 23 for options.
- Sized cylinders for interior doors to 5'0" and exterior doors to 4'0".
- Handed for right or left swinging doors.
- For hollow metal or wood, door and frame.
- Aluminum frame requires minimum 4" (102 mm) x 4" tube.
- Closers to meet ADA requirements. See 5010 Series page 24.
- Standard or optional custom powder coat finish.
- Optional plated finish on finish plate, arm, and fasteners.
- Optional SRI primer for installations in corrosive conditions. (Available with powder coat finishes only.)



● 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

CONCEALED MOUNTING

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

MAXIMUM OPENING

Butt hung doors can be templated for 100°,

Ⓐ = 10-3/16" (259 mm)

Ⓑ = 12" (305 mm)

or 180°,

Ⓐ = 5-1/2" (140 mm)

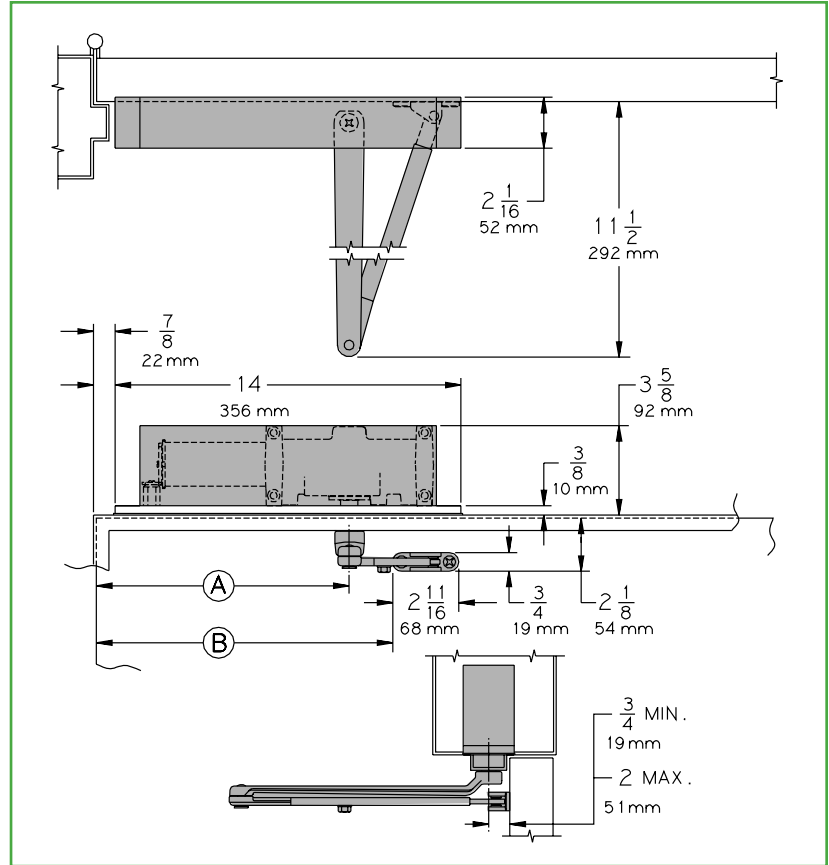
Ⓑ = 7-5/16" (186 mm)

trim permitting.

Hold-open points up to maximum opening with hold-open arms.

Center pivot mounting restricts opening to 140°.

Offset pivot mounting allows up to 180°, trim permitting.



- **Butt Hinges** should not exceed 6" (152 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where a door cannot swing 180°.
- **Top Rail** minimum 2-1/8" (54 mm) required.
- **Delay Action** Add suffix "DEL" to selected cylinder (eg. 5014 DEL).
Not available with 5016 cylinder.
Delays closing from maximum opening to approximately 70°.
Delay time adjustable up to approximately 1 minute.

Options

- Delayed action cylinder.
- Hold-open.

Special Templates

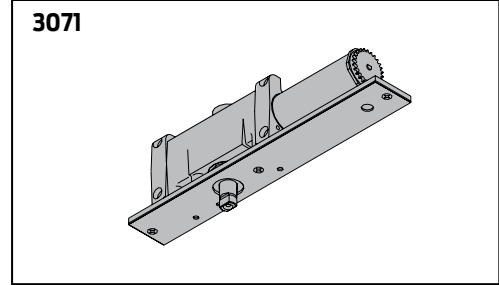
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.

5010 SERIES

CYLINDERS

CYLINDER, 5010-3071

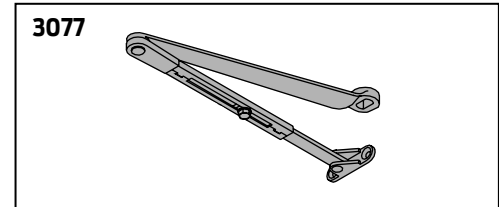
Standard, handed, cast iron cylinder assembly with mounting plate.
For various applications see "Table of Sizes" on 5010 Series page 24.



ARMS

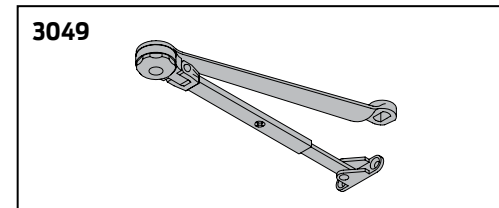
REGULAR ARM, 5010-3077

Non-handed arm.



HOLD-OPEN ARM, 5010-3049

Optional, handed arm provides hold-open function for 100° Template, adjustment at elbow.



5010 SERIES

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.

EXTERIOR (and VESTIBULE) DOOR WIDTH

	24" 610mm	30" 762mm	36" 914mm	42" 1067mm	48" 1219mm
	size 3	size 4	size 5	size 6	
5013	→				
5014		→			
5015			→		
5016				→	

Minimum Door Width

INTERIOR DOOR WIDTH

	24" 610mm	34" 864mm	38" 965mm	48" 1219mm	54" 1372mm	60" 1524mm
	size 2	size 3	size 4	size 5	size 6	
5012	→					
5013		→				
5014			→			
5015				→		
5016					→	


Minimum Door Width

→ Indicates recommended range of door width for closer size.

REDUCED OPENING FORCE 5010 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.

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

* Maximum opening force.

HOW-TO-ORDER 5010 SERIES CLOSERS

1. SELECT CYLINDER SIZE

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

2. SPECIFY HAND

- RH
- LH

3. SPECIFY FINISH

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

Closer will be shipped with:

- FINISH PLATE,
- 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

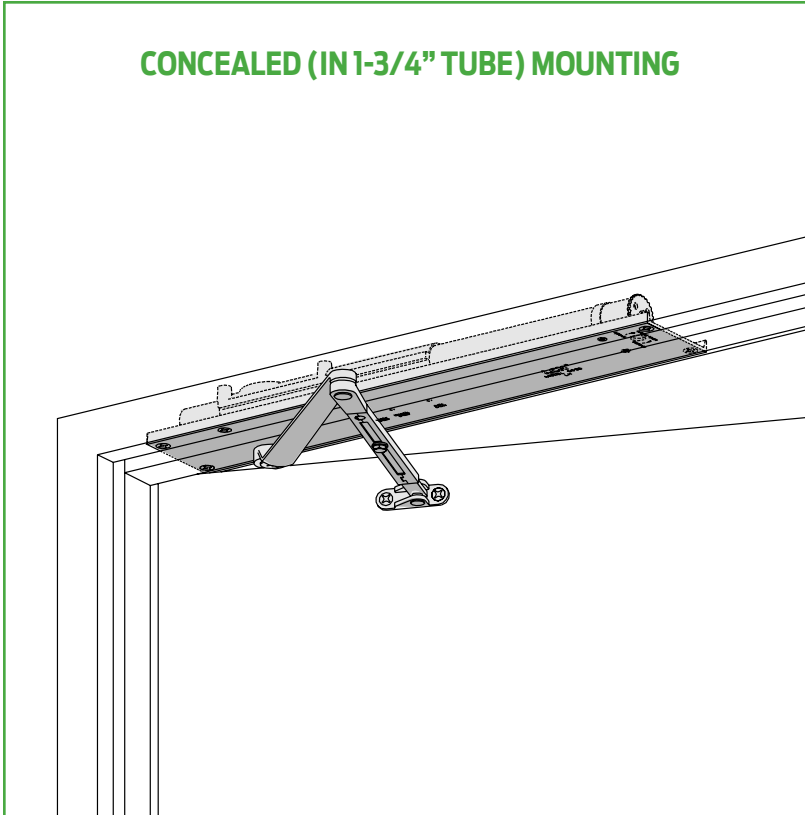
- TORX Machine Screw (TORX)

SPECIAL TEMPLATE

- ST- _____

5030 SERIES

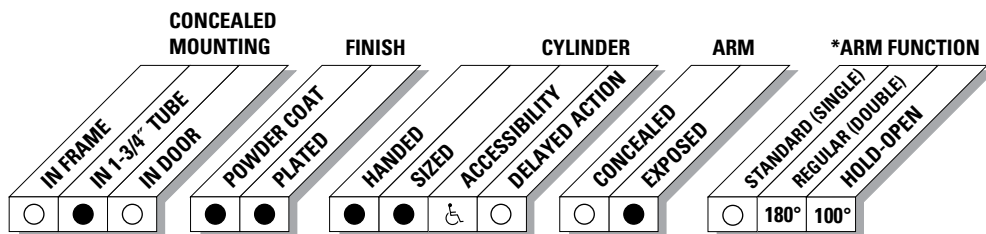
CONCEALED (IN 1-3/4" TUBE) MOUNTING



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.

The 5030 Series is UL and cUL listed with regular arms for self-closing doors. Tested and certified under ANSI Standard A156.4, grade one.

- Standard 5030 Series closer shipped with regular arm, mounting/finish plate and wood and machine screw pack. See 5030 Series page 27 for options.
- Sized cylinders for interior doors to 5' 0" and exterior doors to 4' 0".
- Handed for right or left swinging doors.
- Aluminum frame requires minimum 1-3/4" (44 mm) x 4-1/2" (114 mm) tube.
- Closers to meet ADA requirements. See 5030 Series page 28.
- Standard or optional custom powder coat finish.
- Optional plated finish on arm, fasteners and mounting/finish plate.
- Optional SRI primer for installations in corrosive conditions. (Available with powder coat finishes only.)



● AVAILABLE
○ NOT AVAILABLE

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

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

5030 SERIES

CONCEALED MOUNTING

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

MAXIMUM OPENING

Butt hung doors can be templated for 100°,

Ⓐ = 5-13/16" (148 mm)

Ⓑ = 11-13/16" (300 mm)

or 180°,

Ⓐ = 2-1/16" (52 mm)

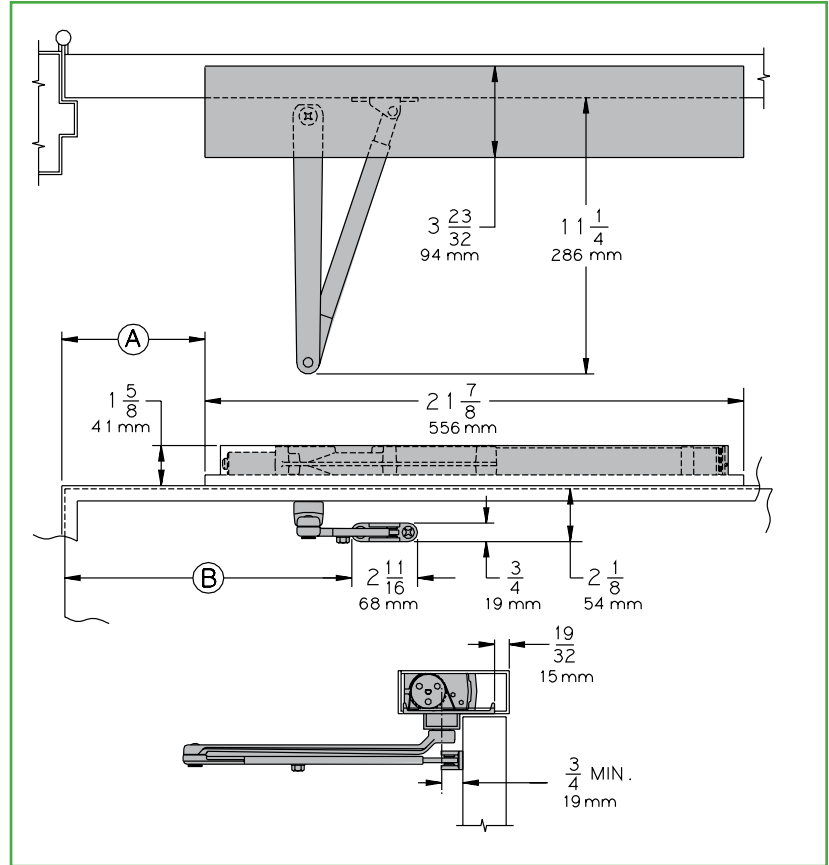
Ⓑ = 8-1/16" (205 mm)

trim permitting.

Hold-open points up to maximum opening with hold-open arms.

Center pivot mounting restricts opening to 120°.

Offset pivot mounting allows up to 115°, trim permitting.



- **Butt Hinges** should not exceed 6" (152 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point or where the door cannot swing 180°.
- **Wood Frame** installation simplified by WOOD MOUNTING CLIP SET 5030-416 for center pivoted or 5030-417 for offset pivoted and butt hung installations. Consult factory for preparation details.
- **Top Rail** minimum 2-1/8" (54 mm) required.
- **Door Thickness** maximum 1-3/4" (44 mm), for doors thicker than 1-3/4" consult factory.

Options

- Hold-open.

Special Templates

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

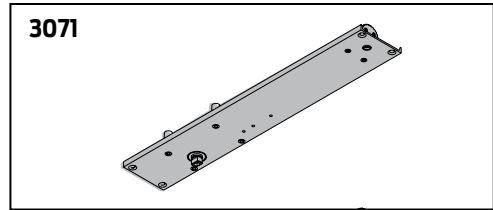
5030 SERIES

ACCESSORIES

CYLINDERS

CYLINDER, 5030-3071

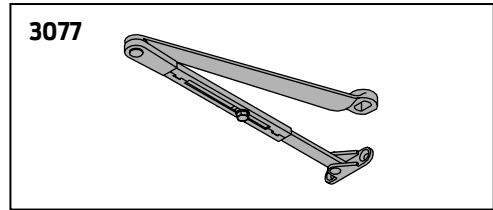
Standard, handed, cast iron cylinder assembly with mounting plate.
For various applications see "Table of Sizes" on 5030 Series page 28.



ARMS

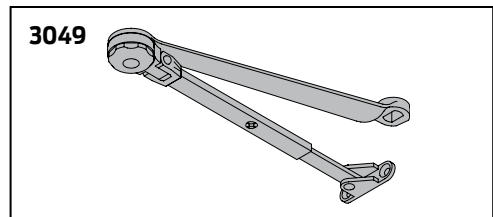
REGULAR ARM, 5030-3077

Non-handed arm.



HOLD-OPEN ARM, 5030-3049

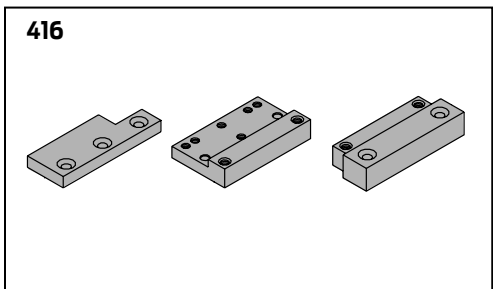
Optional, handed arm provides hold-open function for 100° template, adjustable at elbow.



INSTALLATION ACCESSORIES

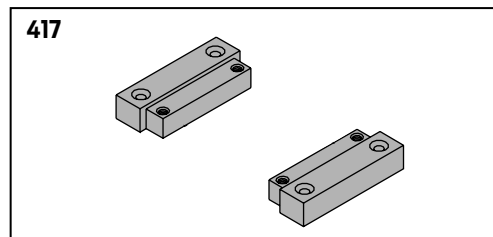
WOOD MOUNTING CLIP SET, 5030-416

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.



WOOD MOUNTING CLIP SET, 5030-417

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.

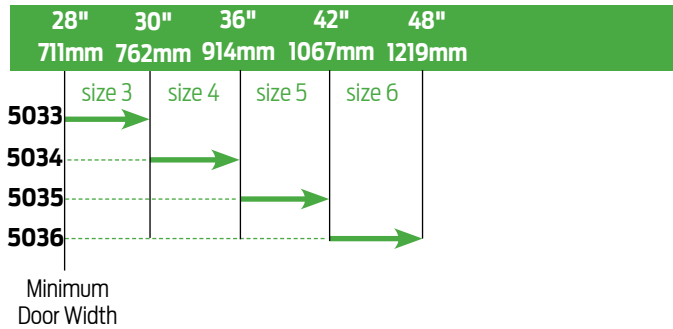


5030 SERIES

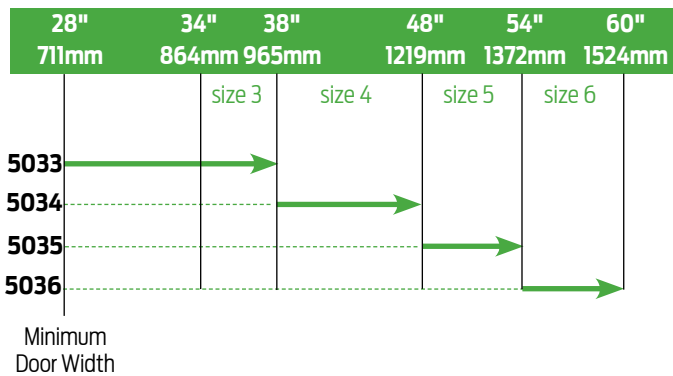
TABLE OF SIZES

Select closer based on width of door.
 5030 Series cylinders available in size 1, 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.

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 5030 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.

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

* Maximum opening force.

HOW-TO-ORDER 5030 SERIES CLOSERS

1. SELECT CYLINDER SIZE

- 5031 (ADA)
- 5033
- 5034
- 5035
- 5036

2. SPECIFY HAND

- RH
- LH

3. SPECIFY FINISH

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

Closer will be shipped with:

- 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)

INSTALLATION ACCESSORIES

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

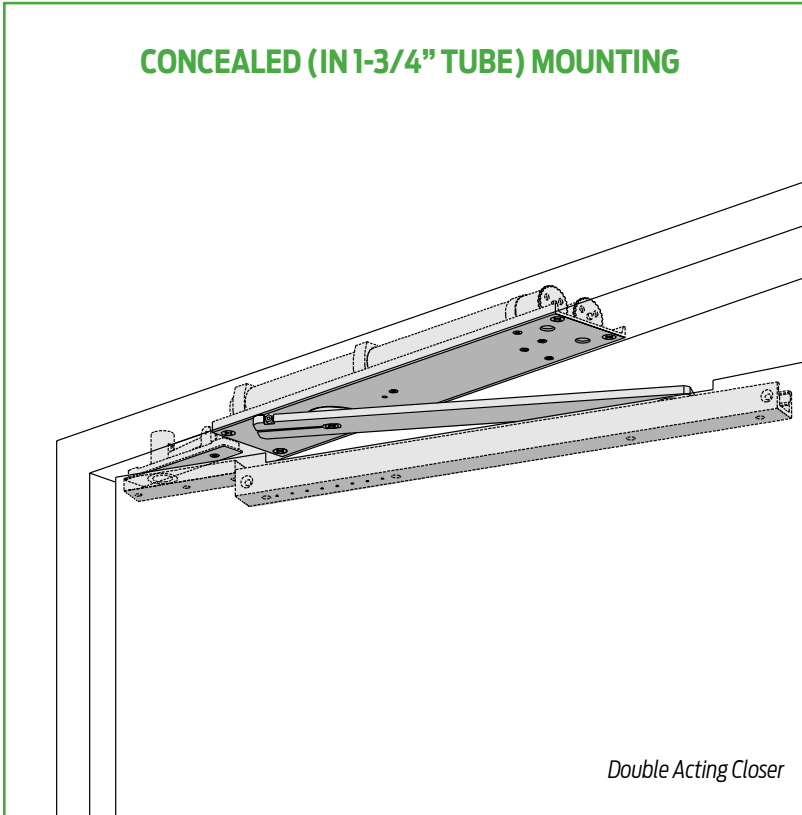
SPECIAL TEMPLATE

- ST- _____

6030 SERIES

FEATURES

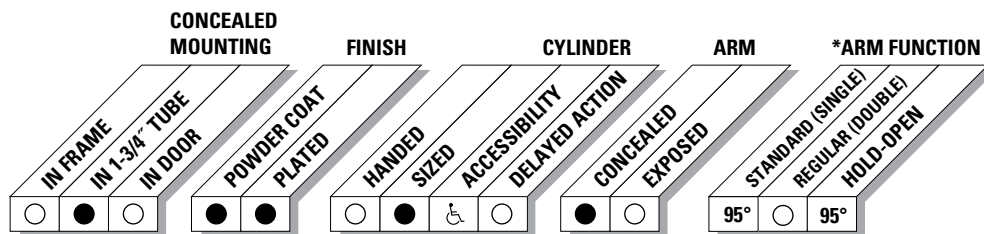
CONCEALED (IN 1-3/4" TUBE) MOUNTING



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).

The 6030 Series is UL and cUL listed for self-closing doors, non hold-open. Tested and certified under ANSI Standard A156.4, grade one.

- Standard 6030 Series closer shipped with standard arm, standard track with bumper, mounting/finish plate and wood and machine screw pack. See 6030 Series page 31 for options.
- Sized, double acting cylinders for interior doors to 4'6" and exterior doors to 3'6".
- Aluminum frame requires minimum 1-3/4" (44 mm) x 4" (102 mm) header.
- Closers to meet ADA requirements. See 6030 Series page 32.
- Adjustment of spring power and latch speed independent for either swing.
- Backcheck and general speed adjustment are common for both swings.
- Standard or optional custom powder coat finish.
- Optional plated finish on arm, fasteners and mounting/finish plate.
- Optional SRI primer for installations in corrosive conditions. (Available with powder coat finishes only.)



- 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.

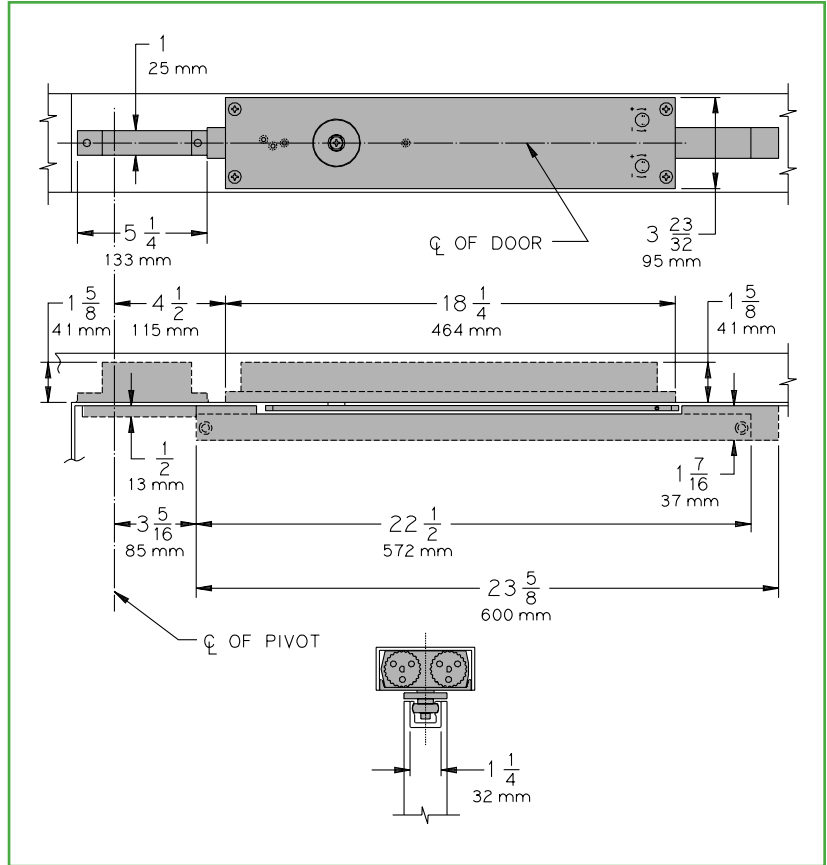
6030 SERIES

CONCEALED MOUNTING

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

MAXIMUM OPENING

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



- **Auxiliary Stop** is recommended where a door cannot swing 95°.
- **Center Pivot Set**, must be used but ordered separately.
- **Door Width** 30" (762 mm) minimum with 1-3/4" (44 mm) pivot centers.
- **Top Rail** 1-7/16" (36 mm) mortise required. 3/8" (10 mm) cutout required at top of the door, both sides.
- **Door Thickness** 1-3/4" (44 mm) minimum.
- **Centering Adjustment** provided by eccentric in track roller with 3/4" (19 mm) adjustment to center a 36" (914 mm) door in the opening.
- **Wood Frame** installation simplified by WOOD MOUNTING CLIP SET, 6030-416. Consult product support for special template.

Options

- Hold-open track with Bumper.

Special Templates

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

6030 SERIES

CYLINDERS

CYLINDER, 6030-3071

Standard, non-handed, cast iron cylinder assembly with mounting plate. For various applications see "Table of Sizes" on 6030 Series page 36.

ARM

STANDARD ARM, 6030-3077T

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

TRACKS

STANDARD TRACK with BUMPER, 6030-3038B

Standard, non hold-open, non-handed track with bumper.
Will accept hold-open clip.

HOLD-OPEN TRACK with BUMPER, 6030-3038HB

Optional, non-handed hold-open track with bumper.

INSTALLATION ACCESSORIES

WOOD MOUNTING CLIP SET, 6030-416

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.

TRACK BUMPER, 6030-169

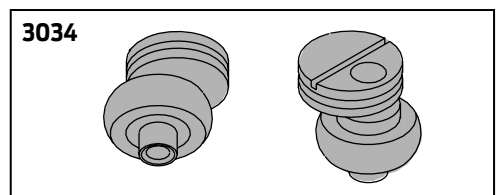
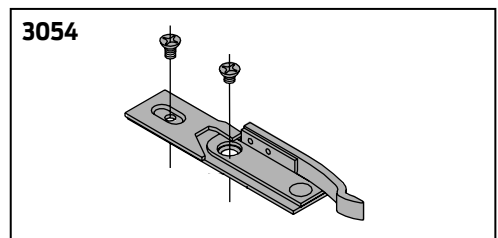
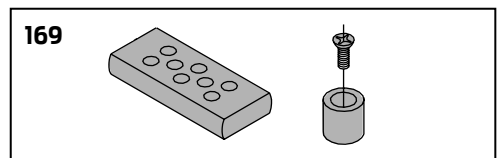
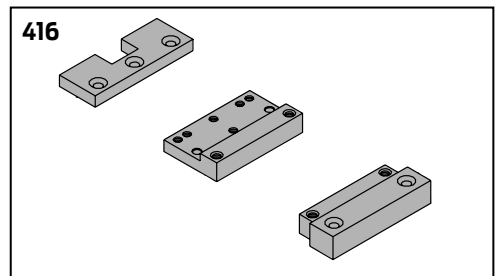
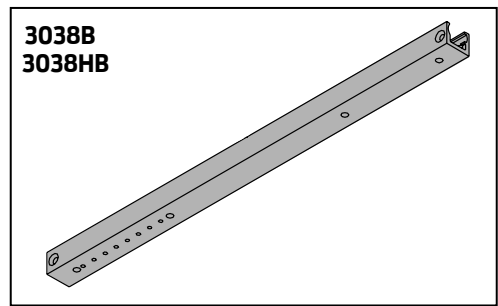
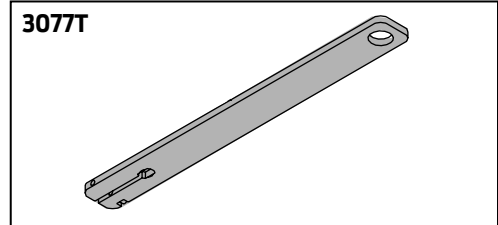
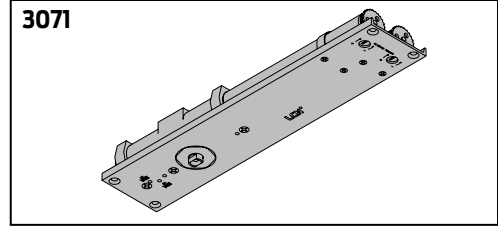
Mounts in track to assist backcheck. Limits maximum opening.
Consists of bumper, bumper post, and mounting screw.
NOTE: Track bumper does not replace auxiliary stop.

HOLD-OPEN CLIP, 6030-3054

Mounts in track to provide hold-open function.
Hold-open point controlled by clip location.

TRACK ROLLER, 6030-3034

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

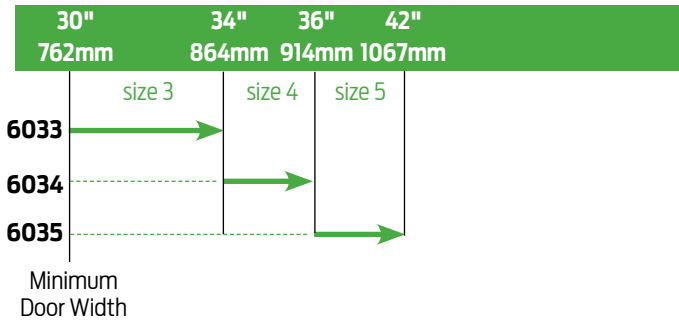


6030 SERIES

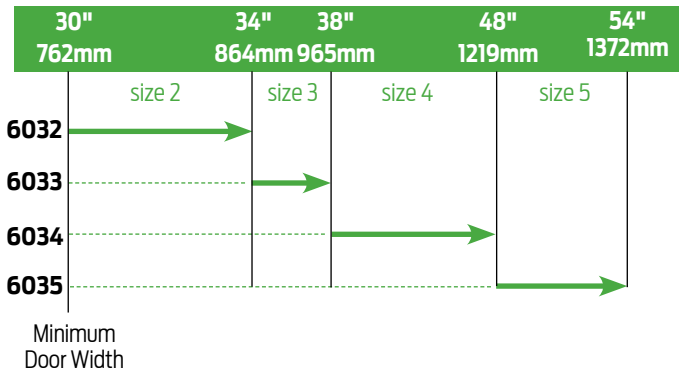
TABLE OF SIZES

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 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.

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

* Maximum opening force.

HOW-TO-ORDER 6030 SERIES CLOSERS

1. SELECT CYLINDER SIZE

- 6031 (ADA)
- 6032
- 6033
- 6034
- 6035

3. SPECIFY FINISH

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

Closer will be shipped with:

- STANDARD ARM,
- TRACK ROLLER,
- 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)

SCREW PACK

- TORX Machine Screw (TORX)

INSTALLATION ACCESSORIES

- Wood Clip Set, 6030-416

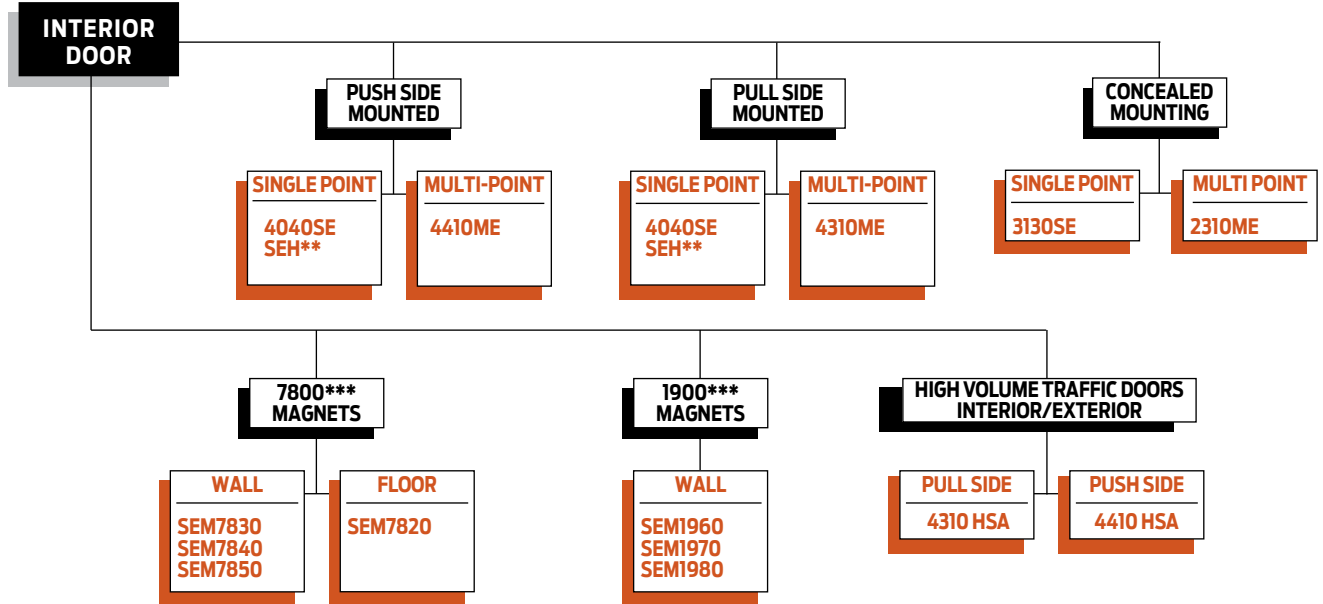
SPECIAL TEMPLATE

- ST- _____

FIRE/LIFE SAFETY CLOSERS/HOLDERS SERIES

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 and SEM 1900 Series are plastic.

PRODUCT COMPARISON

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

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

● AVAILABLE
 ○ NOT AVAILABLE

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

FIRE/LIFE SAFETY CLOSERS/HOLDERS SERIES

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.

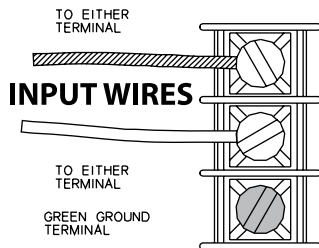
GENERAL NOTES

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

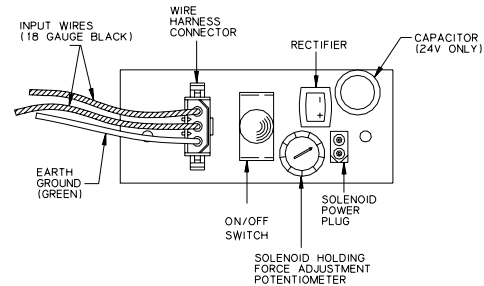
24V AC/DC (+10% -15%) @ 120 mA max.

TRANSFORMER DATA

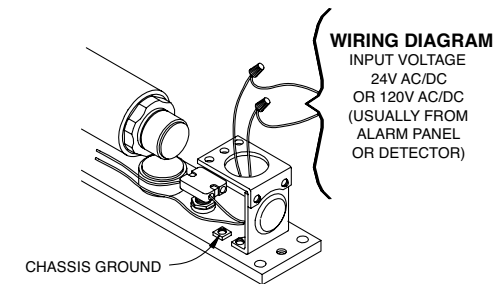
120V AC 50-60 Hz (primary); 24V AC @ 400 mA max. (secondary)
An LCN supplied transformer will power (recommended) two SE, ME or SEM and one HSA.

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



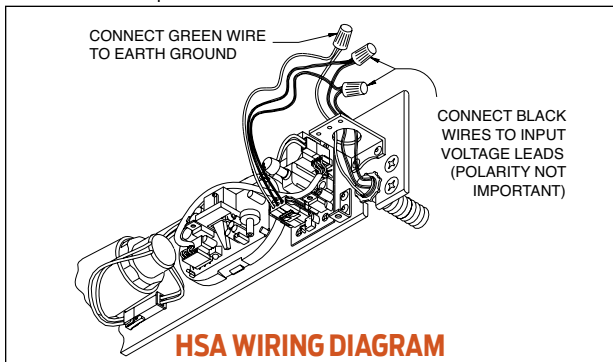
ME (2310) WIRING DIAGRAM

PHONE 877-671-7011
FAX 800-248-1460
www.allegion.com/us
2/14

FIRE/LIFE SAFETY CLOSERS/HOLDERS SERIES

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 for over 85 years.

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

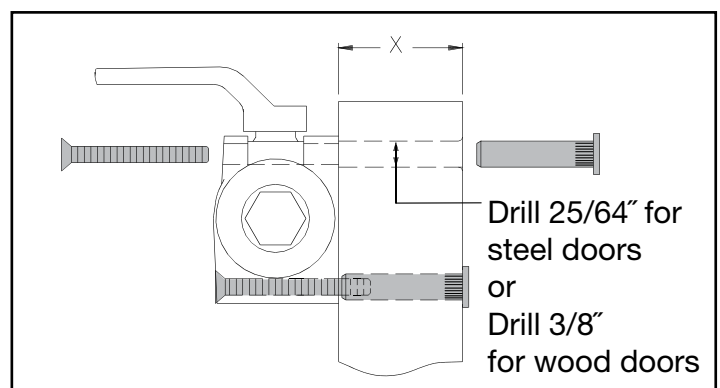
Closers mounted according to LCN installation instructions require no periodic adjustments. Quarterly inspections are recommended. Refer to the installation instructions for complete, product specific details.

POSITIVE PRESSURE

LCN closers have been certified for three hours by UL to be in compliance with UBC 7.2 (1997) and 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.



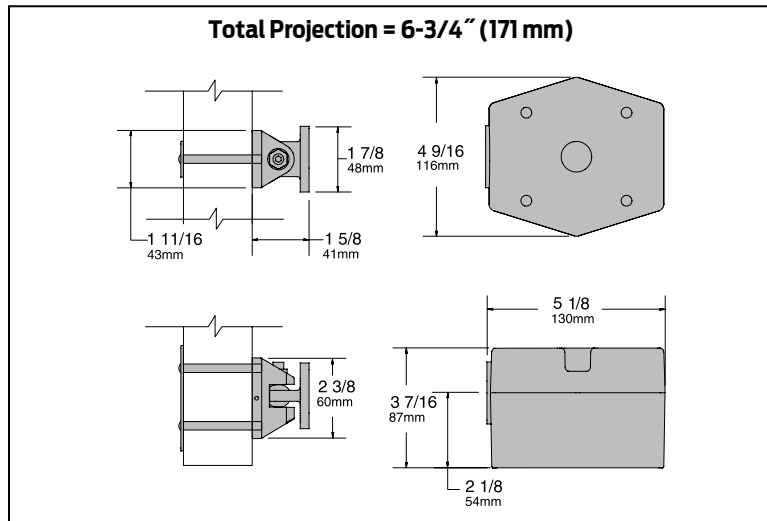
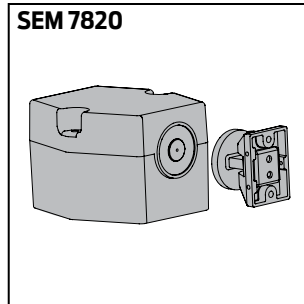
NOTE 1: For Thru Bolts, specify door thickness if other than 1-3/4" (44 mm).

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

SEM SERIES

SEM 7820 MAGNET

Die Cast, Floor mounted.



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.

All SEM Series magnets are UL listed for smoke barrier or labeled fire doors. Tested and certified under ANSI Standard A156.15.

SEM FEATURES

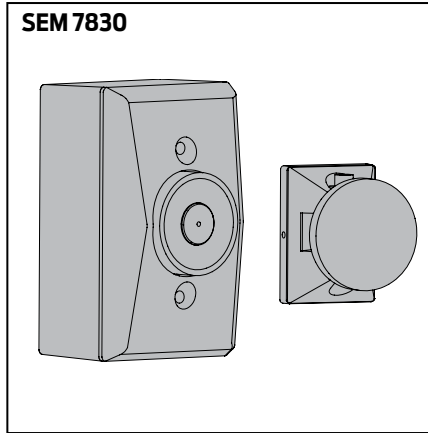
- Tri-voltage design with 35 lbs. of holding force.
- Now available armature extensions from LCN (see page 11).
- SEM 7820 magnets are shipped with die cast housing, cover, armature(s) and WMS screw pack.
- Available in Aluminum and Dark Bronze finishes only.
- UL listed for smoke barrier or labeled fire doors.

SEM SERIES

FEATURES

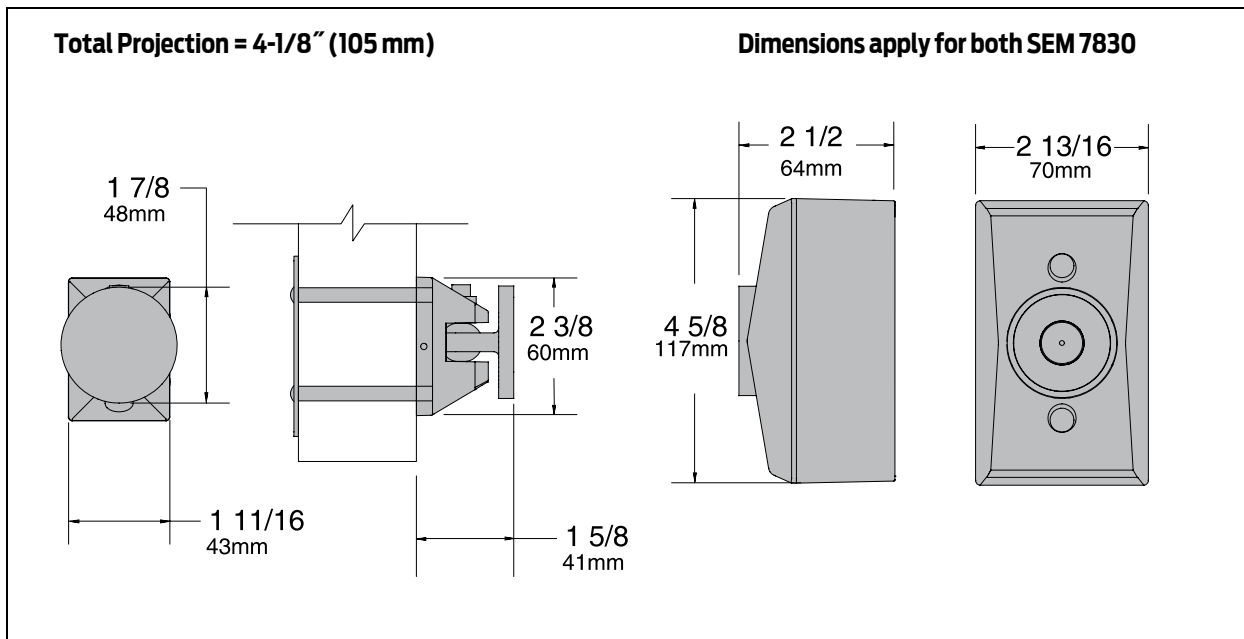
SEM 7830 MAGNET

Die cast housing,
Surface wall mounted.



SEM FEATURES

- Tri-voltage design with 35 lbs. of holding force.
- Now available armature extensions from LCN (see page 11).
- SEM 7830 magnets are shipped with die cast housing, cover, armature and WMS screw pack.
- SEM 7830 available in Aluminum and Dark Bronze finishes only.
- Suitable for use in pocket door installations.
- UL listed for smoke barrier or labeled fire doors.



SEM SERIES

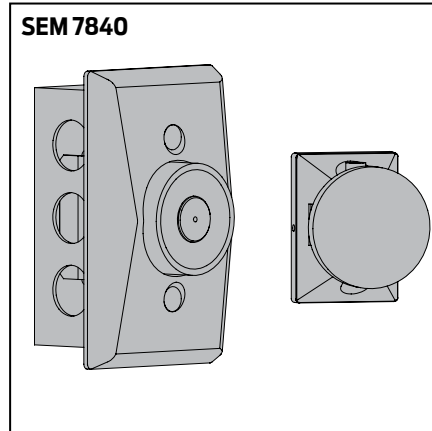
FEATURES

SEM 7840 MAGNET

Die cast housing, low profile recessed wall mount.

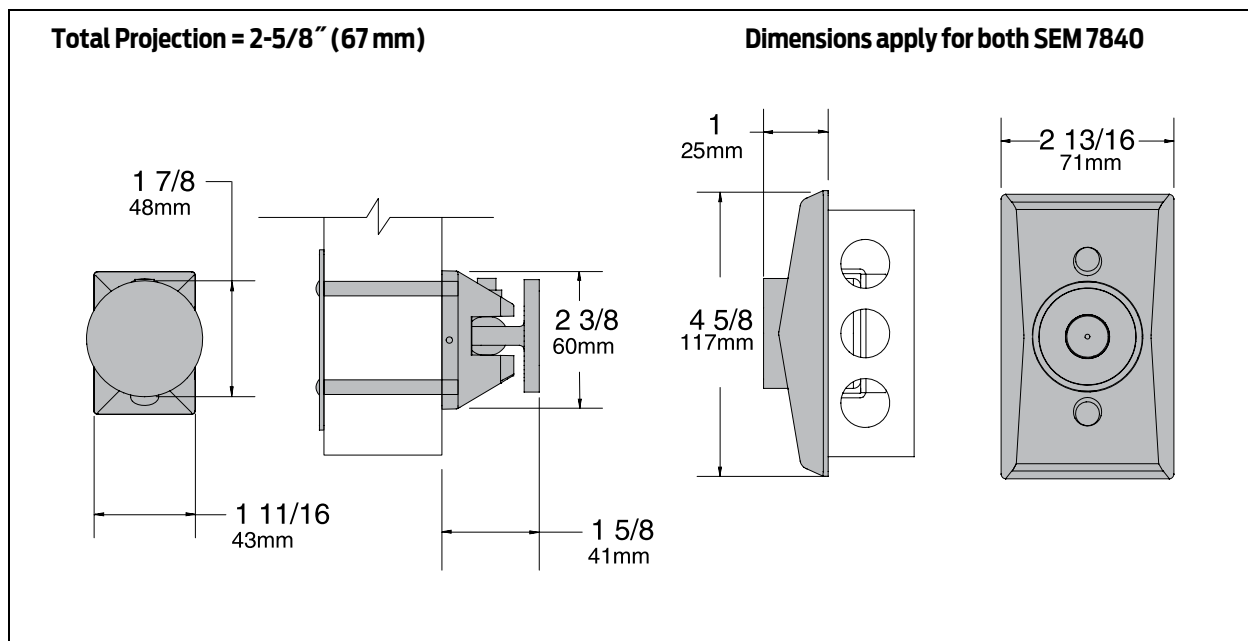
2" (51 mm) x 4" (102 mm) x 1-1/2" (38 mm).

NOTE: Outlet box not included.



SEM FEATURES

- Tri-voltage design with 35 lbs. of holding force.
- Now available armature extensions from LCN (see page 11).
- SEM 7840 magnets are shipped with die cast housing, cover, armature and WMS screw pack.
- SEM 7840 available in Aluminum and Dark Bronze finishes only.
- Suitable for use in pocket door installations.
- UL listed for smoke barrier or labeled fire doors.



SEM SERIES

FEATURES

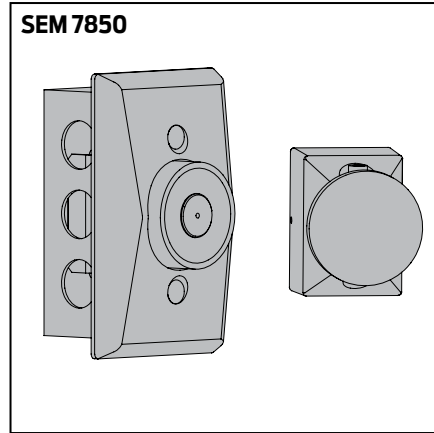
SEM 7850 MAGNET

Die cast housing, standard
profile recessed wall mount.

2" (51 mm) x 4" (102 mm)

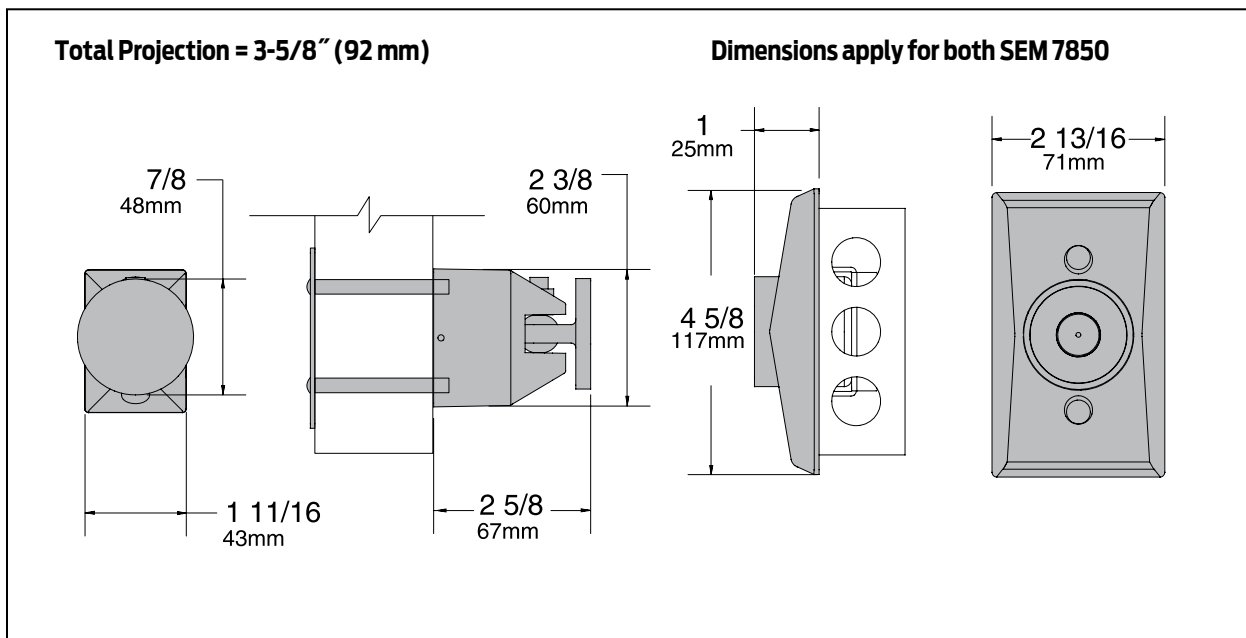
x 1-1/2" (38 mm)

NOTE: Outlet box not included.

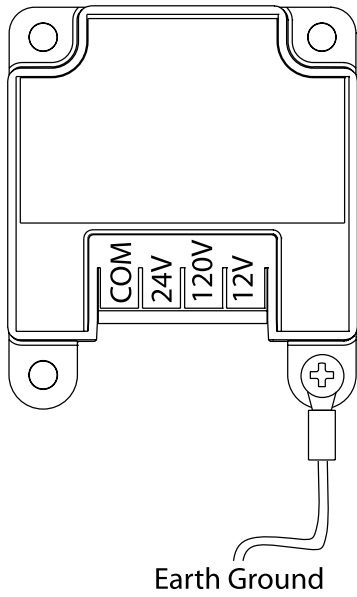


SEM FEATURES

- Tri-voltage design with 35 lbs. of holding force.
- Now available armature extensions from LCN (see page 11).
- SEM 7850 available in standard powder coat finishes.
- SEM 7850 available in Aluminum and Dark Bronze finishes only.
- Suitable for use in pocket door installations.
- UL listed for smoke barrier or labeled fire doors.



VOLTAGE INPUT



ELECTRICAL DATA

Holding Force: 35 lbs. @ Nominal Input Voltage.
 Maximum Current Draw: .020A @ 24VAC/DC, 120VAC
 .030A @ 12VDC

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.

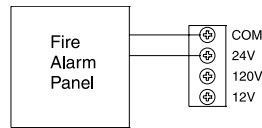


Fig. 1 24VAC/DC Wiring
 Polarity is unimportant

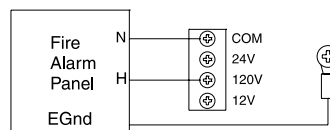


Fig. 2 120VAC Wiring

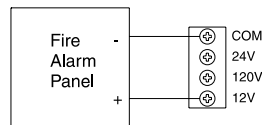


Fig. 3 12VDC Wiring
 Polarity as shown

SEM SERIES

MAGNETS

FLOOR MAGNET, SEM7820-516

Standard magnet coil.

WALL MAGNET, SEM7830-516, SEM7840-516, SEM7850-516, SEM1960-516, SEM1970-516, SEM1980-516

Standard magnet coil.

ARMATURES

DOOR ARMATURE, SEM7820-825, SEM7830-825, SEM7840-825

Standard, die cast low profile armature.

DOOR ARMATURE, SEM7850-828

Standard, die cast armature.

DOOR ARMATURE, SEM1960-825, SEM1970-825

Standard, plastic low profile armature.

DOOR ARMATURE, SEM1980-828

Standard, plastic armature.

COVER

STANDARD COVER, SEM7830-72, SEM7840-72, SEM7850-72

Standard, die cast cover.

STANDARD COVER, SEM1960-72, SEM1970-72, SEM1980-72

Standard, plastic cover.

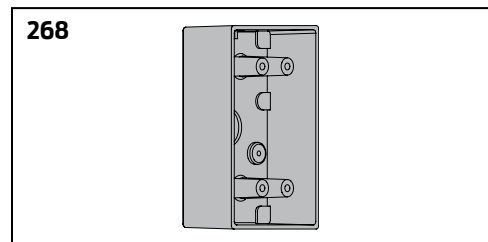
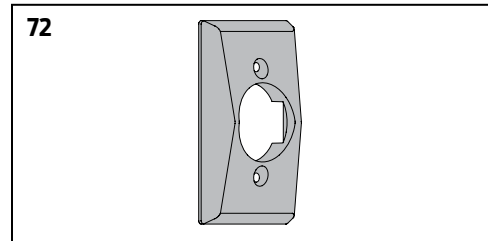
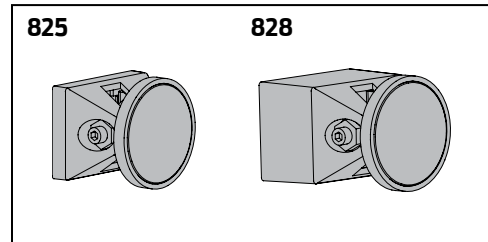
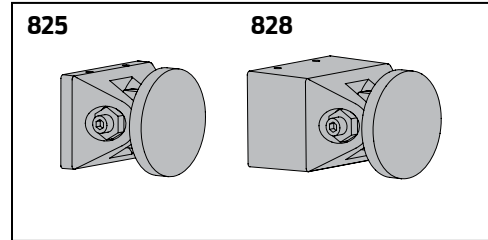
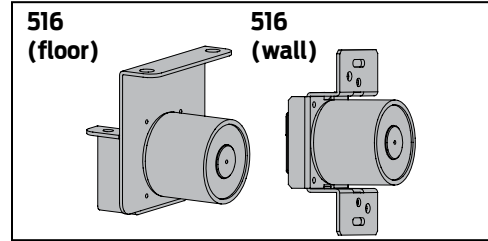
BOX

WALL BOX, SEM7830-268

Standard, die cast surface wall mount box.

WALL BOX, SEM1960-268

Standard, plastic surface wall mount box.



SEM SERIES

ACCESSORIES

EXTENSIONS

COUPLER ASSEMBLY KIT, SEM7810-514

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

Extension, SEM7810-E050

Standard metal 1/2" extension.

Extension, SEM7810-E075

Standard metal 3/4" extension.

Extension, SEM7810-E100

Standard metal 1" extension.

Extension, SEM7810-E200

Standard metal 2" extension.

Extension, SEM7810-E400

Standard metal 4" extension.

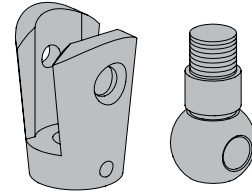
EXTENSION KIT, SEM7810-517

Extension kit includes:

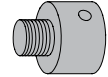
- 10.....7810SEM-E050
- 10.....7810SEM-E075
- 10.....7810SEM-E100
- 5.....7810SEM-E200
- 20.....7810SEM-514

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"

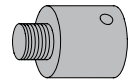
514



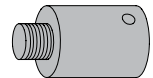
E050



E075



E100



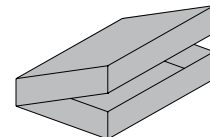
E200



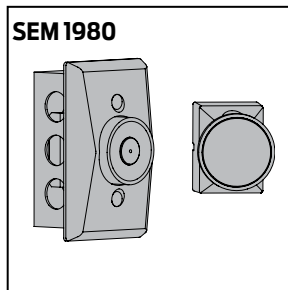
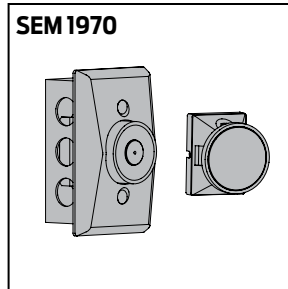
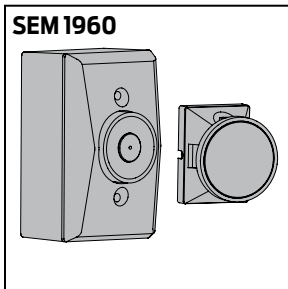
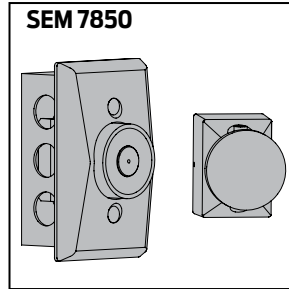
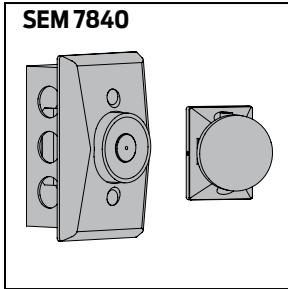
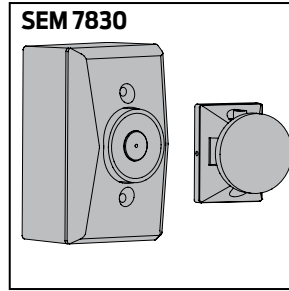
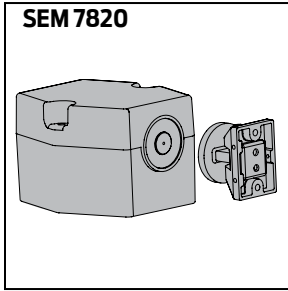
E400



517



SEM SERIES



HOW-TO-ORDER SEM 7800 SERIES MAGNETS

1. SELECT MAGNET SERIES

- SEM7820
- SEM7830
- SEM7840
- SEM7850

2. SPECIFY FINISH

- Standard Powder Coat _____
Aluminum, Dark Bronze.

HOW-TO-ORDER SEM 1900 SERIES MAGNETS

1. SELECT MAGNET SERIES

- SEM1960
- SEM1970
- SEM1980

2. SPECIFY FINISH

- Standard Finish _____
Aluminum or Dark Bronze.

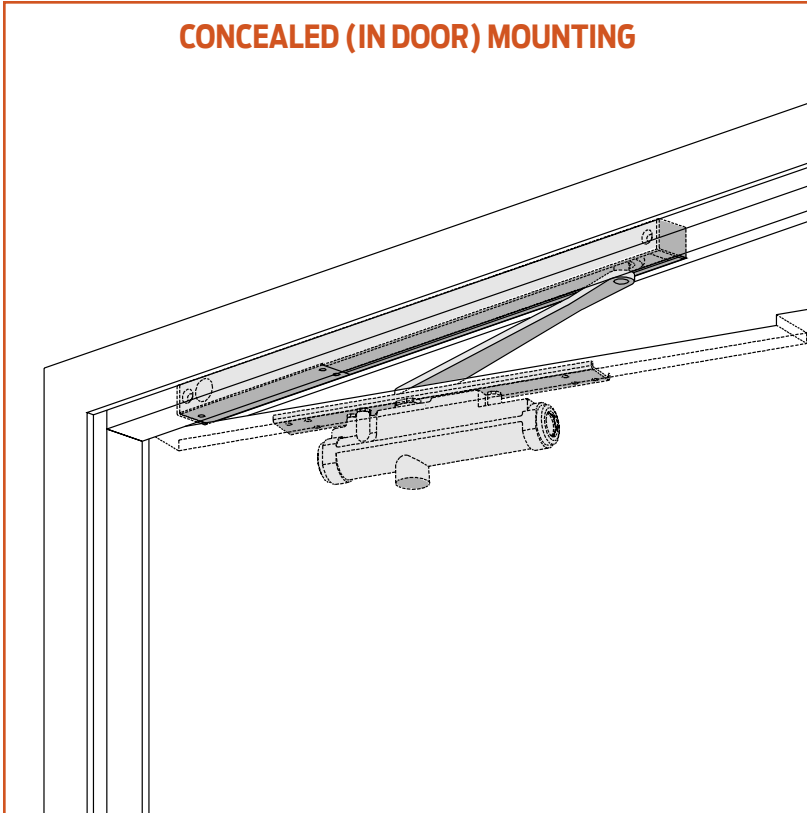
HOW-TO-ORDER SEM 7810 EXTENSIONS

1. SELECT EXTENSIONS

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

3130SE SERIES

CONCEALED (IN DOOR) MOUNTING

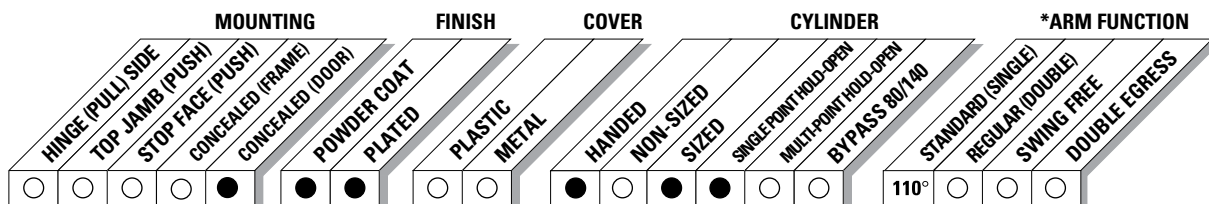


The 3130SE SENTRONIC® is a concealed in the door, closer/holder designed to provide single point hold-open for fire and smoke barrier doors. Door is held open until current interruption releases the holding mechanism and the door closes. Single lever (track) arm closer is specifically designed for interior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

The 3130SE and SEL Series is UL listed for metal smoke barrier or labeled fire doors.

Door and frame manufacturer must have preparation included in their UL procedures. Tested and certified under ANSI Standard A156.15. Conforms to life safety code, NFPA 101.

- Standard 3130SE Series closer shipped with a standard arm, 24V or 120V SE track (please specify), track roller, and wood and machine screw pack. See 3130SE Series page 15 for options.
- Sized cylinders for interior doors to 4' 0".
- Functions as full rack and pinion door closer when hold-open is not engaged or current is interrupted.
- Handed for right or left swinging door.
- Interfaces with fire alarm systems.
- Standard or optional custom powder coated finish.
- Optional plated finish on arm and fasteners.



● AVAILABLE
○ NOT AVAILABLE

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

3130SE SERIES

CONCEALED MOUNTING

For interior smoke barrier and labeled fire doors.

MAXIMUM OPENING

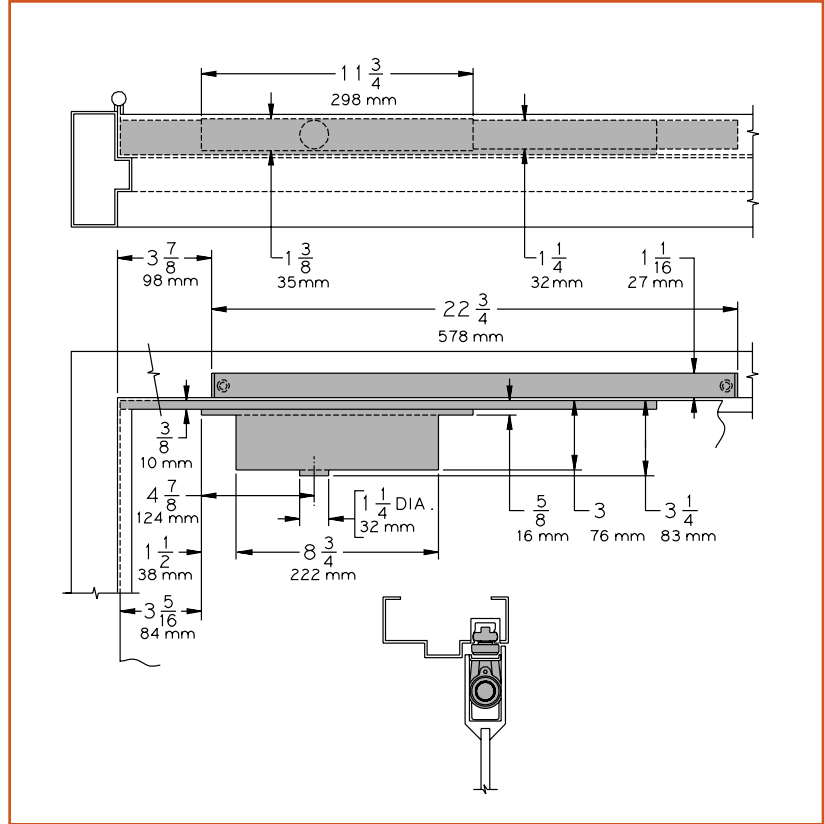
Templating allows 110°.

Hold-open points between 85° and 110° in approximately 3° increments.

SEL arm and track locate hold-open at 110°, 120° and 130°.

SE, SEL ELECTRICAL OPTIONS

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



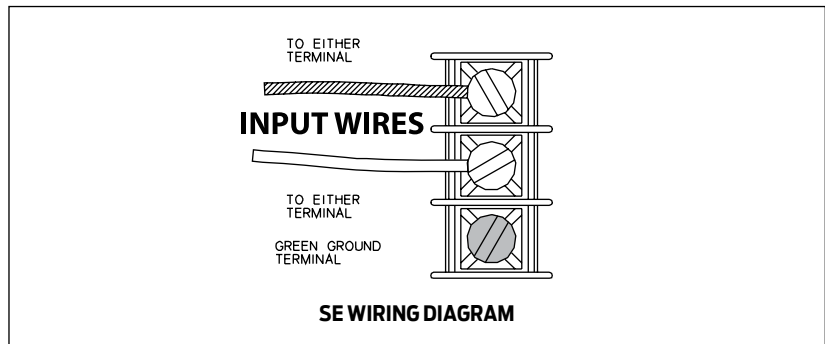
- **Butt Hinges** should not exceed 5" (127 mm) in width. Consult factory for pivot hung installations.
- **Auxiliary Stop** is recommended at hold-open point.
- **Top Rail** minimum 4" (102 mm).
- **Door Thickness** 1-3/4" (44 mm) minimum. Please consult the door manufacturer to assure that the door integrity and warranty is maintained after installing the 3130SE Series door closer in 1-3/4" (44 mm) thickness wood doors.
- **Door Width** 2' 4" (711 mm) minimum for single door with SE. 2' 8" (813 mm) minimum for door with SEL.
- **Wiring Diagram**

Options

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

Special Templates

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



3130SE SERIES

CYLINDER

SE CYLINDER, 3130SE-3071

Standard, handed cast iron cylinder assembly.
For various applications see "Table of Sizes" on 3130SE Series page 16.

ARM

STANDARD ARM, 3130SE-3077T

Handed arm. Arm adjustable to select hold-open point.

LONG ARM, 3130SEL-3077T

Optional, handed, solid arm provides hold-open point from 110° to 130°, determined by track templating.
Used with SEL TRACK 3130SEL-3038 only.

TRACKS

SE TRACK, 3130SE-3038

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

SEL TRACK, 3130SEL-3038

Optional, long non-handed track.
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.

SWITCH

TEST SWITCH, 3130SE-3436

INSTALLATION ACCESSORIES

CONDUIT QUICK-CONNECTOR, 3130SE-81

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

TRACK ROLLER, 3130SE-3034

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

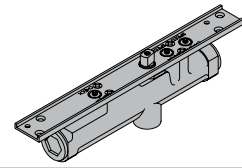
TRACK SLIDER, 3130SE-168

Alloy metal slider for use in SE series tracks only.

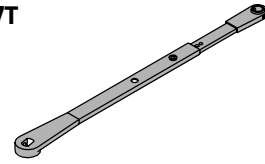
TRANSFORMER, 4040SE-3210

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).

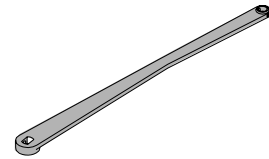
3071



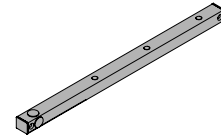
SE-3077T



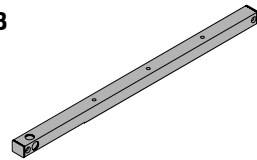
SEL-3077T



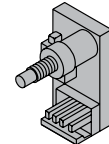
SE-3038



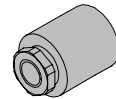
SEL-3038



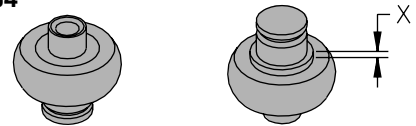
SE-3436



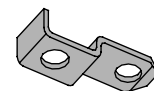
81



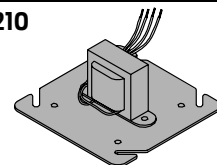
3034



168



4040SE-3210



3130SE SERIES

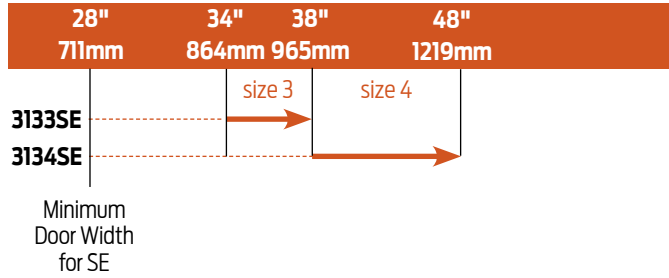
TABLE OF SIZES

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



→ Indicates recommended range of door width for closer size.

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

HOW-TO-ORDER 3130SE SERIES CLOSERS

1. SELECT CYLINDER SIZE

- 3133SE
- 3134SE

2. SPECIFY HAND

- RH
- LH

3. SELECT TRACK

- SE
- SEL (requires long arm)

4. VOLTAGE

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

5. 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

ARM

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

FINISH

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

SCREW PACK

- TORX Machine Screw (TORX)

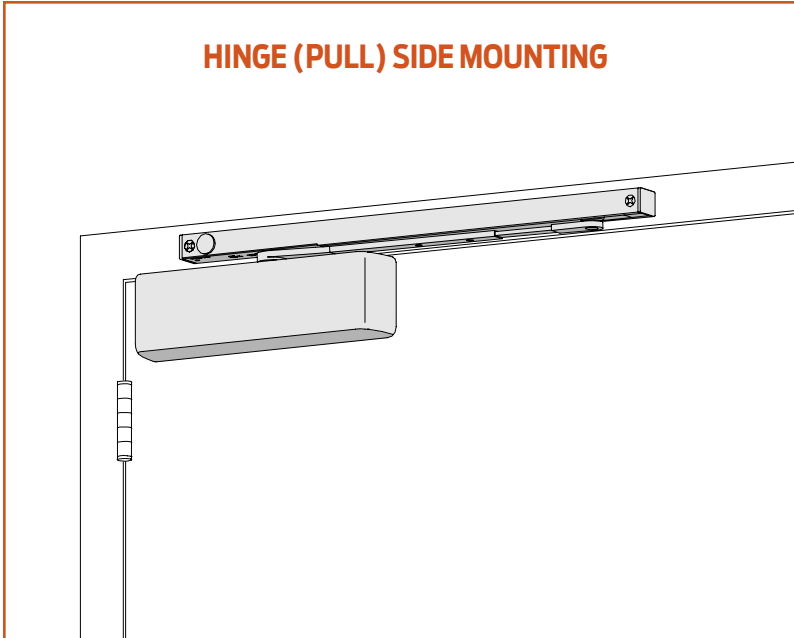
INSTALLATION ACCESSORIES

- Transformer, 4040SE-3210

SPECIAL TEMPLATE

- ST- _____

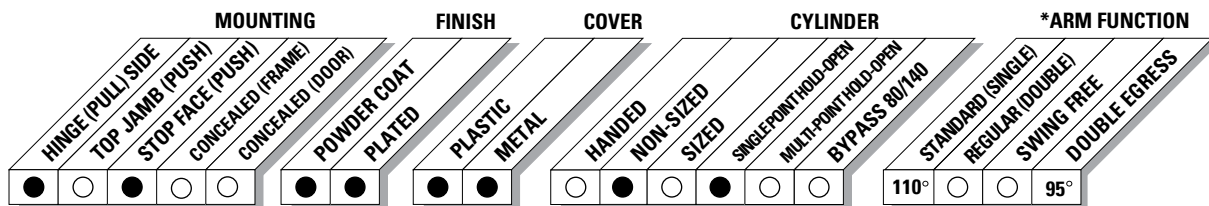
4040SE SERIES



The 4040SE SENTRONIC® is a heavy duty, non-handed, non-sized 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.

The 4040SE and SEL Series is UL listed for smoke barrier or labeled fire doors. cUL listed for self-closing doors without hold-open. Tested and certified under ANSI Standard A156.15. Conforms to life safety code, NFPA 101.

- Standard 4040SE Series closer shipped with a standard arm, 24V or 120V (please specify) SE track, standard plastic clip-on cover, and wood and machine screw pack. SEL tracks are optional, see 4040SE Series pages 20 & 21 for options.
- Non-sized cylinders for interior doors to 4'0".
- 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.
- Closer mounts on either push or pull side of the door.
- Non-handed for mounting on either right or left hand door.
- Concealed or surface wiring.
- Interfaces with alarm systems.
- Standard or optional custom powder coated finishes on cover and arm.
- Optional plated finishes.



● AVAILABLE
○ NOT AVAILABLE

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

4040SE SERIES

HINGE (PULL) SIDE MOUNTING

Information applies to 4040 SE unless otherwise specified.

MAXIMUM OPENING

Templating allows 110°.

Hold-open points between 85° and 110° in approximately 3° increments.

Pull side mounting on a double egress frame requires a handed double egress arm.

Maximum hold-open to 95°.

2-11/16" (67 mm) maximum reveal on pull side.

SEL track provides hold-open points between 90° and 120°, in approximately 3° increments.

SE, SEL ELECTRICAL OPTIONS

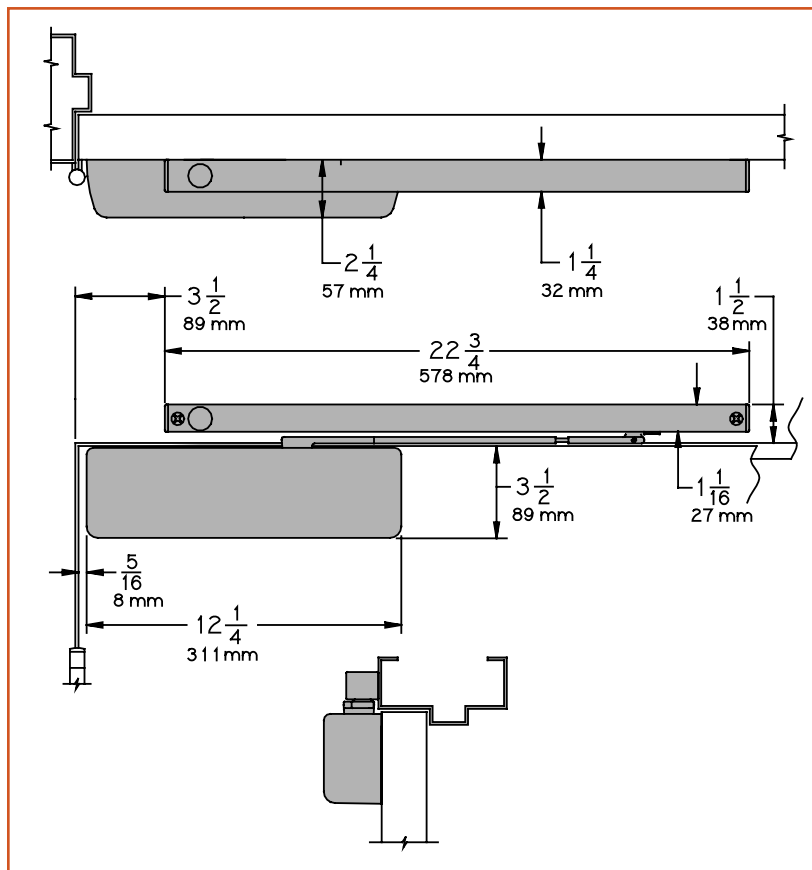
These track assemblies require a single power circuit for the holding solenoid.

SE or SEL holding solenoid is either 24V or 120V input, please specify.

An optional 4040SE-3210

TRANSFORMER reduces 120V AC line voltage to 24V AC.

Circuitry accepts either AC or DC input.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Swing Clear Hinges** consult factory.
- **Auxiliary Stop** is recommended at hold-open point.
- **Reveal** should not exceed 1/8" (3 mm) for standard arm. Should not exceed 2-11/16" (68 mm) for double egress arm.
- **Top Rail** minimum 3-1/2" (89 mm).
Installation with PLATE, 4040SE-18 requires SPECIAL TEMPLATE and 1-3/4" (44 mm) minimum top rail.
- **Head Frame** requires 2" (51 mm) minimum.
- **Flush Ceiling** with 2" (51 mm) head frame does not require special templating.
- **Door Width** 2' 4" (711 mm) minimum for single door with SE.
4' 8" (1422 mm) minimum for paired doors with SE.
- **Clearance** of 2-3/8" (60 mm) behind door required for 90° installation.
- **Wiring Diagram** See "FIRE/LIFE SAFETY" section page 19 for typical wiring and electrical diagram.

Options

- Long (SEL) track.
- Handed double egress arm for reveal under 2-11/16" (67 mm).
- Metal cover.
- 24V or 120V input for SE or SEL, please specify.

Special Templates

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

4040SE SERIES

STOP FACE (PUSH SIDE) MOUNTING

Information applies to 4040 SE closers unless otherwise specified.

MAXIMUM OPENING

Templating allows 110°.

Hold-open points between 85° and 110° in approximately 3° increments.

SEL track provides hold-open points between 90° and 120°, in approximately 3° increments.

SEL track provides hold-open points between 90° and 120°, in approximately 3° increments.

SE, SEL ELECTRICAL OPTIONS

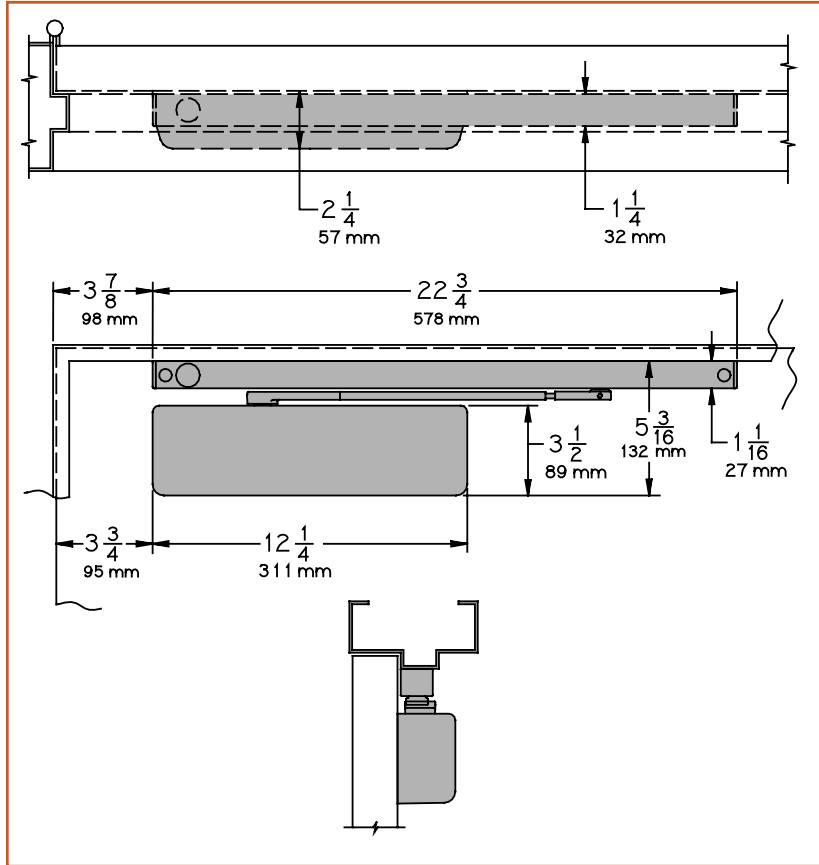
These track assemblies require a single power circuit for the holding solenoid.

SE or SEL holding solenoid is either 24V or 120V input, please specify.

An optional 4040SE-3210

TRANSFORMER reduces 120V AC line voltage to 24V AC.

Circuitry accepts either AC or DC input.



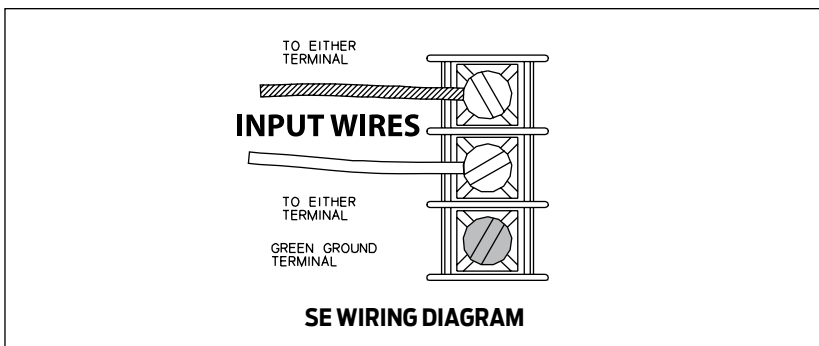
- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended at hold-open point.
- **Top Rail** minimum 5-3/4" (146 mm).
Installation with PLATE, 4040SE-18PA requires SPECIAL TEMPLATE and 2" (51 mm) minimum top rail.
- **Stop Width** 1-1/4" (32 mm) minimum.
- **Door Width** 2' 4" (711 mm) minimum for single door with SE.
4' 8" (1422 mm) minimum for paired doors with SE.
- **Wiring Diagram**

Options

- Long (SEL) track.
- Metal cover.
- 24V or 120V input for SE or SEL, please specify.

Special Templates

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

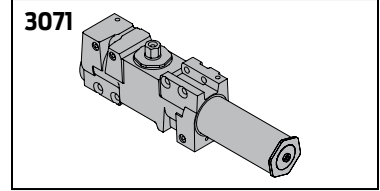


4040SE SERIES

CYLINDER

CYLINDER, 4040SE-3071

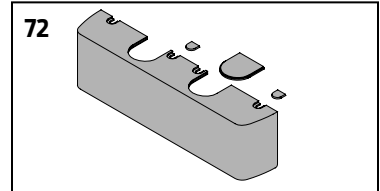
Standard, non-handed cast iron cylinder assembly.



COVERS

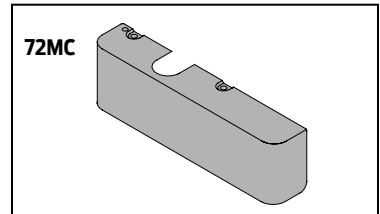
COVER, 4040SE-72

Standard, non-handed plastic clip-on cover.



METAL COVER, 4040SE-72MC

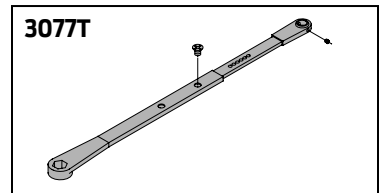
Optional, handed cover. Required for plated finishes and custom powder coat finishes.



ARMS

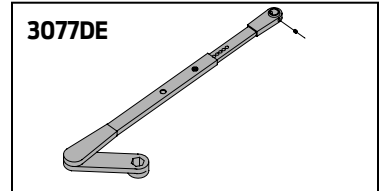
STANDARD ARM, 4040SE-3077T

Non-handed arm, adjustable to select hold-open point.



DOUBLE EGRESS ARM, 4040SE-3077DE

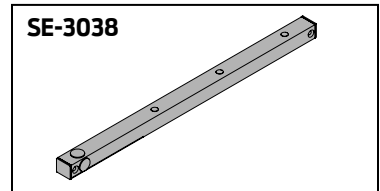
Optional, handed arm for pull side installations on double egress doors and frames. Not required for push side mounting on double egress frames.



TRACKS

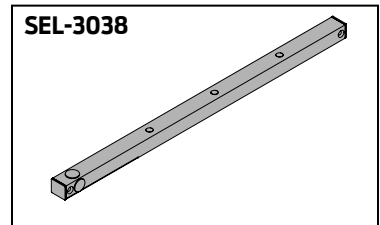
SE TRACK, 4040SE-3038

Standard, non-handed track 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.



SEL TRACK, 4040SEL-3038

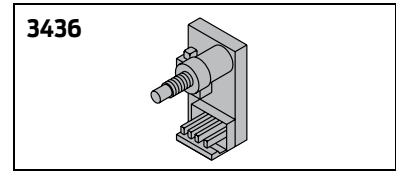
Optional, non-handed long track mounts on either head frame or stop. 24V or 120V AC/DC input standard for holding solenoid, please specify. Includes test switch assembly with fuse.



4040SE SERIES

SWITCH

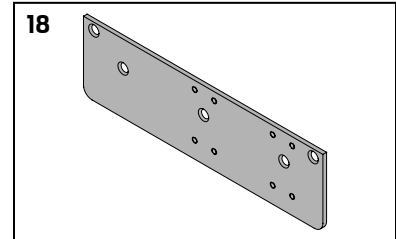
TEST SWITCH, 4040SE-3436



INSTALLATION ACCESSORIES

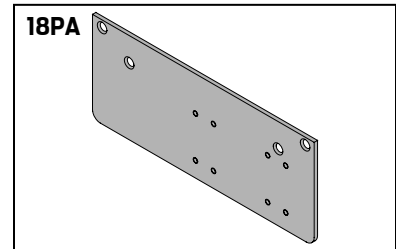
PLATE, 4040SE-18

Required where top rail is less than 3-1/2" (89 mm).
Plate requires minimum 2" (51 mm) top rail.
Plate installations require a SPECIAL TEMPLATE.



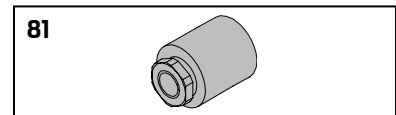
PLATE, 4040SE-18PA

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



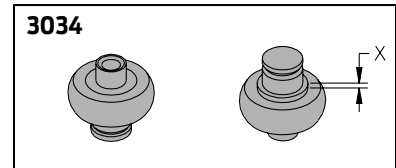
CONDUIT QUICK-CONNECTOR, 4040SE-81

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



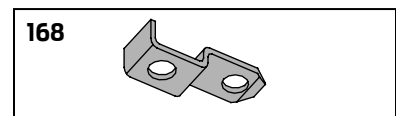
TRACK ROLLER, 4040SE-3034

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



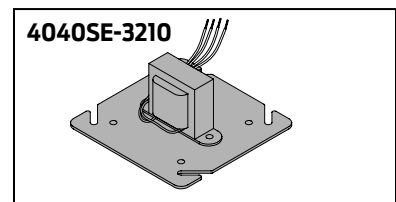
TRACK SLIDER, 4040SE-168

Alloy metal slider for use in SE series tracks only.



TRANSFORMER, 4040SE-3210

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).



4040SE SERIES

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.

Minimum door widths:

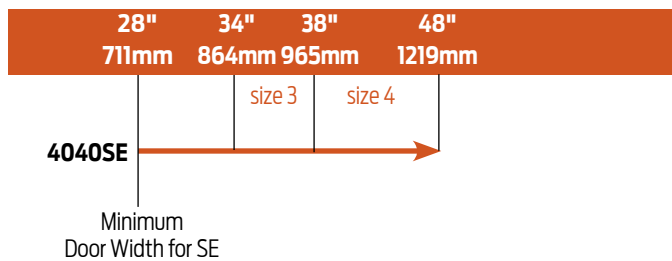
for SE on paired door, min. width 60" (1524 mm).

for SE, minimum door width 28" (711 mm).

for SEL, minimum door width 30" (762 mm).

Details are listed on the MOUNTING DETAILS pages.

INTERIOR DOOR WIDTH



HOW-TO-ORDER 4040SE SERIES CLOSERS

1. SELECT TRACK

- SE
- SEL

2. VOLTAGE

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

3. 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

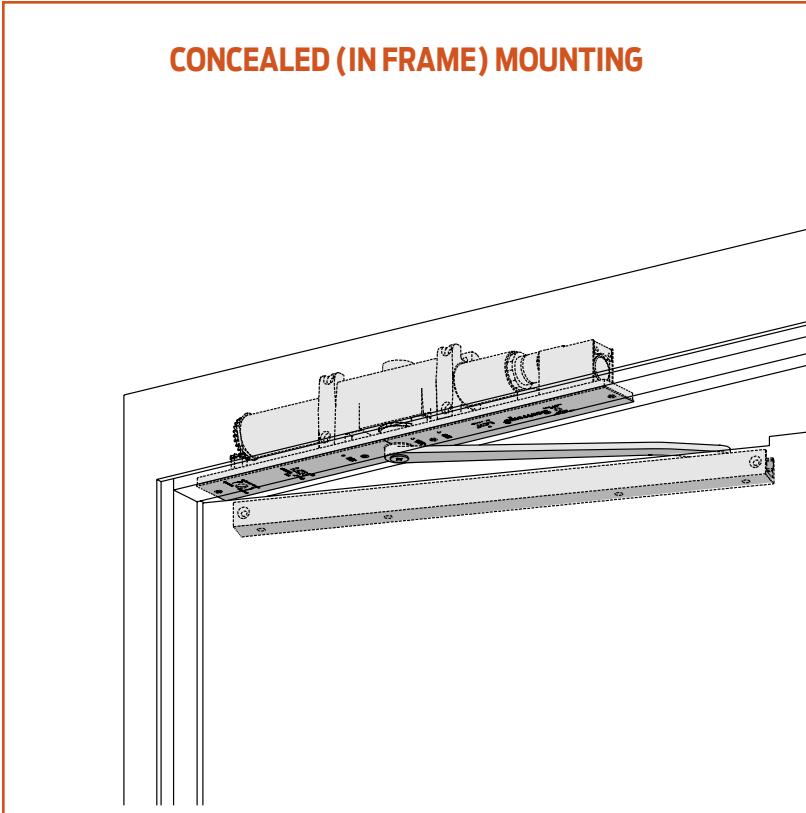
- Plate, 4040SE-18
- Plate, 4040SE-18PA
- Transformer, 4040SE-3210

SPECIAL TEMPLATE

- ST- _____ (if required)

2310ME SERIES

CONCEALED (IN FRAME) MOUNTING



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.

The 2310ME Series is UL & cUL listed for smoke barrier or labeled fire doors. Tested and certified under ANSI Standard A156.15. Conforms to life safety code, NFPA 101.

- Standard 2310ME Series closer shipped with either 24V or 120V cylinder (please specify), two piece metal finish plate, standard arm, track, and wood and machine screw pack. See 2310ME Series page 25 for options.
- Sized cylinders for interior doors to 4' 0".
- Functions as full rack and pinion door closer when hold-open is not engaged or current is interrupted.
- Handed for right or left swinging door.
- Built-in "On/Off" switch controls hold-open function.
- Interfaces with fire alarm systems.
- Standard or optional custom powder coated finish.
- Optional plated finish on arm, fasteners and finish plate.

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	160°	STANDARD (SINGLE)	REGULAR (DOUBLE)	SWING FREE	DOUBLE EGRESS
○	○	○	●	○	●	●	○	○	●	○	○	●	●	○	○	○	○	○	○

● AVAILABLE
○ NOT AVAILABLE

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

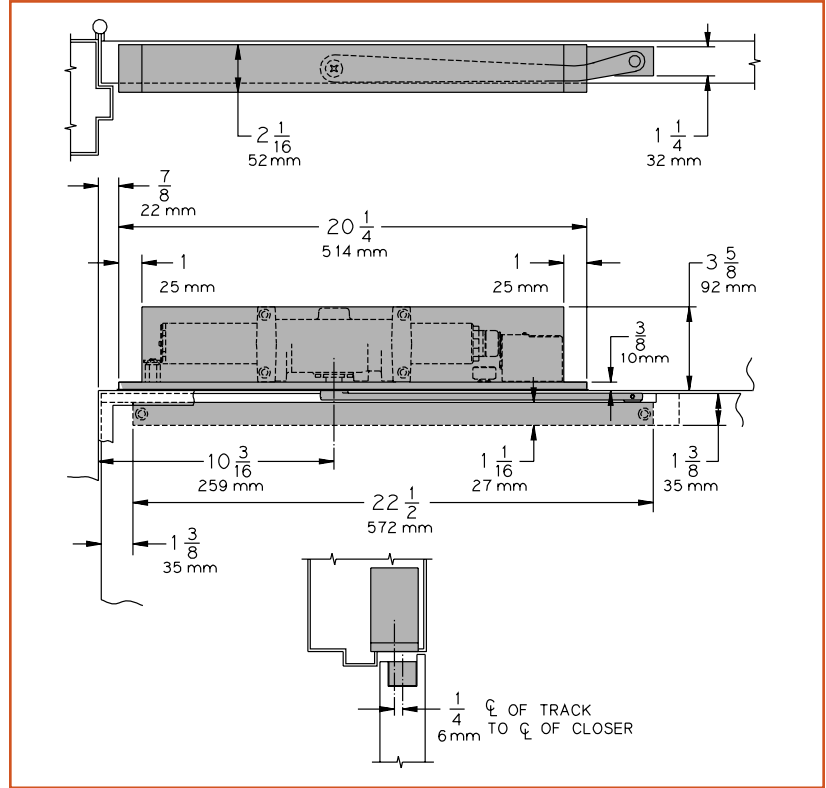
2310ME SERIES

CONCEALED MOUNTING

For interior smoke barrier and labeled fire doors.

MAXIMUM OPENING

Templating allows 180° with hold-open points up to 160°.



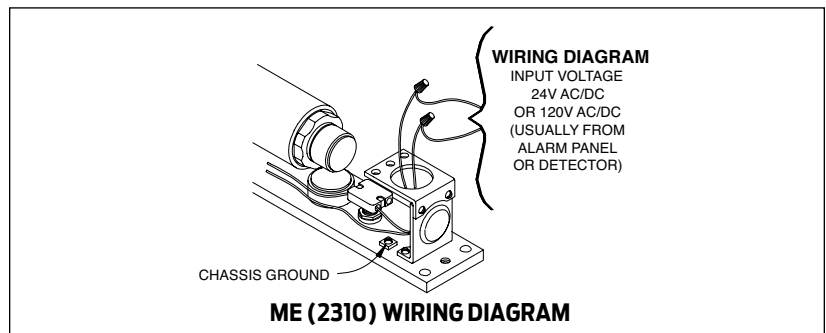
- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Top Rail** 1-3/8" (35 mm) mortise required.
5/16" (8 mm) cutout required at top of door, stop face only.
- **Door Thickness** 1-3/4" (44 mm) minimum.
- **Door Width** 2' 4" (711 mm) minimum.
- **Hollow Metal Frame** Requires minimum 4" (102 mm) x 4" frame.
Consult factory or template for preparation details.
- **Bypass** (suffix "B80" or "B140") eliminates hold-open function up to a specified point of door swing.
B80 cylinder from 0° to 80°.
B140 cylinder from 0° to 140°.
- **Wiring Diagram**

Options

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

Special Templates

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

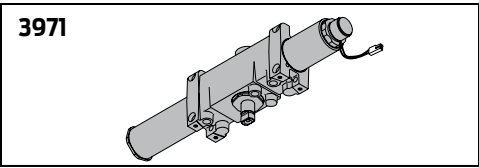


2310ME SERIES

CYLINDER

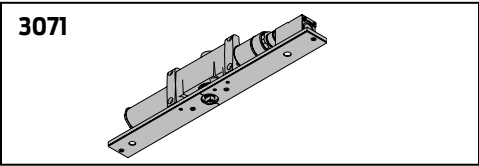
ME CYLINDER, 2310ME-3971

Standard, handed cast iron cylinder assembly. Specify 24V or 120V.



ME CYLINDER, 2310ME-3071

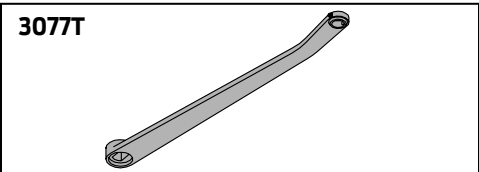
Standard, handed cylinder and mounting plate assembly. "On/Off" switch assembly controls the hold-open function. Circuitry accepts either AC or DC input. Specify 24V or 120V.



ARM

STANDARD ARM, 2310ME-3077T

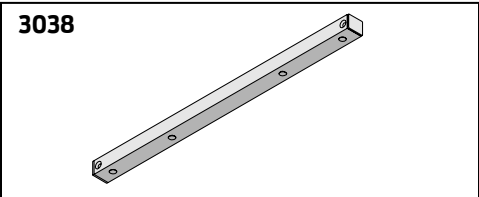
Handed arm.



TRACK

STANDARD TRACK, 2310ME-3038

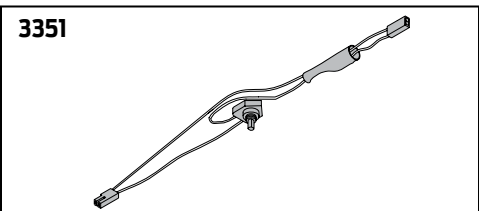
Standard, non-handed track.



SWITCH

SWITCH, 2310ME-3351

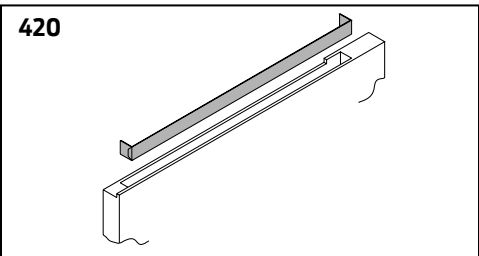
"On/Off" switch assembly provides continuous hold-open function. Available as 24V or 120V, please specify.



INSTALLATION ACCESSORIES

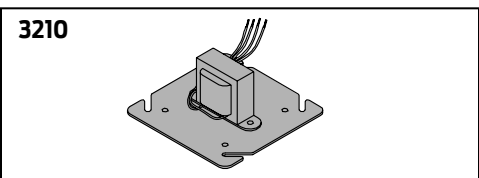
FIRE SHIELD, 2310ME-420

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.



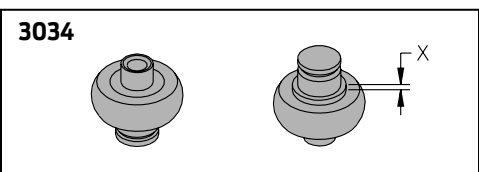
TRANSFORMER, 2310ME-3210

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).



TRACK ROLLER, 2310ME-3034

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

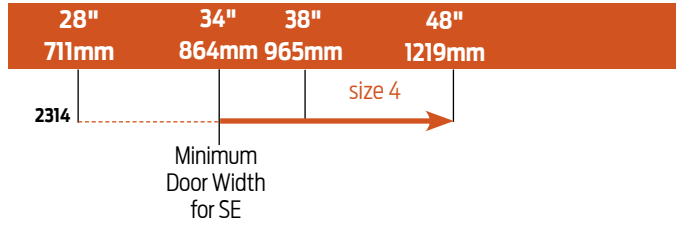


2310ME SERIES

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.

HOW-TO-ORDER 2310ME SERIES CLOSERS

1. SPECIFY HAND

- RH
- LH

2. VOLTAGE

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

3. 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)

FINISH

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

SCREW PACK

- TORX Machine Screw (TORX)

INSTALLATION ACCESSORIES

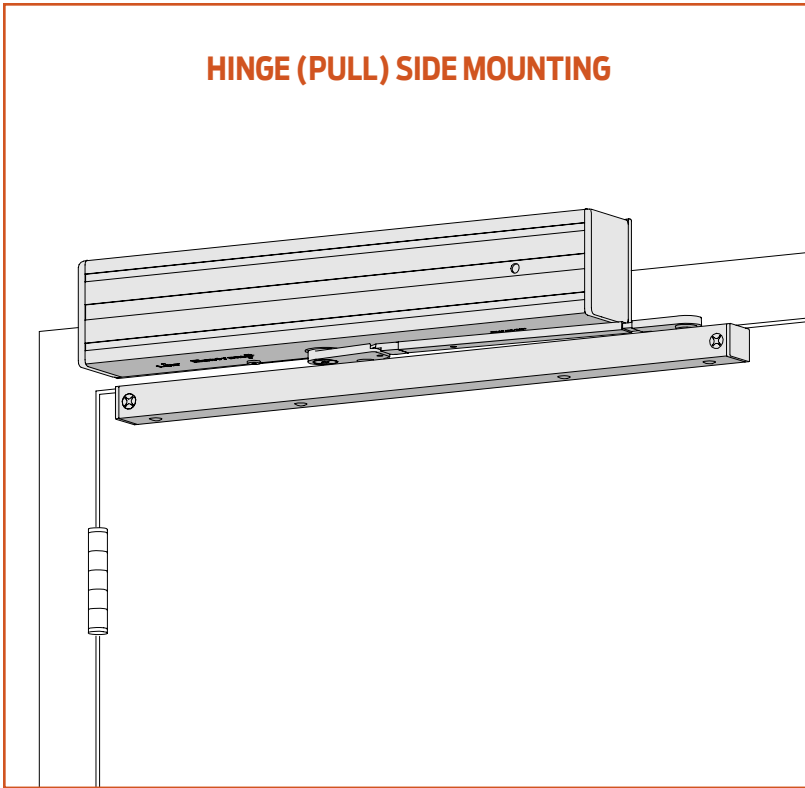
- Fire Shield, 2310ME-420
- Transformer, 2310ME-3210

SPECIAL TEMPLATE

- ST- _____

4310ME SERIES

FEATURES



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.

The 4310ME is UL listed for smoke barrier or labeled fire doors. Tested and certified under ANSI Standard A156.15. Conforms to life safety code, NFPA 101. An ME provides only the closer/holder function.

- Standard 4310ME Series closer shipped with a 24V or 120V cylinder (please specify) on a mounting plate, metal cover, Swing-Free arm, track, track roller, and wood and machine screw pack. See 4310ME Series pages 29 & 30 for options.
- Sized cylinders for interior doors to 4'0".
- Functions as full rack and pinion door closer when hold-open is not engaged or current is interrupted with Swing-Free arm engaged.
- Handed for right or left swinging door.
- Concealed or exposed electrical connections.
- Built-in "On/Off" switch controls hold-open function.
- Swing-Free arm allows door to be moved without door closer resistance.
- Interfaces with fire alarm systems.
- Standard or optional custom powder coated finish.
- Optional plated finish on cover, arm, and fasteners.

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
●	○	○	○	○	●	●	○	●	●	○	○	●	●	○
														160° 95°

● AVAILABLE
○ NOT AVAILABLE

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

4310ME SERIES

HINGE (PULL) SIDE MOUNTING

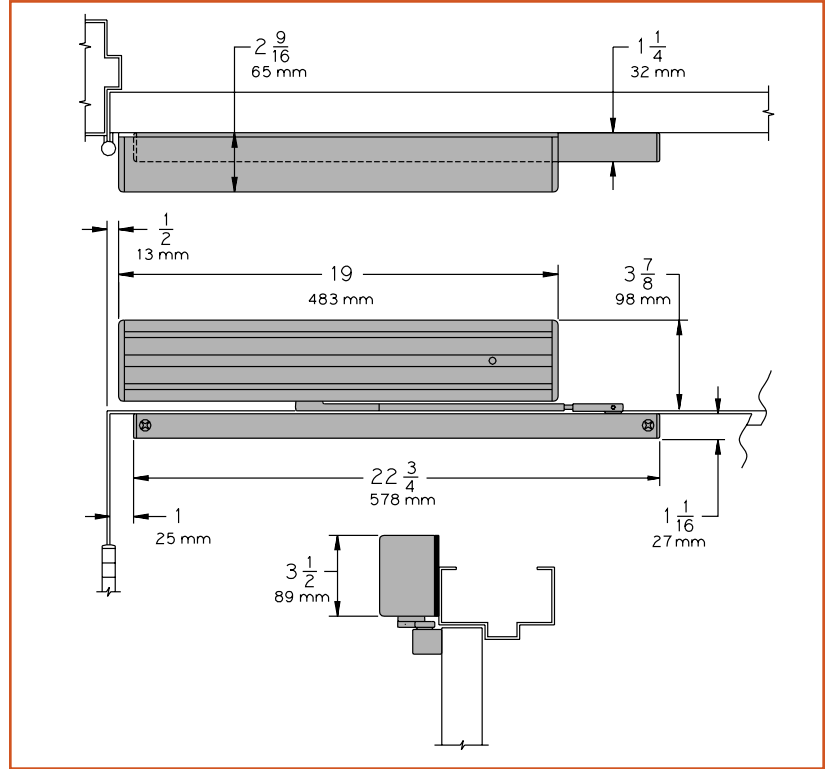
Information applies to ME closer.

MAXIMUM OPENING

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

ME ELECTRICAL OPTIONS

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



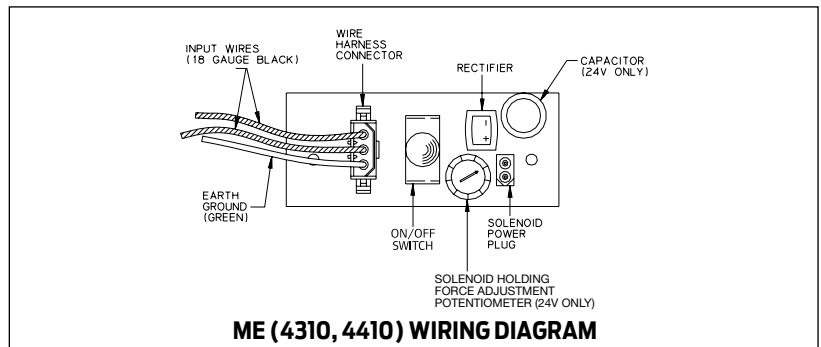
- **Butt Hinges** should not exceed 4-1/2" (114 mm) in width.
- **Top Rail** 1-1/16" (27 mm) minimum.
- **Reveal** should not exceed 1/8" (3 mm) for Swing-Free arm. Should not exceed 2-11/16" (68 mm) for double egress arm.
- **Head Frame** requires 2" (51 mm) minimum.
- **Clearance** of 1-1/4" (32 mm) behind door required for installation.
- **Bypass** (suffix "B80 or B140") eliminates hold-open function up to a specified point of the doors swing. B80 cylinder from 0° to 80°. B140 cylinder from 0° to 140°.
- **Wiring Diagram**

Options

- Hold-open bypass.
- Double egress arm.
- 24V or 120 volt input, please specify.

Special Templates

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



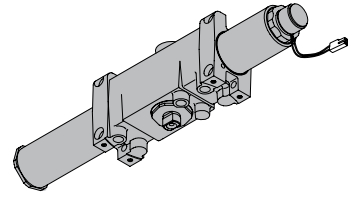
4310ME SERIES

CYLINDER

ME CYLINDER, 4310ME-3971

Standard, handed cast iron cylinder assembly. Please specify 24V or 120V.

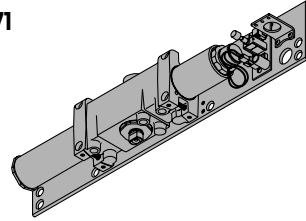
3971



ME CYLINDER, 4310ME-3071

Standard, handed cylinder and mounting plate assembly. "On/Off" switch assembly controls hold-open function. Circuitry accepts either AC or DC input. Please specify 24V or 120V.

3071

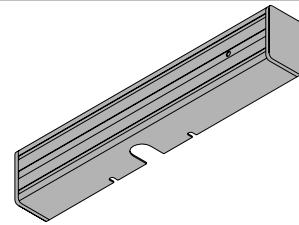


COVERS

COVER, 4310ME-72MC

Handed, metal cover.

72MC



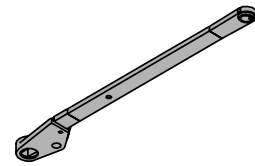
ARMS

SWING-FREE ARM, 4310ME-3077SF

Handed arm.

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

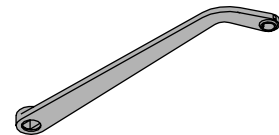
3077SF



DOUBLE EGRESS ARM, 4310ME-3077DE

Optional, handed arm for double egress doors and frames. 2-11/16" (68 mm) maximum reveal.

3077DE

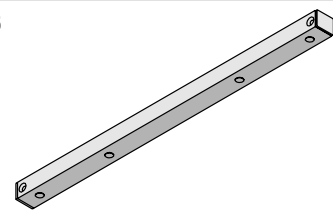


TRACK

TRACK, 4310ME-3038

Standard, non-handed track.

3038

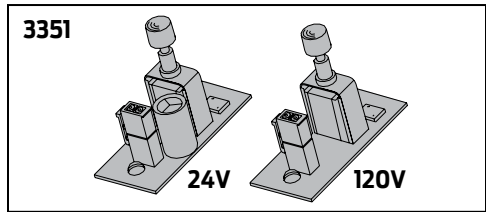


4310ME SERIES

SWITCH

SWITCH, 4310ME-3351

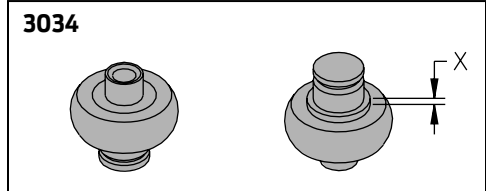
"On/Off" switch assembly provides continuous hold-open function.
Available as 24V or 120V, please specify.



INSTALLATION ACCESSORIES

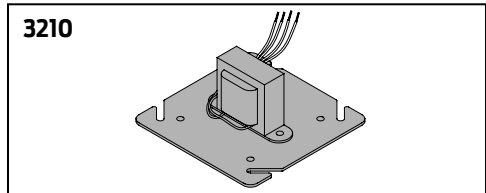
TRACK ROLLER, 4310ME-3034

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



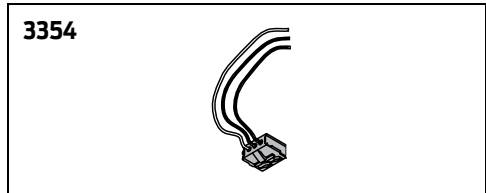
TRANSFORMER, 4310-3210

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).



ME WIRING HARNESS, 4310ME-3354

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

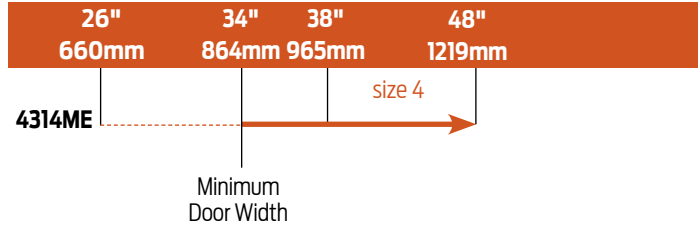


4310ME SERIES

TABLE OF SIZES

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

INTERIOR DOOR WIDTH



→ Indicates recommended range of door width for closer size.

HOW-TO-ORDER 4310ME SERIES CLOSERS

1. SPECIFY HAND

- RH
- LH

2. VOLTAGE

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

3. SPECIFY FINISH

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

Closer will be shipped with:

- STANDARD COVER,
- SWING-FREE (SF) ARM,
- STANDARD TRACK,
- TRACK ROLLER,
- WOOD & MACHINE SCREW PACK,
unless options listed below are selected.

CLOSER OPTIONS

CYLINDER FUNCTION

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

ARM

- Double Egress (DE)

FINISHES

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

SCREW PACK

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

INSTALLATION ACCESSORIES

- Transformer, 4310ME-3210

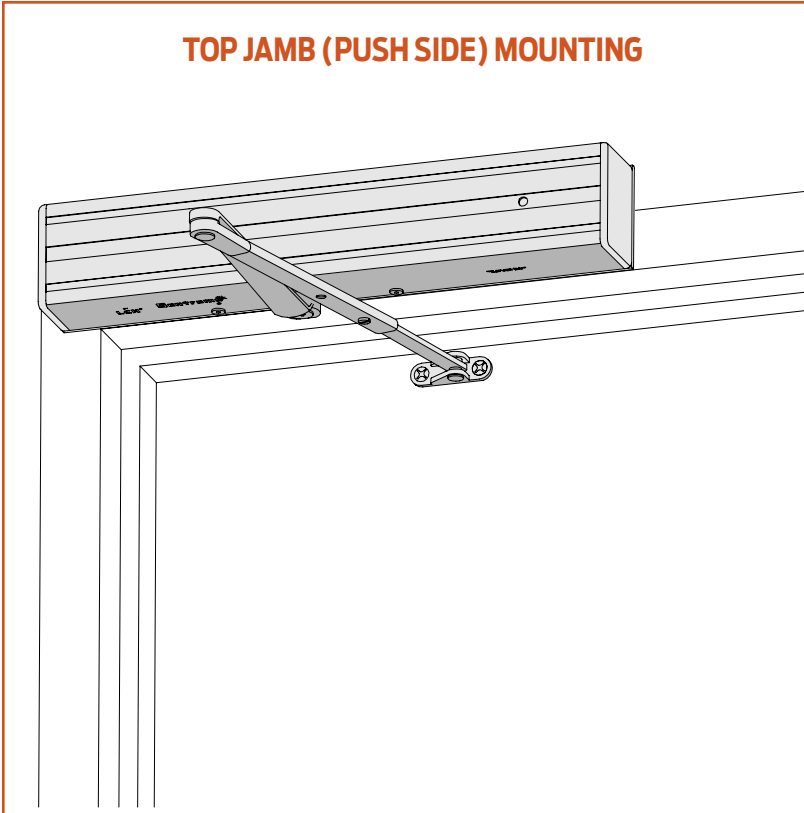
SPECIAL TEMPLATE

- ST-_____

ORDERING INFORMATION

4410ME SERIES

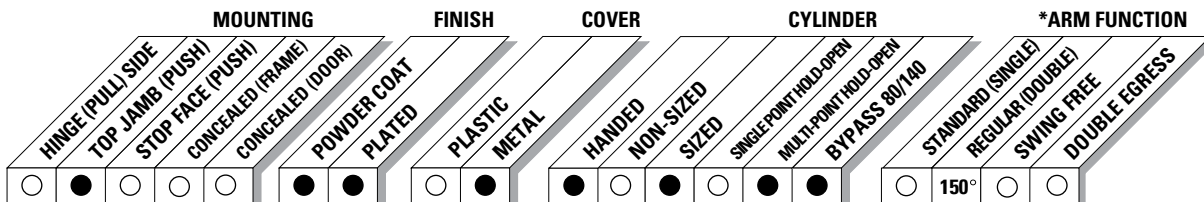
TOP JAMB (PUSH SIDE) MOUNTING



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.

The 4410ME Series is UL listed for smoke barrier or labeled fire doors. Tested and certified under ANSI Standard A156.15. Conforms to life safety code, NFPA 101. An ME provides only the closer/holder function.

- Standard 4410ME Series closer shipped with a 24V or 120V cylinder (please specify) on a mounting plate, metal cover, regular arm, and wood and machine screw pack. See 4410ME Series pages 35 & 36 for options.
- Sized cylinder for interior doors to 4' 0".
- Functions as full rack and pinion door closer when hold-open is not engaged or current is interrupted.
- Handed for right or left swinging door.
- Concealed or surface wiring.
- Built-in "On/Off" switch controls hold-open function.
- Interfaces with fire alarm systems.
- Standard or optional custom powder coat finish.
- Optional plated finish on cover, arm, and fasteners.



● AVAILABLE
○ NOT AVAILABLE

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

4410ME SERIES

TOP JAMB (PUSH SIDE) MOUNTING

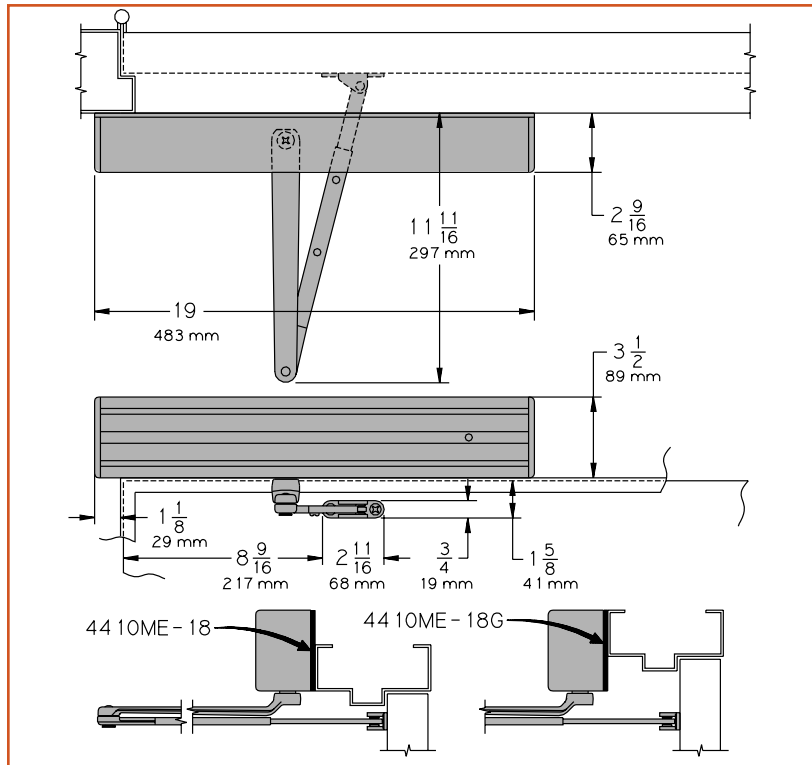
MAXIMUM OPENING

Templating allows 160°, with hold-open points up to 150°.

Optional long arm allows 180°, hold-open points up to 170°.

ME ELECTRICAL OPTIONS

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



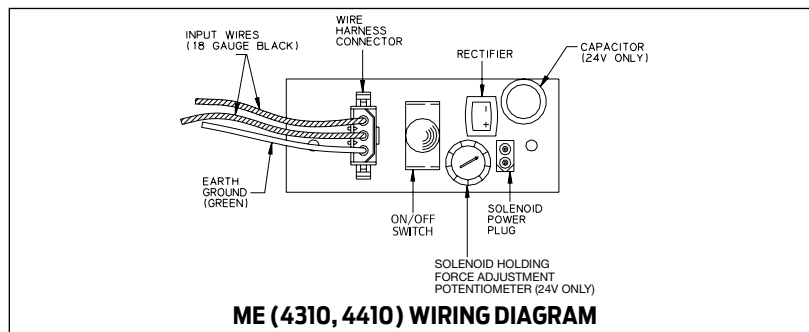
- **Butt Hinges** should not exceed 4-1/2" (114 mm) in width.
- **Top Rail** 1-3/4" (44 mm) minimum. 3-3/4" (95 mm) minimum with flush ceiling.
- **Reveal** 3-7/8" (98 mm) maximum regular or long arm. For reveals greater than 3-7/8" consult factory.
- **Head Frame** requires 1-1/2" (38 mm) minimum. 2" (51 mm) minimum with flush ceiling.
- **Flush Ceiling** requires PLATE, 4410ME-18G substituted for standard mounting plate.
- **Bypass** (suffix "B80" or "B140") eliminates hold-open function up to a specified point of door swing.
B80 cylinder from 0° to 80°.
B140 cylinder from 0° to 140°.
- **Wiring Diagram**

Options

- Hold-open bypass.
Optional long arm allows 180° with hold-open points up to 170°.
- Optional -18G plate accommodates flush ceiling conditions.
- 24V or 120V volt input, please specify.

Special Templates

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



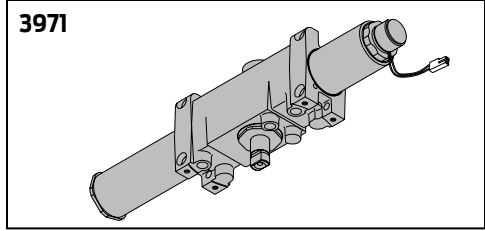
PHONE 877-671-7011
FAX 800-248-1460
www.allegion.com/us
2/14

4410ME SERIES

CYLINDER

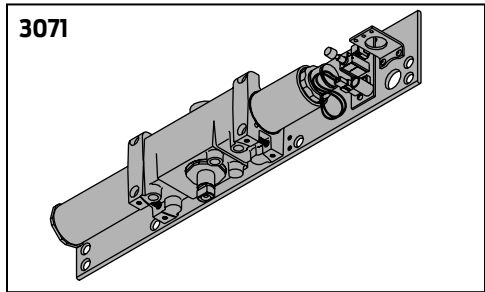
ME CYLINDER, 4414ME-3971

Standard, handed cast iron cylinder assembly.
Please specify 24V or 120V.



ME CYLINDER, 4414ME-3071

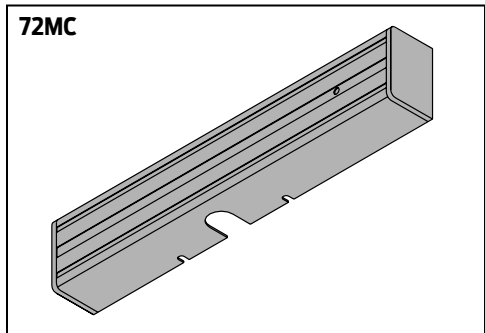
Standard, handed cylinder and mounting plate assembly.
"On/Off" switch assembly controls hold-open function.
Circuitry accepts either AC or DC input.
Please specify 24V or 120V.



COVERS

COVER, 4410ME-72MC

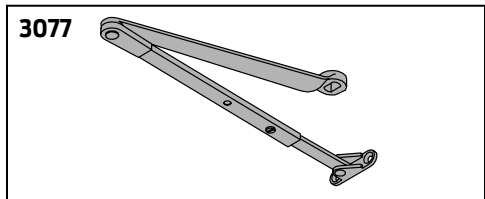
Handed, metal cover.



ARMS

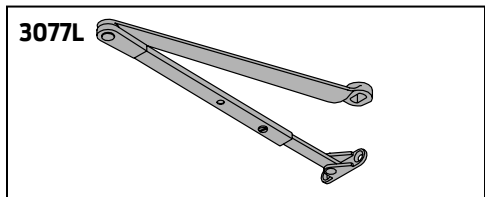
REGULAR ARM, 4410ME-3077

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



LONG ARM, 4410ME-3077L

Optional long ARM for increasing opening to 180°.
3-7/8" (98 mm) maximum reveal.

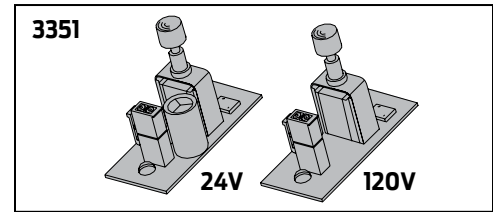


4410ME SERIES

SWITCH

SWITCH, 4410ME-3351

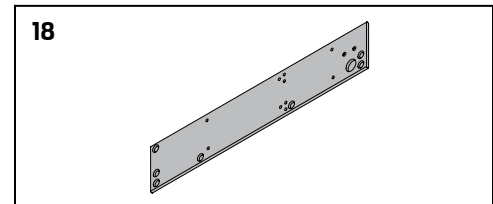
“On/Off” switch assembly provides continuous hold-open function. Available as 24V or 120V, please specify.



INSTALLATION ACCESSORIES

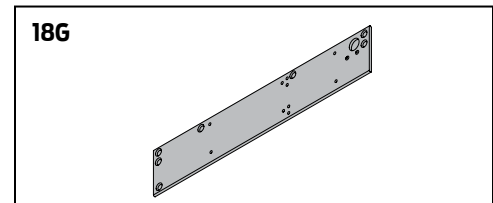
MOUNTING PLATE, 4410ME-18

Standard mounting plate.



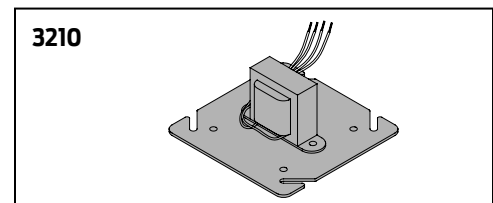
MOUNTING PLATE, 4410ME-18G

Optional mounting plate substituted for standard plate on flush ceiling installations.



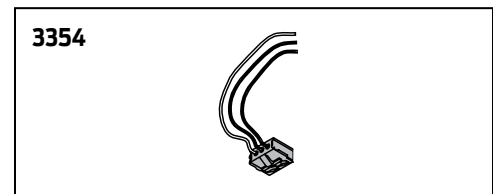
TRANSFORMER, 4410ME - 3210

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).



ME WIRING HARNESS, 4410ME-3354

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

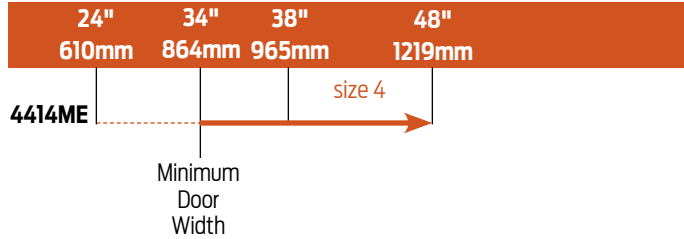


4410ME SERIES

TABLE OF SIZES

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

INTERIOR DOOR WIDTH



→ Indicates recommended range of door width for closer size.

HOW-TO-ORDER 4410ME SERIES CLOSERS

1. SPECIFY HAND

- RH
- LH

2. VOLTAGE

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

3. 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

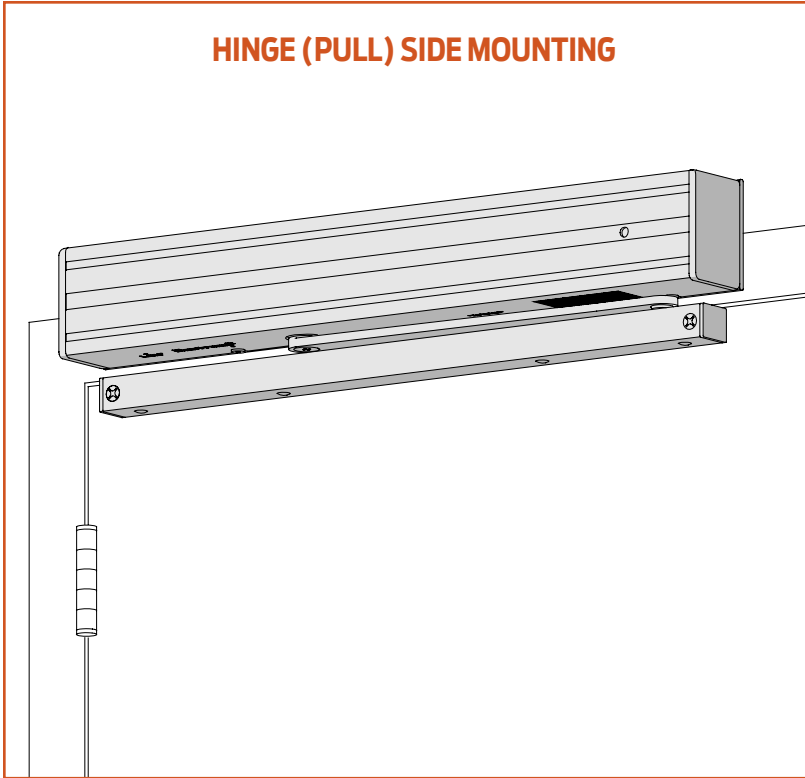
- Plate, 4410ME-18G
(substituted for standard mounting plate).
- Transformer, 4410ME-3210

SPECIAL TEMPLATE

- ST-_____

4310 HSA SERIES

FEATURES



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.

Tested and certified under ANSI Standard A156.4 and A156.15. Conforms to life safety code, NFPA 101.

- Standard 4310HSA series closer shipped with a 24V cylinder, standard cover, standard arm, non-handed track and wood & machine screw pack. See 4310HSA Series page 41 for options.
- HSA features a scanner activated hold-open function.
- Hold-open period is adjustable up to 30 seconds.
- Sized cylinders for interior doors to 4' 0".
- Functions as full rack and pinion door closer when current is interrupted or continuous hold-open is not engaged.
- Handed for right or left swinging door.
- Concealed or surface wiring. 24V AC/DC input only. 120V AC input requires 4310HSA-3210 transformer.
- Built-in "On/Off" switch provides continuous hold-open function.
- Standard or optional custom powder coated finish.
- Optional plated finish on cover, arm and fasteners. (Available with powder coat finishes only).

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	160Y	STANDARD (SINGLE)	REGULAR (DOUBLE)	SWING FREE	DOUBLE EGRESS	95Y
●	○	○	○	○	●	●	○	●	●	○	○	●	○		○	○	○	○	○	○

● AVAILABLE
○ NOT AVAILABLE

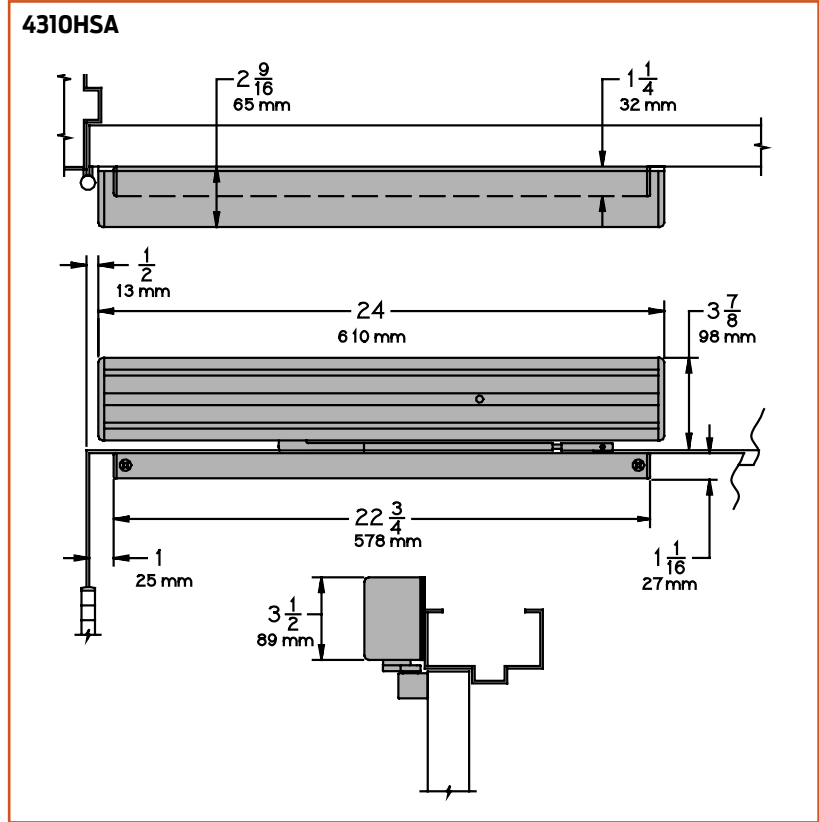
* Maximum hold-open point with standard template. See individual closer series for degrees of opening and hold-open per installation.

4310 HSA SERIES

HINGE (PULL) SIDE MOUNTING

MAXIMUM OPENING

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



- **Butt Hinges** should not exceed 4-1/2" (114 mm) in width.
- **Top Rail** 1-1/16" (27 mm) minimum.
- **Reveal** should not exceed 1/8" (3 mm) for standard arm. Should not exceed 2-11/16" (68 mm) for double egress arm.
- **Head Frame** requires 2" (51 mm) minimum.
- **Clearance** 1-1/4" (32 mm) minimum.
- **Wiring Diagram**

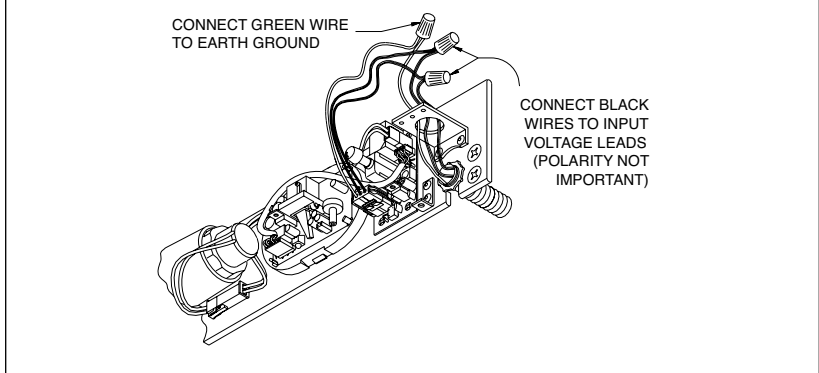
Options

- Double egress arm.
- 120 volt input requires 4310HSA-3210 transformer to change 120V AC to 24V AC.

Special Templates

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

HSA WIRING DIAGRAM



4310 HSA SERIES

CYLINDER

HSA CYLINDER, 4311HSA-3971

Standard, handed cast iron cylinder assembly. 24V AC/DC input only for holding solenoid.

HSA CYLINDER, 4311HSA-3071

Standard, handed cylinder and mounting plate assembly. 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.

COVERS

METAL COVER, 4310HSA-72MC

Handed, metal cover.

ARM

STANDARD ARM, 4310HSA--3077T

Handed arm.

DOUBLE EGRESS ARM, 4310HSA--3077DE

Optional, handed arm for double egress doors and frames. 2 11/16" (67 mm) maximum reveal.

TRACK

TRACK, 4310HSA-3038

Standard, non-handed track.

SWITCH

SWITCH, 4310HSA-3448

"On/Off" switch assembly provides continuous hold-open function.

SCANNER

SCANNER MODULE, 4310HSA-3428

INSTALLATION ACCESSORIES

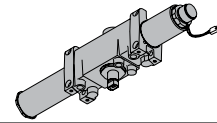
TRACK ROLLER, 4310HSA-3034

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

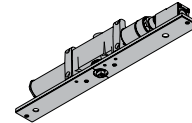
TRANSFORMER, 4310HSA-3210

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).

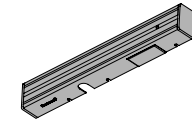
3971



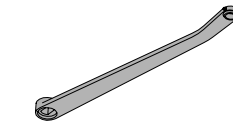
3071



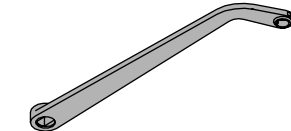
72MC



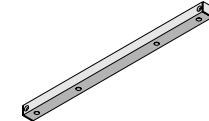
3077T



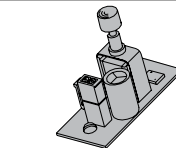
3077DE



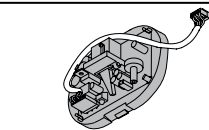
3038



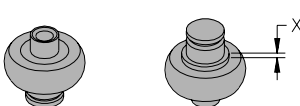
3448



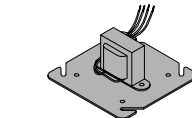
3428



3034



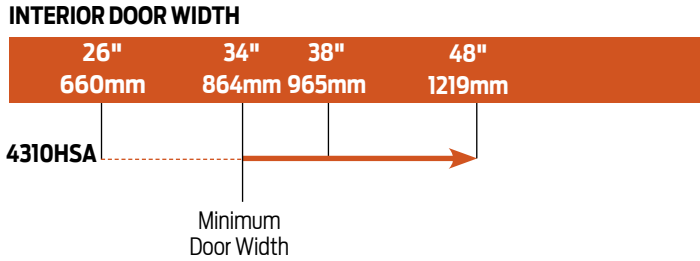
3210



4310 HSA SERIES

TABLE OF SIZES

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



→ Indicates recommended range of door width for closer size.

HOW-TO-ORDER 4310 HSA SERIES CLOSERS

1. SPECIFY HAND

- RH
- LH

2. VOLTAGE

- 24V AC/DC

3. SPECIFY FINISH

- Standard Powder Coat _____
Aluminum, Dark Bronze, Tan, 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)

FINISH

- 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

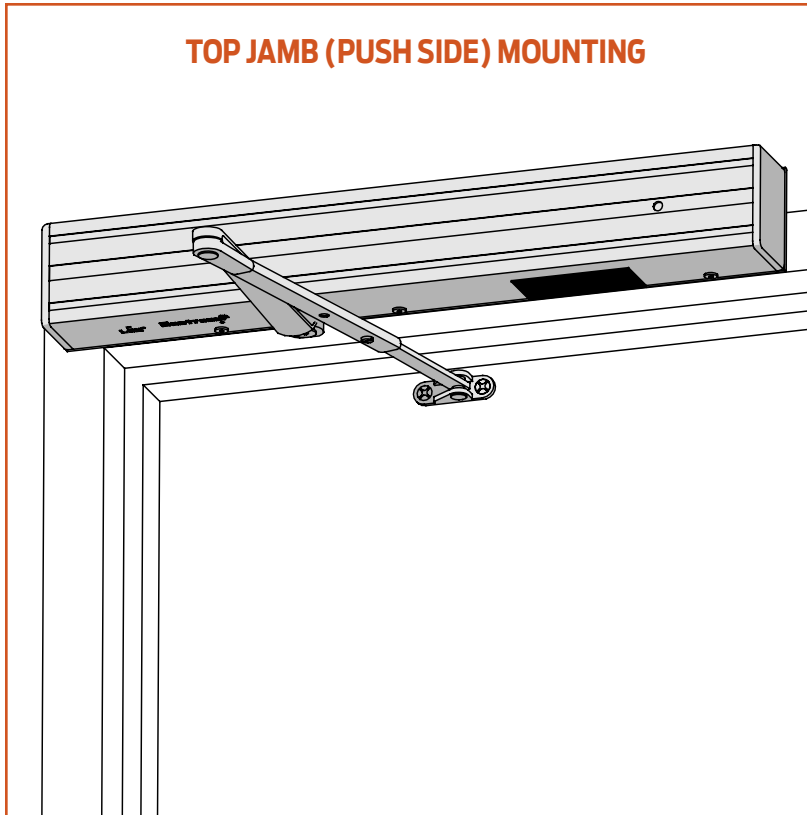
- Transformer, 4310HSA-3210

SPECIAL TEMPLATE

- ST-_____ (if required)

4410 HSA SERIES

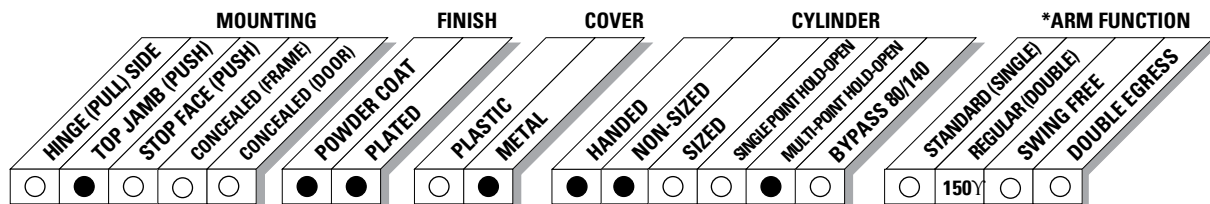
FEATURES



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.

- Standard 4410HSA Series closer shipped with a 24V cylinder, standard cover, regular arm and wood & machine screw pack. See 4410HSA Series page 45 for options.
- HSA features a scanner activated hold-open function.
- Hold-open period is adjustable up to 30 seconds.
- Sized cylinders for interior doors to 4'6".
- Functions as full rack and pinion door closer when current is interrupted or continuous hold-open is not engaged.
- Handed for right or left swinging door.
- Concealed or surface wiring. 24V AC/DC input only. 120V AC input requires 4410HSA-3210 transformer.
- Built-in "On/Off" switch provides continuous hold-open function.
- Standard or optional custom powder coated finish.
- Optional plated finish on cover, arm and fasteners.

Tested and certified under ANSI Standard A156.4 and A156.15. Conforms to life safety code, NFPA 101.



● AVAILABLE
○ NOT AVAILABLE

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

4410 HSA SERIES

TOP JAMB (PUSH) SIDE MOUNTING

MAXIMUM OPENING

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

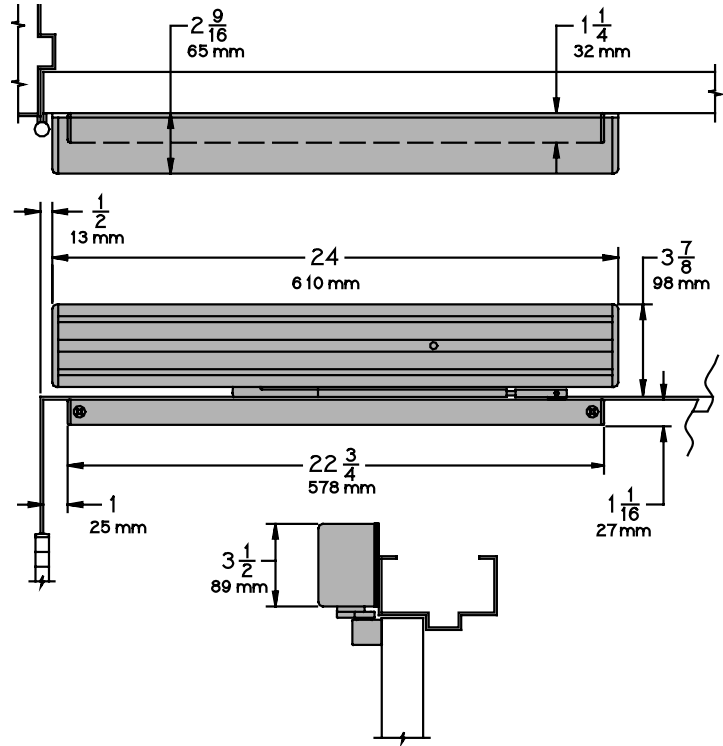
Options

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

Special Templates

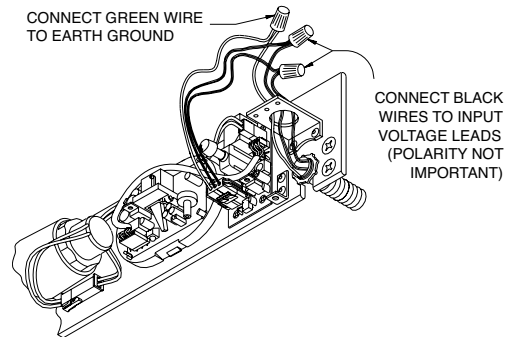
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.

4310HSA



- **Butt Hinges** should not exceed 4-1/2" (114 mm) in width.
- **Top Rail** 1-3/4" (44 mm) minimum.
3-3/4" (95 mm) minimum with flush ceiling.
- **Head Frame** requires 1-1/2" (38mm) minimum.
2" (51 mm) minimum with flush ceiling.
- **Reveal** 3-7/8" (98 mm) maximum for regular or long arm. For reveals greater than 3-7/8" consult factory.
- **Wiring Diagram**

HSA WIRING DIAGRAM



4410 HSA SERIES

CYLINDER

HSA CYLINDER, 4312HSA-3971

Standard, handed cast iron cylinder assembly. 24V AC/DC input only for holding solenoid.

HSA CYLINDER, 4312HSA-3071

Standard, handed cylinder and mounting plate assembly. 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.

COVERS

METAL COVER, 4410HSA-72MC

Handed, metal cover.

ARM

REGULAR ARM, 4410HSA-3077

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

LONG ARM, 4410HSA-3077L

Optional arm for increased opening.
3-7/8" (98 mm) maximum reveal.

SWITCH

SWITCH, 4410HSA-3448

"On/Off" switch assembly provides continuous hold-open function.

SCANNER

SCANNER MODULE, 4410HSA-3428

INSTALLATION ACCESSORIES

MOUNTING PLATE, 4410HSA-18

Standard mounting plate.

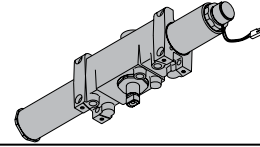
MOUNTING PLATE, 4410HSA-18G

Optional mounting plate substituted on flush ceiling installations.

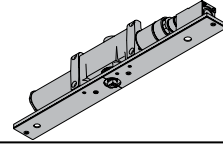
TRANSFORMER, 4410HSA-3210

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).

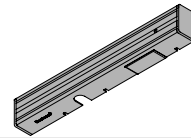
3971



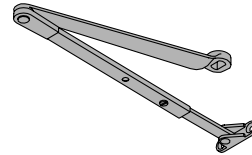
3071



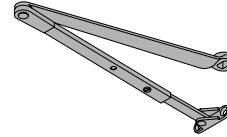
72MC



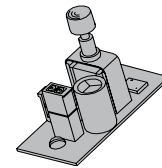
3077



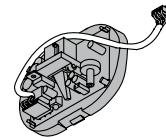
3077L



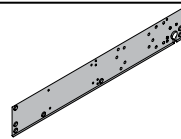
3448



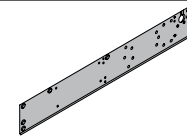
3428



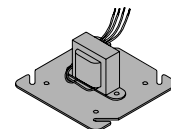
18



18G



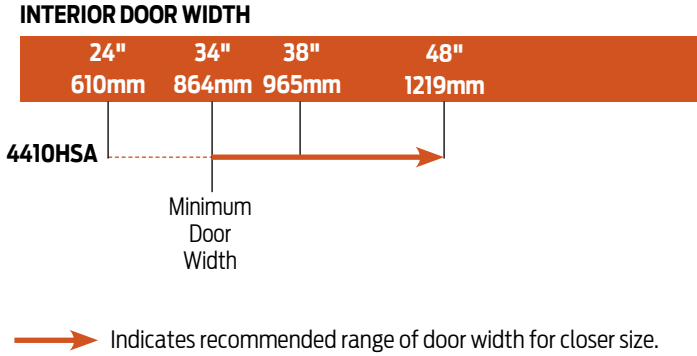
3210



4410 HSA SERIES

TABLE OF SIZES

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



HOW-TO-ORDER 4410 HSA SERIES CLOSERS

1. SPECIFY HAND

- RH
- LH

2. VOLTAGE

- 24V AC/DC

3. SPECIFY FINISH

- Standard Powder Coat _____
Aluminum, Dark Bronze, Tan, 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)

FINISH

- 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

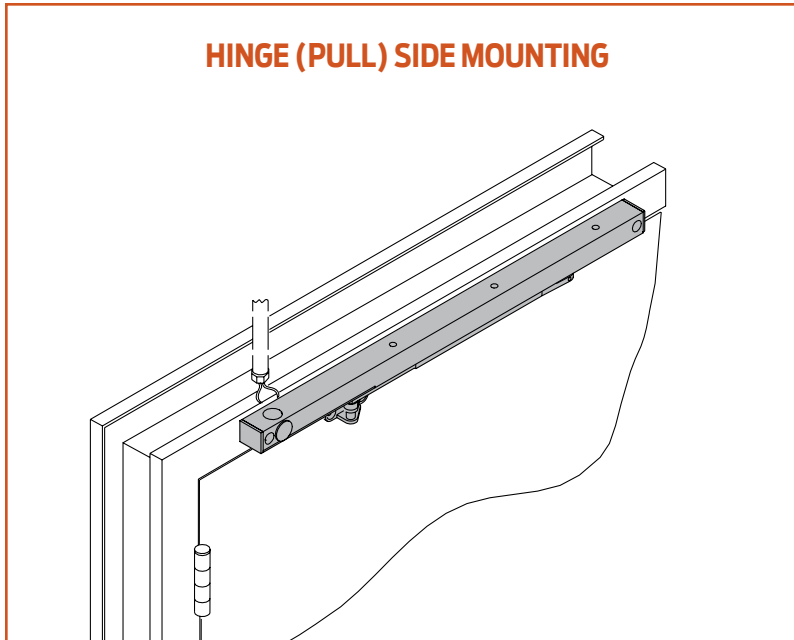
- Plate, 4410HSA-18
- Plate, 4410HSA-18G
(substituted for standard mounting plate)
- Transformer, 4410HSA-3210

SPECIAL TEMPLATE

- ST- _____ (if required)

SEH SERIES

FEATURES



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.

- Standard SEH Series is a door holder that must be installed in conjunction with an opposite side mounted, UL listed door closer.
- Standard SEH series holder shipped with a standard arm, 24V or 120V (please specify) SEH track and wood and machine screw pack.
- Hold-open force is adjustable.
- Momentary on/off switch board assembly for testing door release also provides over-voltage protection. Field replaceable.
- Non-handed for mounting on either right or left hand door.
- Concealed or surface wiring.
- Interfaces with alarm systems. Consult factory for full details.
- Standard or optional custom powder coated finishes on track and arm.

The SEH Series is UL listed for smoke barrier or labeled fire doors.

cUL listed for self-closing doors

without hold-open. Tested and certified under ANSI Standard A156.15. Conforms to life safety code, NFPA 101.

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°	100°	STANDARD (SINGLE)	REGULAR (DOUBLE)	SWING FREE	DOUBLE EGRESS
●	○	●	○	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● AVAILABLE
○ NOT AVAILABLE

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

SEH SERIES

HINGE (PULL) SIDE & STOP FACE (PUSH SIDE) MOUNTINGS

Information applies to SEH unless otherwise specified.

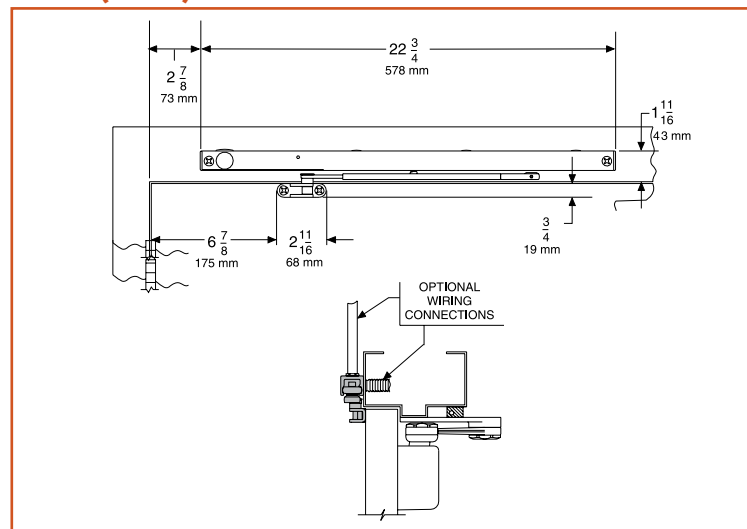
MAXIMUM OPENING

Templating allows 100°.
Hold-open points between 80° and 100° in approximately 3° increments.

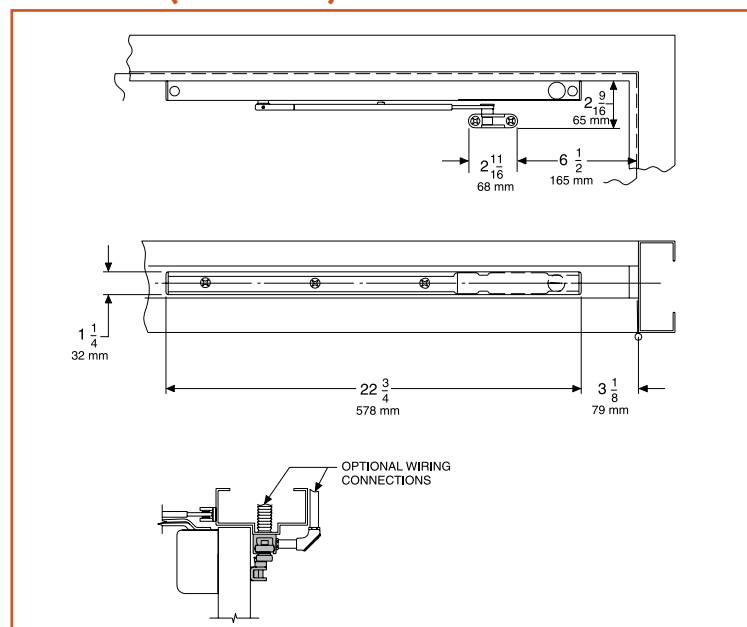
SEH ELECTRICAL OPTIONS

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

HINGE (PULL) SIDE MOUNT



STOP FACE (PUSH SIDE) MOUNT



Options

- 24V or 120V volt input for SEH, please specify.

Special Templates

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

- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Swing Clear Hinges** consult factory.
- **Auxiliary Stop** is recommended at hold-open point.
- **Reveal** should not exceed 1/8" (3 mm) for standard arm.
- **Head Frame** requires 2" (51 mm) minimum.
- **Stop Width** 1-1/4" (32 mm) minimum.
- **Flush Ceiling** with 2" (51 mm) head frame does not require special templating.
- **Door Width** 2' 4" (711 mm) minimum for single door with SEH. 4' 8" (1422 mm) minimum for paired doors with SEH.
- **Wiring Diagram** See "FIRE/LIFE SAFETY" section page 19 for typical wiring and electrical diagram.

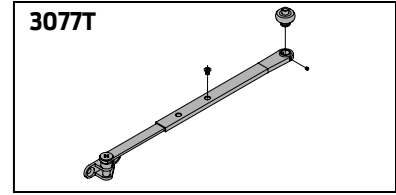
SEH SERIES

ACCESSORIES

ARMS

HOLDER ARM, SEH-3077T

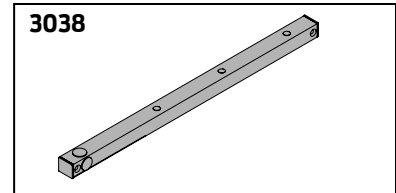
Non-handed arm can be combined with any 4040SE Series track to provide an electrically controlled hold-open function on either side of the door. All SEH type holders require a separate closer for fire or smoke barrier door applications.



TRACKS

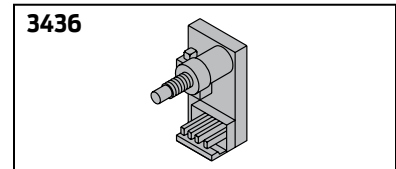
SE TRACK, SEH-3038

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



SWITCH

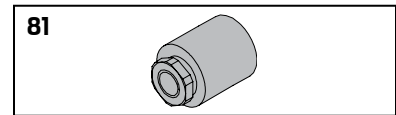
TEST SWITCH, SEH-3436



INSTALLATION ACCESSORIES

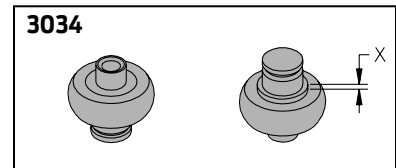
CONDUIT QUICK-CONNECTOR, SEH-81

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



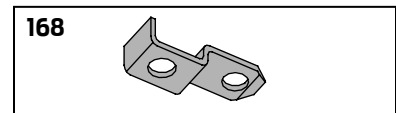
TRACK ROLLER, SEH-3034

Quiet, low friction roller assembly.
Shoulder dimension "X" = 1/4" (6 mm).



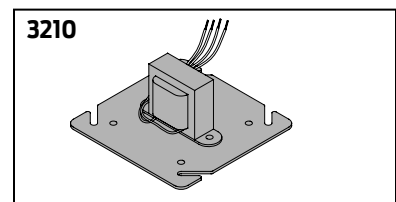
TRACK SLIDER, SEH-168

Alloy metal slider for use in SE series tracks only.



TRANSFORMER, 4040SE-3210

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).



SEH SERIES

HOW-TO-ORDER SEH SERIES

1. VOLTAGE

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

2. 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.*

CLOSER OPTIONS

FINISHES

- Custom Powder Coat (RAL)
(handed metal cover required)

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

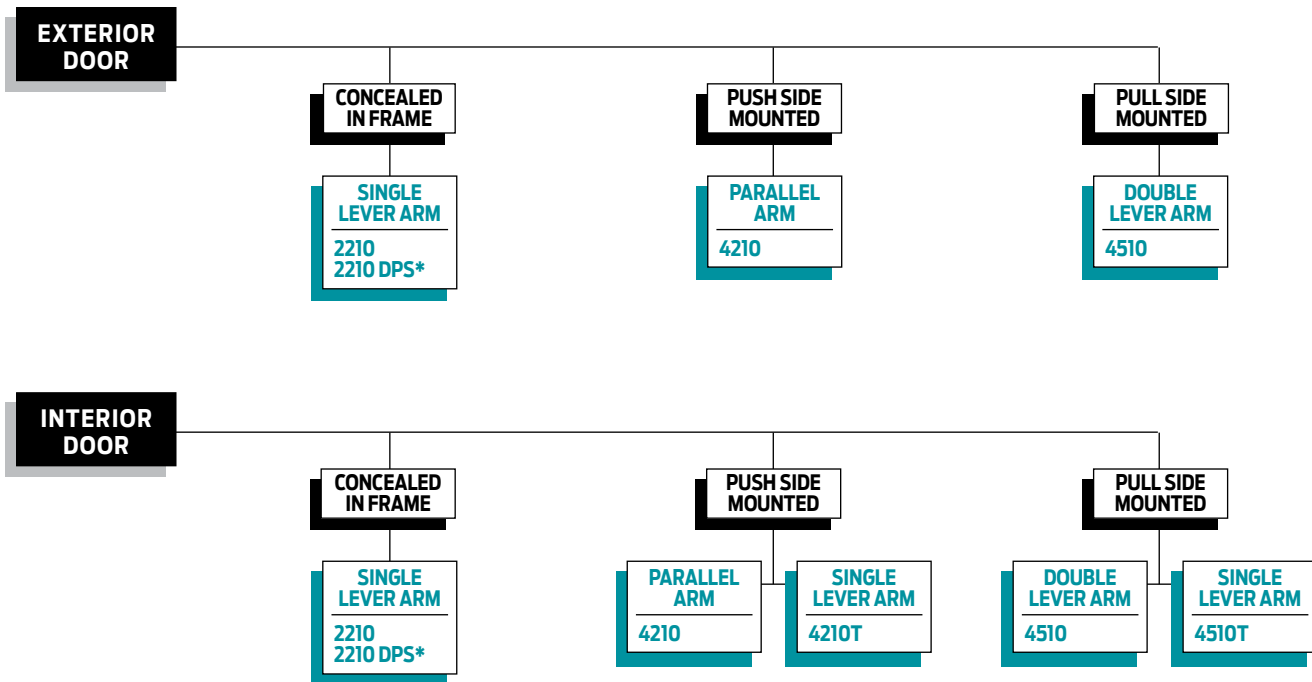
SPECIAL TEMPLATE

- ST- _____ (if required)

HIGH SECURITY CLOSERS SERIES

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.




* Door position switch.

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 for over 85 years. 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 10 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.
- **All weather fluid** eliminates seasonal adjustments.
- **High efficiency, full compliment**, 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.

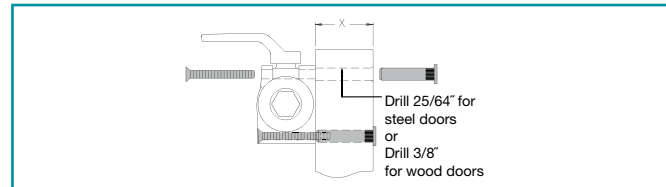
Consult factory for other listings such as; ULC, California State Fire Marshal, Bureau of Standards and Appeals.

POSITIVE PRESSURE

LCN closers have been certified for three hours by UL to be in compliance with UBC 7.2 (1997) and UL 10 C. Contact LCN for specific details on door closer fire ratings.

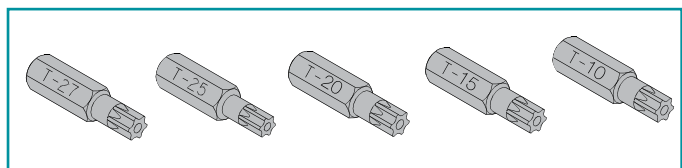
FASTENERS

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.



MAINTENANCE

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

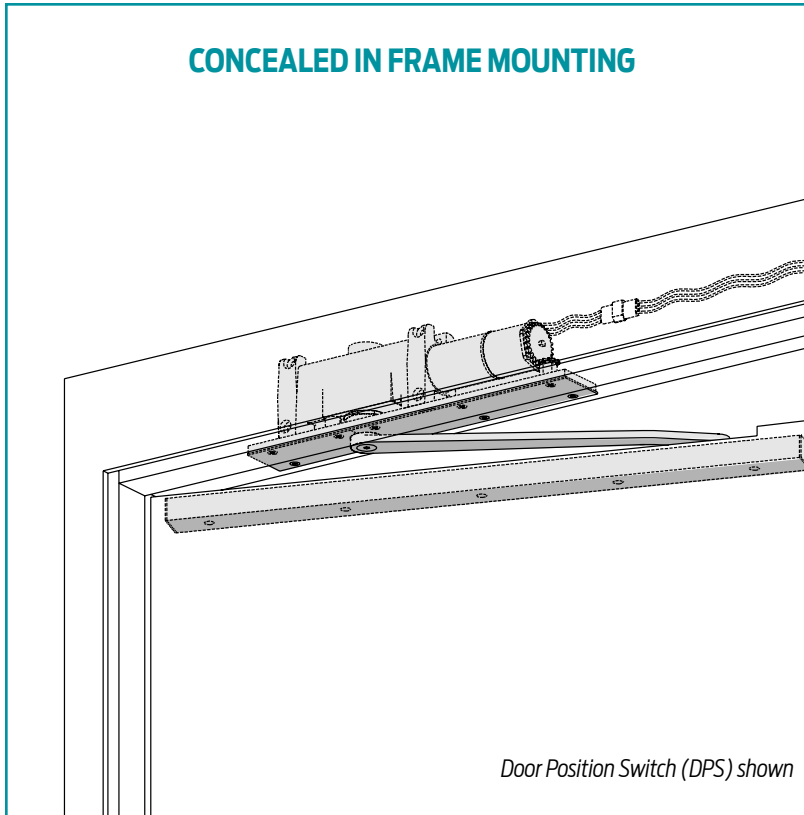
SPECIFICATIONS

Refer to "SPECIFICATIONS" section for suggested architectural specifications.

PHONE 877-671-7011
FAX 800-248-1460
www.allegion.com/us
2/14

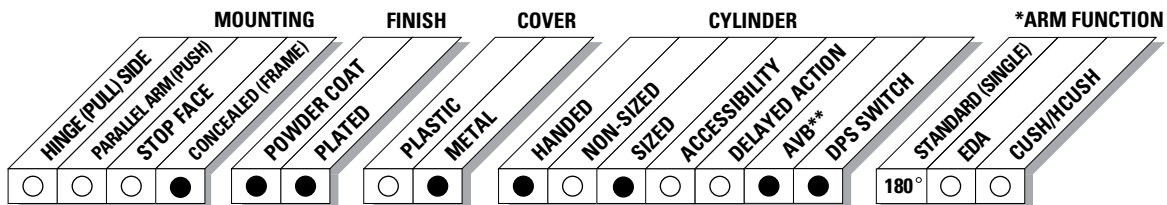
2210 SERIES

FEATURES



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.

- Standard 2210 Series closer shipped with standard arm, security track (non hold-open), two piece metal cover plate, and TORX machine screw pack. For options see 2210 Series page 5.
- Sized cylinders for interior doors to 4'6" and exterior doors to 3'6".
- Concealed cylinder mounts in head frame, specify right or left swinging door.
- Optional Door Position Switch (DPS). Limited two year warranty.
- Standard or optional custom powder coat finish.
- Optional SRI primer for installations in corrosive conditions (excludes DPS option). (Available with powder coat finishes only).
- The 2210 Series is UL and cUL listed for self-closing doors, grade one.
- Tested and certified under ANSI A156.4.



● AVAILABLE
○ NOT AVAILABLE

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

2210 SERIES

CONCEALED MOUNTING

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

MAXIMUM OPENING

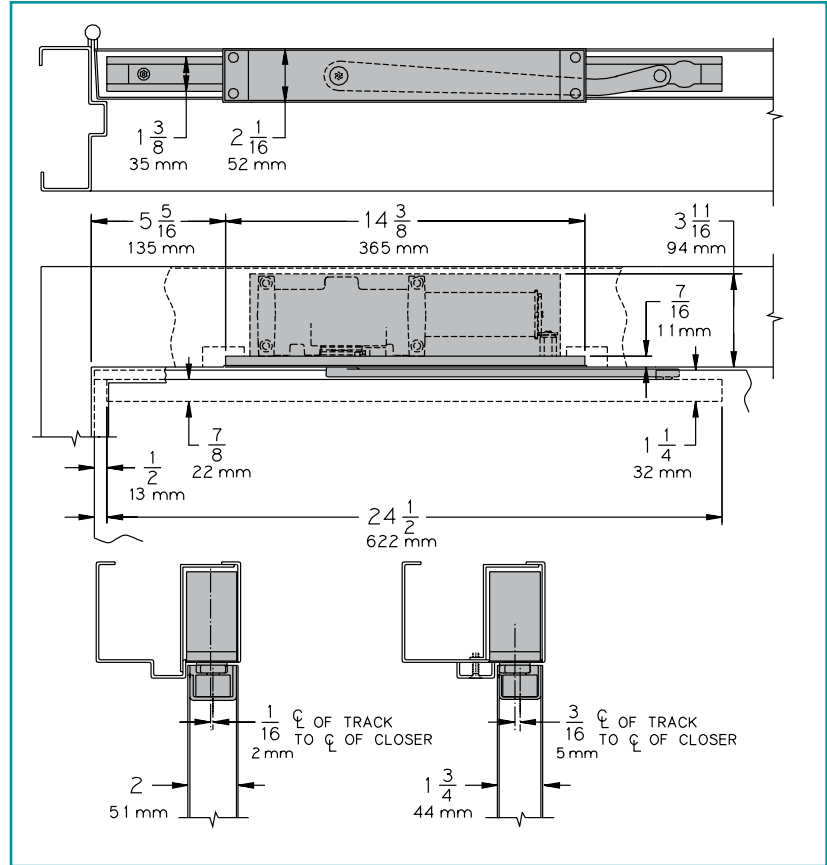
Templating allows 180°.

Consult factory if door will be held open at 180°.

Pivot mounting door limits opening to 110° and increases minimum door width to 32" (813 mm). Consult factory.

Please note that many track style door closers are capable of allowing 180° of door swing.

Note: Track style closers are at their weakest closing force at 180°. Consult factory for applications where exterior or large/heavy door must swing 180°.



- ▶ **Butt Hinges** should not exceed 4-1/2" (114 mm) in width.
- ▶ **Auxiliary Stop** is recommended where a door cannot swing 180°.
- ▶ **Top Rail** 1-1/4" (32 mm) mortise required. 3/8" (10 mm) cutout required at top of door, stop face only.
- ▶ **Door Thickness** 1-3/4" (44 mm) minimum.
- ▶ **Door Width** 28" (711 mm) minimum.
- ▶ **Head Frame** 5-3/4" (146 mm) wide and 4" (102 mm) high with 2-3/16" (56 mm) rabbet required. Consult factory if any dimension is less.
- ▶ **Steel Mounting Plate** thickness 3/8" (10 mm).
- ▶ **Door Position Switch** Optional, newly redesigned, field adjustable switch can interface with security and monitoring systems. Add suffix "DPS" to selected cylinder. Finish plates must be removed for access to adjustments. Provides normally open (N.O.) and normally closed (N.C.) circuit. A three wire connector harness with 84" (2134 mm), 16 AWG leads is furnished to simplify connection to field wiring. Single pole double throw (SPDT) contacts rated at 125/250 VAC at 10.1 amps maximum resistive load are standard.
- ▶ **Advanced Variable Backcheck** cylinder starts backcheck at approximately 45° instead of the normal 75°. Add suffix "AVB" to selected cylinder (eg. 2213 DPS AVB).

Options

- Advanced Variable Backcheck Cylinder.
- Door Position Switch.
- Test kit.

Special Templates

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

2210 SERIES

CYLINDERS

CYLINDER, 2210-3071

Standard, handed cast iron cylinder assembly.
For various applications see "Table of Sizes" on 2210 Series page 6.

ARM

STANDARD SECURITY ARM, 2210-3077T

Handed arm features 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.
Roller is included with arm when 2210-3077T ordered separately.

TRACK

SECURITY TRACK, 2210-3038

Non-handed, high security track.
Hold-open function not available.
Designed to eject foreign objects placed in track during either opening or closing motion.
Requires track roller, 2210-3034.

SECURITY TRACK ROLLER, 2210-3034

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

FINISH PLATES

LONG PLATE, 2210-11

Heavy gauge metal finish plate.
Plate 2210-12 also required for complete enclosure.
Six point TORX® mounting screws for extra security.
Closer adjustments not accessible with finish plates installed.

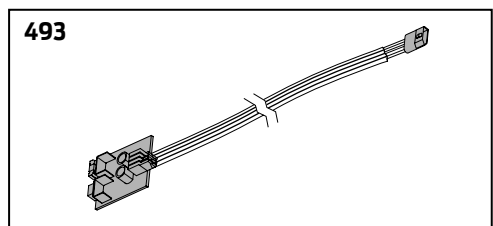
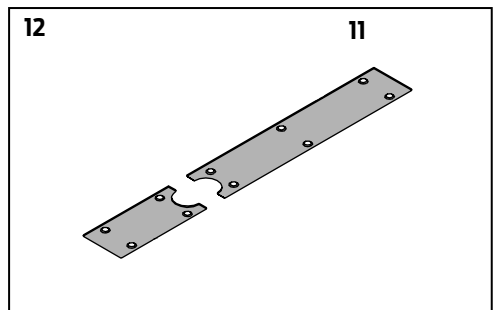
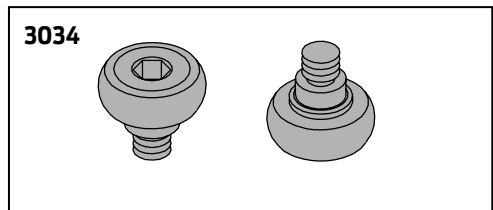
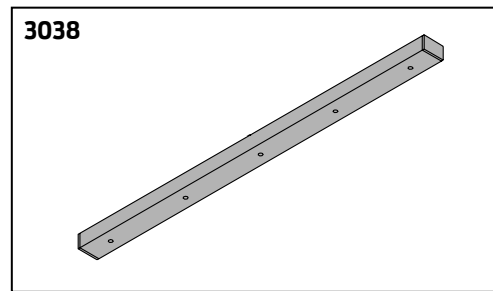
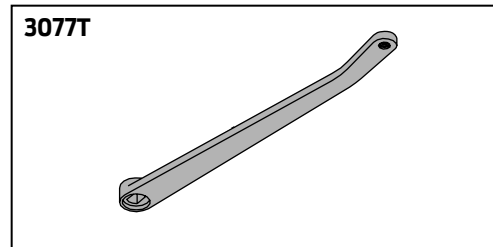
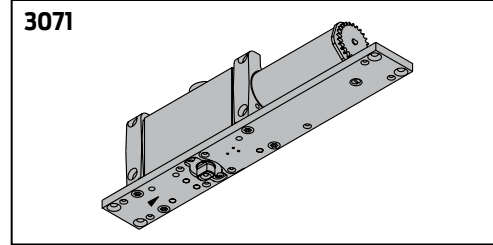
SHORT PLATE, 2210-12

Heavy gauge metal finish plate.
Plate 2210-11 also required for complete enclosure.
Four point TORX® mounting screws for extra security.
Closer adjustments not accessible with finish plates installed.

INSTALLATION ACCESSORIES

TEST KIT, 2210-493

Battery operated test kit designed to verify switch signal response point. Test kit can be used directly at door location.
(used for 2210 DPS only)

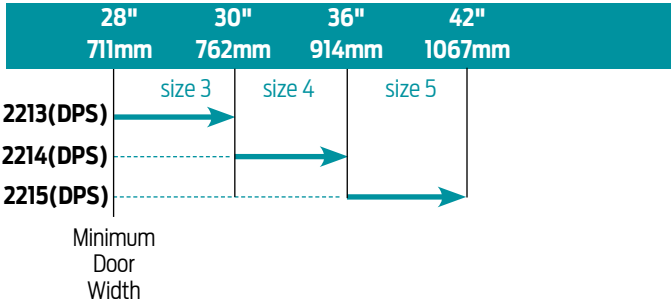


2210 SERIES

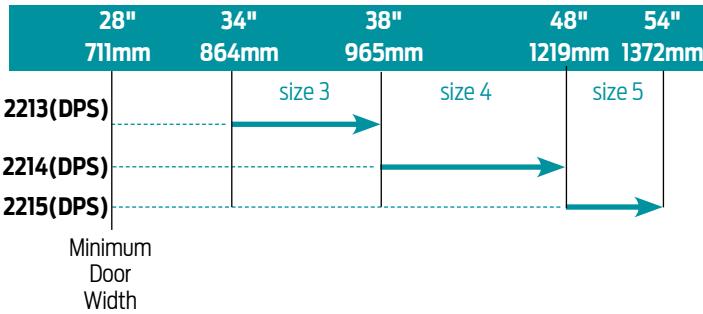
TABLE OF SIZES

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. Closing power of all 2210 Series closers may be increased 50%.

EXTERIOR (and VESTIBULE) DOOR



INTERIOR DOOR WIDTH



→ Indicates recommended range of door width for closer size.

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

HOW-TO-ORDER 2210 SERIES CLOSERS

1. SELECT CYLINDER SIZE

- 2213 2213 DPS
- 2214 2214 DPS
- 2215 2215 DPS

2. SPECIFY HAND

- RH
- LH

3. SPECIFY FINISH

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

Closer will be shipped with:

- TWO PIECE 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)

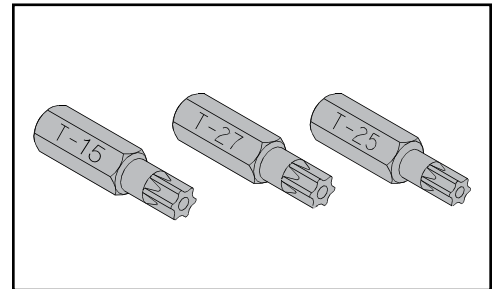
FINISH

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

SPECIAL TEMPLATE

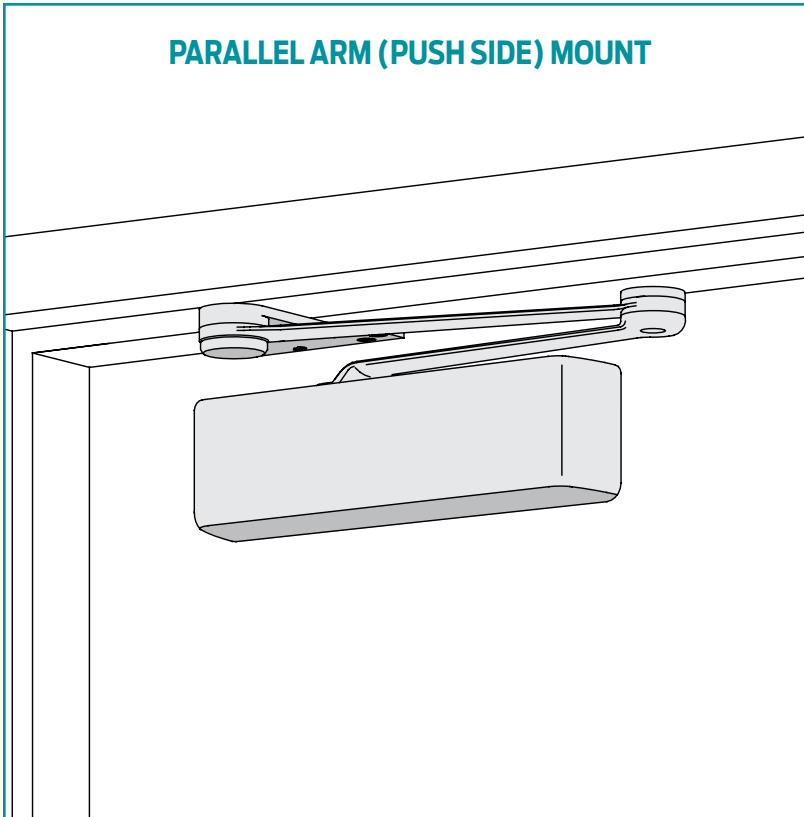
- ST- _____

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.



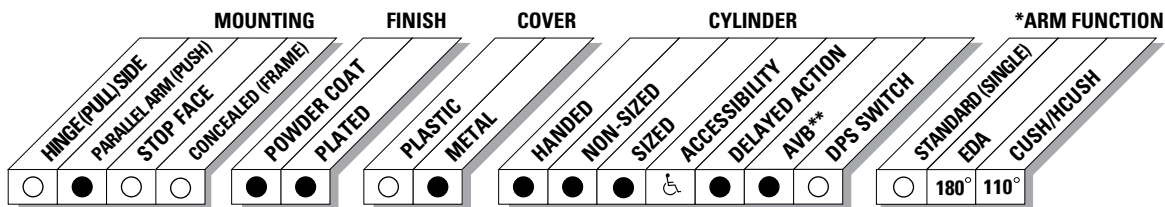
4210 SERIES

FEATURES



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.

- Standard 4210 series closer shipped with EXTRA DUTY arm (non hold-open), metal security cover, and TORX Machine Screw pack. For options, see 4210 Series page 9.
- Sized cylinders for interior doors to 5'0" and exterior doors to 4'0".
- Non-sized cylinder adjustable for interior doors to 4'6" and exterior doors to 3'6".
- Closer mounts parallel arm, specify right or left swinging door.
- 4211 cylinder meets ADA requirements. See 4210 Series page 10.
- Standard or optional custom powder coat finish.
- Optional SRI primer for installations in corrosive conditions. (Available with powder coat finishes only).
- The 4210 Series is UL listed with EDA or CUSH arms for self-closing doors.
- Tested and certified under ANSI Standard A156.4, grade one.



● 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

PARALLEL ARM (PUSH SIDE) MOUNTING

MAXIMUM OPENING

EDA arm can be templated for 100°

Ⓐ = 5-15/16" (151 mm)

Ⓑ = 7-1/4" (184 mm)

140°

Ⓐ = 4-7/16" (113 mm)

Ⓑ = 5-3/4" (146 mm)

or 180°

Ⓐ = 2-15/16" (75 mm)

Ⓑ = 4-1/4" (108 mm)

CUSH arm can be templated for maximum opening at

85°

Ⓐ = 8-5/16" (211 mm)

Ⓑ = 9-5/8" (244 mm)

90°

Ⓐ = 7-11/16" (195 mm)

Ⓑ = 9" (229 mm)

100°

Ⓐ = 6-7/16" (164 mm)

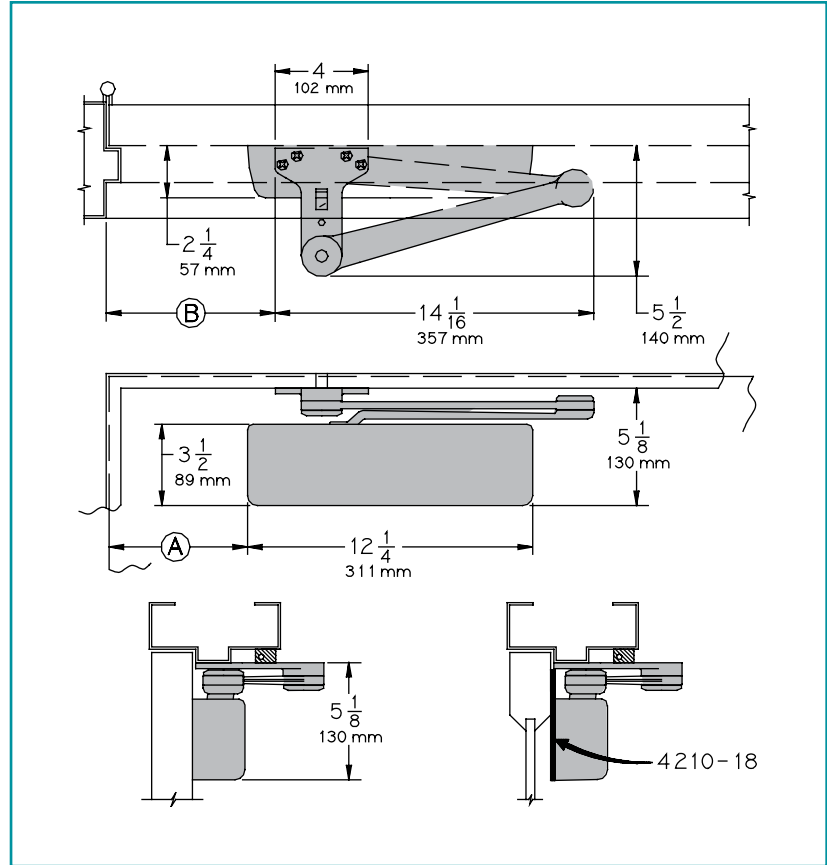
Ⓑ = 7-3/4" (197 mm)

or 110°

Ⓐ = 5-9/16" (141 mm)

Ⓑ = 6-7/8" (175 mm)

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



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended where the door cannot swing 180° or where CUSH arms not used.
- **Clearance** for EDA or CUSH is 5-1/2" (140 mm) from push side of door.
- **Top Rail** less than 5-1/8" (130 mm) measured from stop, requires PLATE 4210-18. Plate requires 2" (51 mm) minimum top rail.
- **Stop Width** 2-3/4" (70 mm) recommended. Less than 1" (25mm), consult factory.
- **Delay Action** Add suffix "DEL" to selected cylinder (eg. 4211DEL). Not available with 4215 or 4216 cylinder. Delays closing from maximum opening to approximately 70°. Delays time adjustable up to approximately 1 minute.
- **Advanced Variable Backcheck** cylinder starts backcheck at approximately 45° instead of the normal 75°. Add suffix "AVB" to selected cylinder (eg. 4211 AVB).

Options

- Sized or non-sized cylinder.
- Delayed Action or Advanced Variable Backcheck cylinder.
- CUSH or H-CUSH arm.

Special Templates

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

4210 SERIES

CYLINDERS

CYLINDER, 4210-3071

Standard, handed cast iron cylinder assembly.
For various applications see "Table of Sizes" on 4210 Series page 10.

COVER

SECURITY COVER, 4210-72MC

Standard, handed heavy gauge metal security cover.
Four point mounting for extra security.
Closer adjustments not accessible with cover installed.

ARMS

EXTRA DUTY ARM, 4210-3077EDA

Non-handed parallel arm features solid forged steel main arm and forearm for potentially abusive installations.
Double slab arm/pinion attachment for maximum strength.

CUSH-N-STOP® (CUSH) ARM, 4210-3077CNS

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.

HCUSH ARM, 4210-3049CNS

Non-handed arm provides hold-open function with templated stop/hold-open points.
Handle controls hold-open function.
HCUSH arm not available with 4216 cylinder.
Double slab arm/pinion attachment for maximum strength.

INSTALLATION ACCESSORIES

PLATE, 4210-18, 4210-18CUSH

Required for push side mount where top rail is less than 5-1/8" (130 mm), measured from the stop.
Plate requires 2" (51 mm) minimum top rail measured from the stop. Plate also used with Cush arm installations.

CUSH SHOE SUPPORT, 4210-30

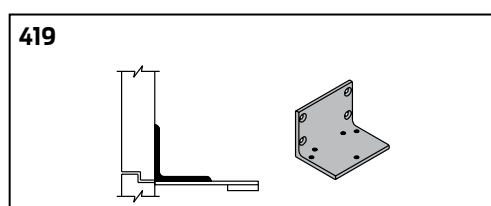
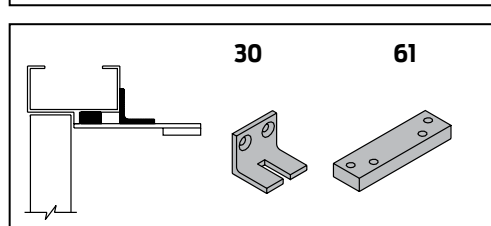
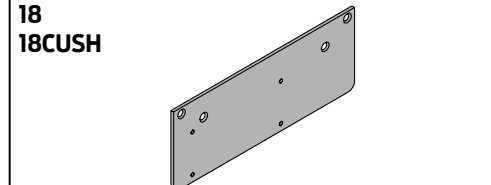
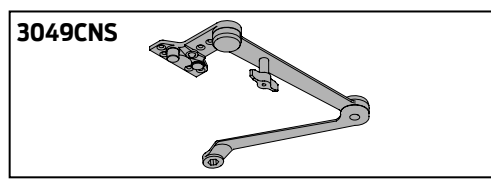
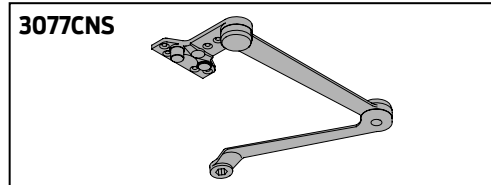
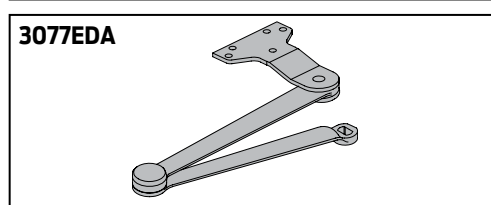
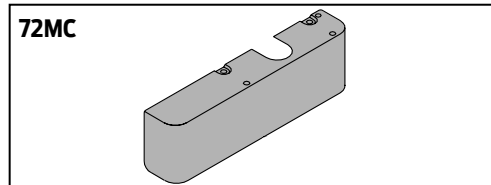
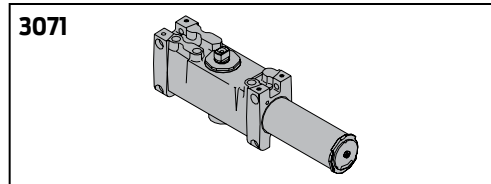
Provide anchorage for fifth screw used with CUSH arms where reveal is less than 3-1/16" (78mm).

BLADE STOP SPACER, 4210-61

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

PA FLUSH PANEL ADAPTER, 4210-419

Provides horizontal mounting surface for EDA or CUSH shoe on single rabbetted or flush frame.



4210 SERIES

TABLE OF SIZES

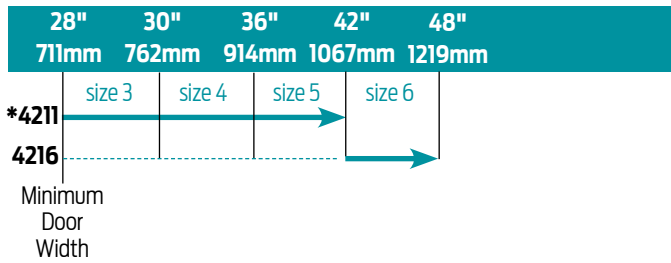
Select closer based on width of door.

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.

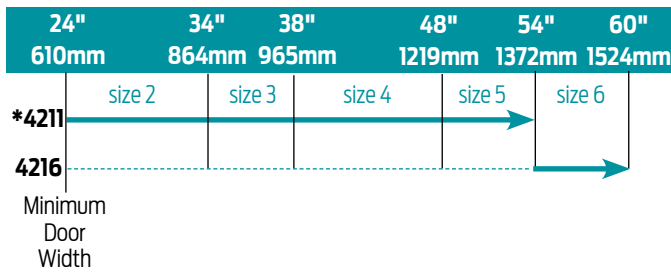
Delayed action not available with 4216 cylinder.

EXTERIOR (and VESTIBULE) DOOR



* Adjustable Size 1 thru 5

INTERIOR DOOR WIDTH




* Adjustable Size 1 thru 5

→ Indicates recommended range of door width for closer size.

REDUCED OPENING FORCE 4210 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.

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

* Maximum opening force.

HOW-TO-ORDER 4210 SERIES CLOSERS

1. SELECT CYLINDER SIZE

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

2. SPECIFY HAND

- RH
- LH

3. SPECIFY FINISH

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

Closer will be shipped with:

- SECURITY COVER,
- EXTRA DUTY ARM,
- TORX MACHINE SCREW PACK,
unless options listed below are selected.

CLOSER OPTIONS

CYLINDER

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

FINISH

- Custom Powder Coat (RAL) _____
- Plated Finish, US _____
- SRI primer (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".

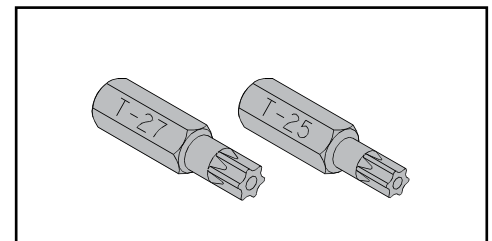
INSTALLATION ACCESSORIES

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

SPECIAL TEMPLATE

- ST- _____

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



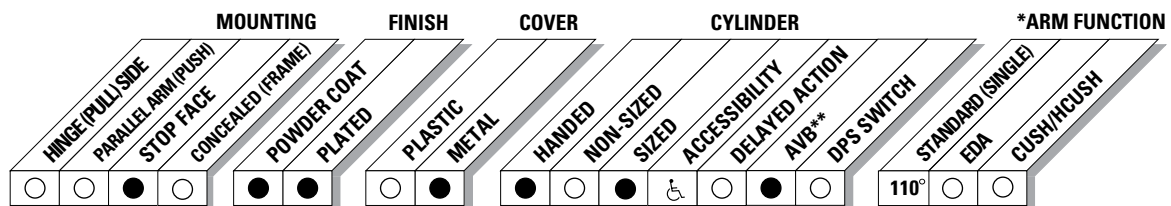
4210T SERIES

FEATURES



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.

- Standard 4210T Series closer shipped with standard arm, security track (non hold-open), metal security cover, and TORX Machine Screw pack. See 4210T Series page 13 for options.
- Sized cylinders for interior doors to 4' 0".
- Closer mounts on push side of the door, track mounts to frame stop. Specify right or left swinging door.
- 4211T cylinder meets ADA requirements. See 4210T Series page 14.
- Standard or optional custom powder coat finish.
- Optional SRI primer for installations in corrosive conditions. (Available with powder coat finishes only).
- The 4210T Series is UL listed for self-closing doors.
- Tested and certified under ANSI Standard A156.4, grade one.



● AVAILABLE
○ NOT AVAILABLE

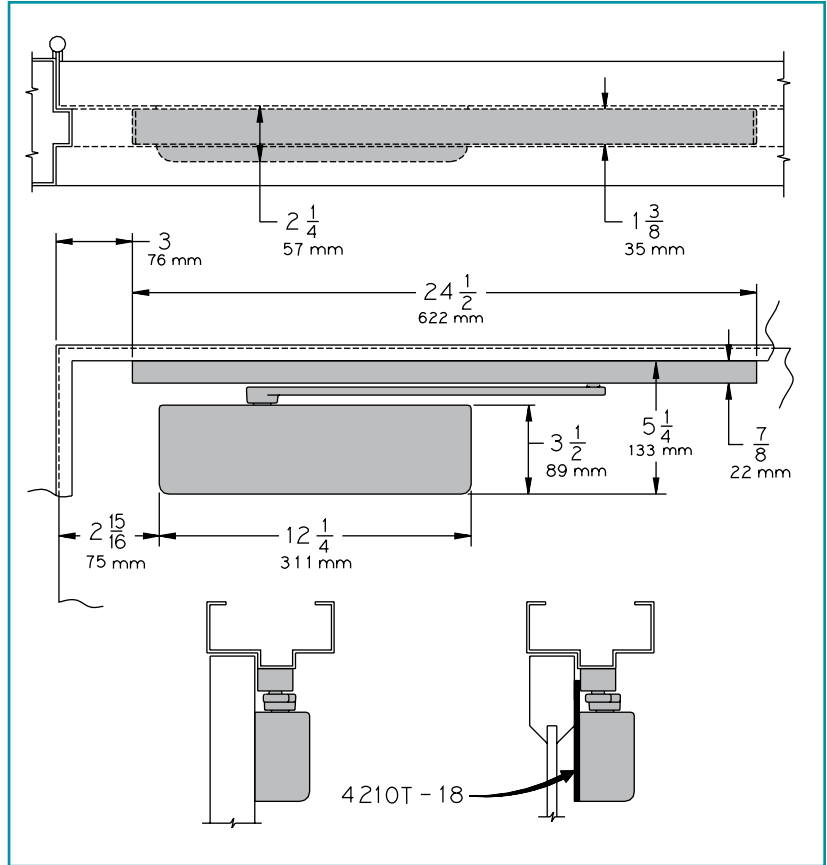
♿ Closer available with less than 5.0 lbs. opening force on 36" door.
* Maximum opening with standard template.
** Advanced Variable Backcheck.

4210T SERIES

STOP FACE (PUSH SIDE) MOUNTING

MAXIMUM OPENING

Templating allows 110°.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended where the door cannot swing 110°.
- **Clearance** is 2-1/4" (57 mm) from door.
- **Top Rail** less than 5-1/4" (133 mm) measured from stop, requires PLATE 4210T-18. Plate requires 2-1/4" (57mm) minimum measured from the stop.
- **Stop Width** minimum 1-3/8" (35 mm).
- **Advanced Variable Backcheck** cylinder starts backcheck at approximately 45° instead of the normal 75°. Add suffix "AVB" to selected cylinder (eg. 4213T AVB).

Options

- Advanced Variable Backcheck cylinder.

Special Templates

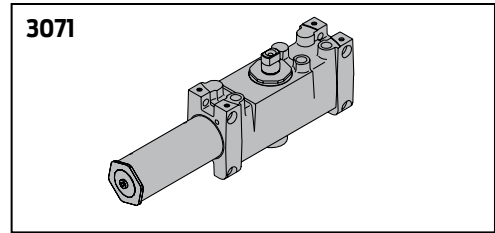
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.

4210T SERIES

CYLINDERS

CYLINDER, 4210T-3071

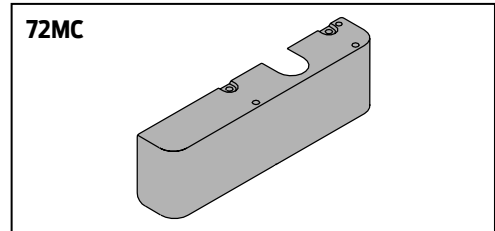
Standard, handed cast iron cylinder assembly. For various applications see "Table of Sizes" on 4210T Series page 14.



COVER

SECURITY COVER, 4210T-72MC

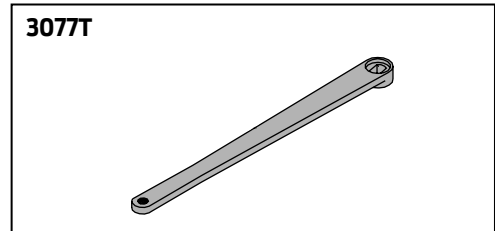
Handed, heavy gauge metal security cover. Four point TORX mounting for extra security. Closer adjustments not accessible with cover installed.



ARM

STANDARD SECURITY ARM, 4210T-3077T

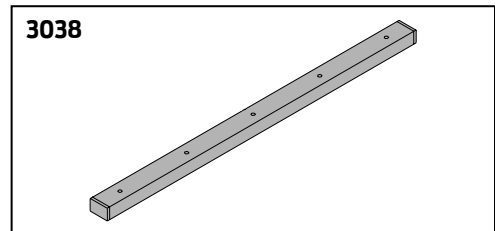
Handed arm closer features solid forged steel, large cross section arm. Special threaded attachment of track roller for extra security. Double slab arm/pinion attachment for maximum strength. Can only be used with high security track roller, 4210T-3034.



TRACK

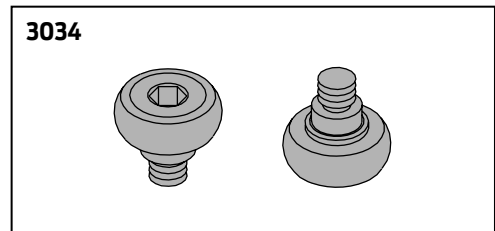
SECURITY TRACK, 4210T-3038

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



SECURITY TRACK ROLLER, 4210T-3034

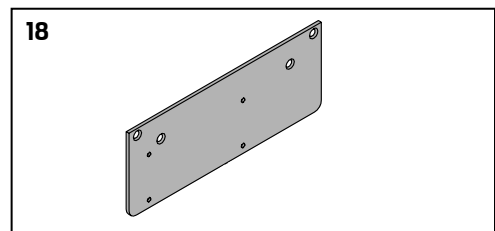
Low friction track roller threads into 4210T-3077 arm for extra strength and security. Can not be removed without disconnecting arm from closer.



INSTALLATION ACCESSORIES

PLATE, 4210T-18

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

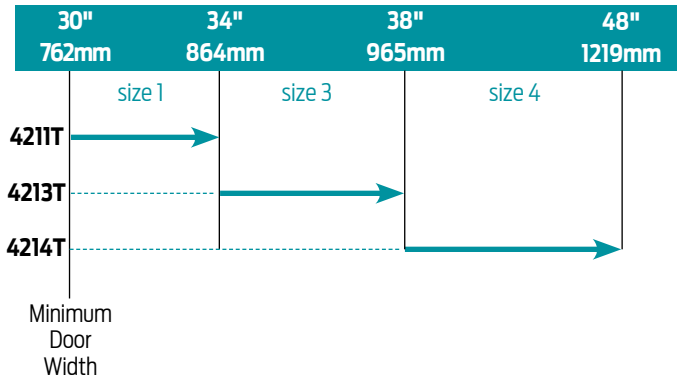


4210T SERIES

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%.

INTERIOR DOOR WIDTH




→ Indicates recommended range of door width for closer size.

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

REDUCED OPENING FORCE 4210T 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.

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

* Maximum opening force.

HOW-TO-ORDER 4210T SERIES CLOSERS

1. SELECT CYLINDER SIZE

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

2. SPECIFY HAND

- RH
- LH

3. SPECIFY FINISH

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

Closer will be shipped with:

- SECURITY COVER,
- 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)

FINISH

- 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".

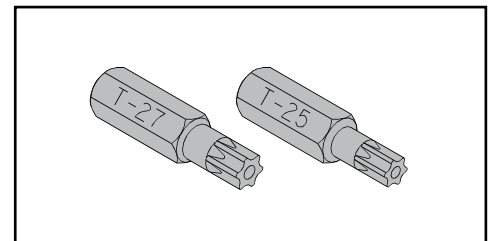
INSTALLATION ACCESSORIES

- PLATE, 4210T-18

SPECIAL TEMPLATE

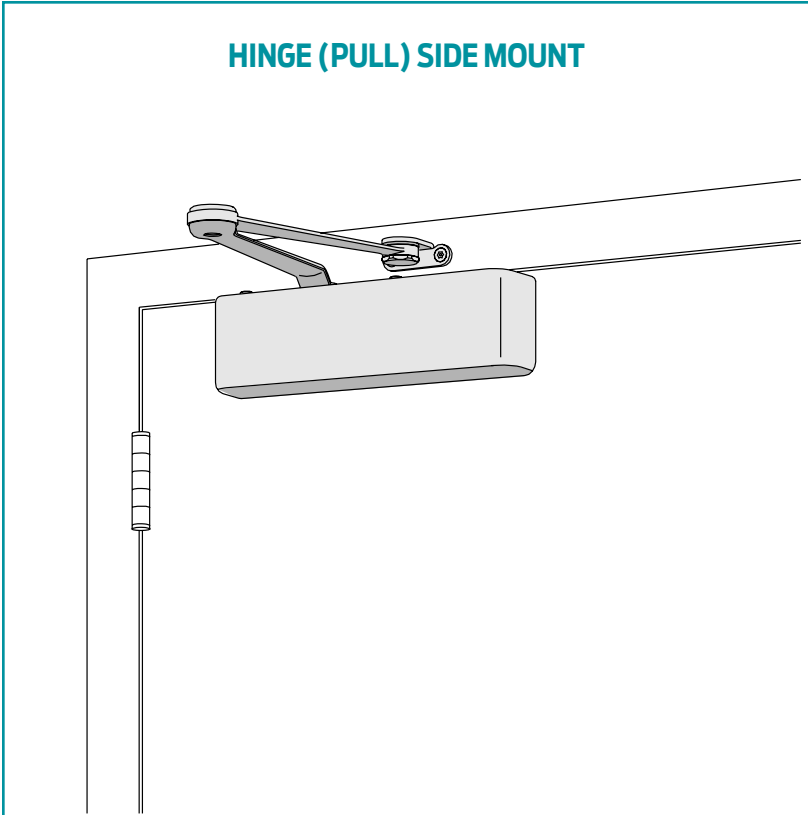
- ST- _____

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



4510 SERIES

FEATURES



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

- Standard 4510 Series closer shipped with extra duty arm (non hold-open), metal security cover, and TORX Machine Screw pack. See 4510 Series page 17 for options.
- Sized cylinders for interior doors to 5'0" and exterior doors to 4'0".
- Non-sized cylinder adjustable for interior doors to 4'6" and exterior doors to 3'6".
- Closer mounts hinge side, specify right or left swinging door.
- 4511 cylinder meets ADA requirements. See 4510 Series page 18.
- Standard or optional custom powder coat finish.
- Optional SRI primer for installations in corrosive conditions. (Available with powder coat finishes only).
- The 4510 Series is UL listed for self-closing doors.
- Tested and certified under ANSI Standard A156.4, grade one.



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/HICUSH
●	○	○	○	●	●	○	●	●	●	○	○	○	○	○	○	○	○

● AVAILABLE
○ NOT AVAILABLE

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

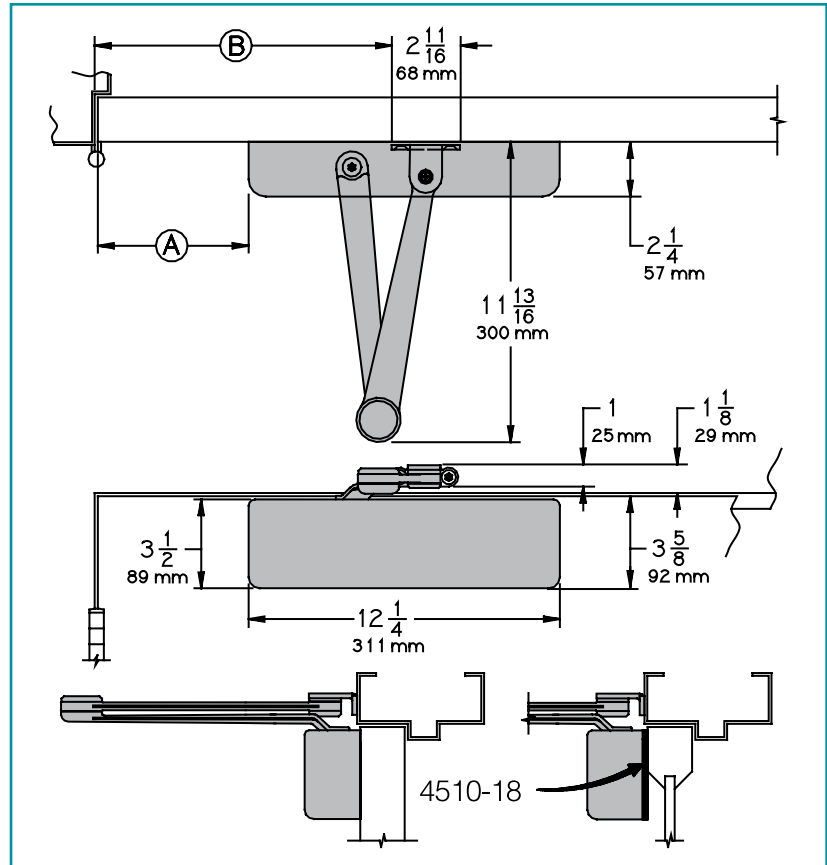
4510 SERIES

HINGE (PULL) SIDE MOUNTING

MAXIMUM OPENING

Can be templated for
140°.

- Ⓐ = 4-3/16" (106 mm)
- Ⓑ = 9-7/8" (251 mm)



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended where a door cannot swing 140°.
- **Reveal** should not exceed 1/8" (3 mm).
- **Top Rail** less than 3-1/2" (89 mm), requires PLATE 4510-18. Plate requires 2" (51mm) minimum top rail.
- **Head frame** less than 1" (25 mm), consult factory.
- **Clearance** of 2-1/4" (57 mm) behind door required for installation.
- **Arm Clearance** above door 1-1/8" (29 mm) required.
- **Delay Action** Add suffix "DEL" to selected cylinder. Not available with 4516 cylinder. Delays closing from maximum opening to approximately 70°. Delay time adjustable up to approximately 1 minute.
- **Advanced Variable Backcheck** cylinder starts backcheck at approximately 45° instead of the normal 75°. Add suffix "AVB" to selected cylinder.

Options

- Sized or non-sized cylinder.
- Delayed action or Advanced Variable Backcheck cylinder.

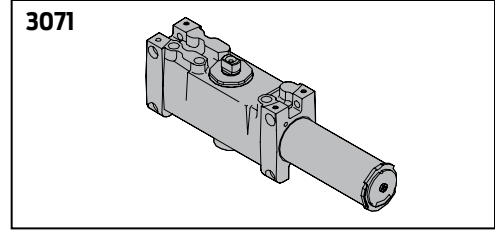
Special Templates

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

CYLINDERS

CYLINDER, 4510-3071

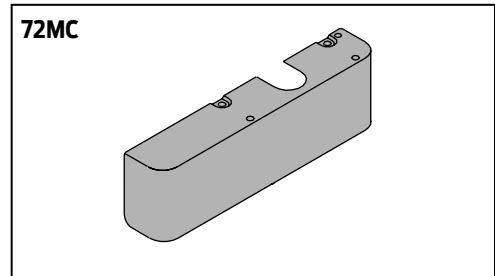
Standard, handed cast iron cylinder assembly.
 For various applications see "Table of Sizes" on 4510 Series page 18.



COVER

SECURITY COVER, 4510-72MC

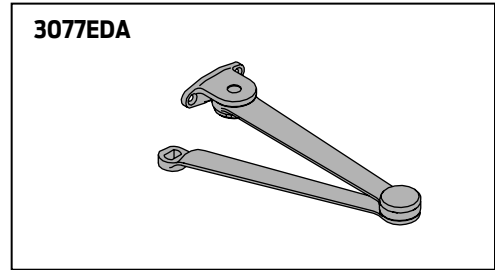
Standard, handed, heavy gauge metal security cover.
 Four point mounting for extra security.
 Closer adjustments not accessible with cover installed.



ARM

EXTRA DUTY ARM, 4510-3077EDA

Non-handed arm, features solid forged steel main arm and forearm for potentially abusive installations.
 Double slab arm/pinion attachment for maximum strength.



INSTALLATION ACCESSORIES

PLATE, 4510-18

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

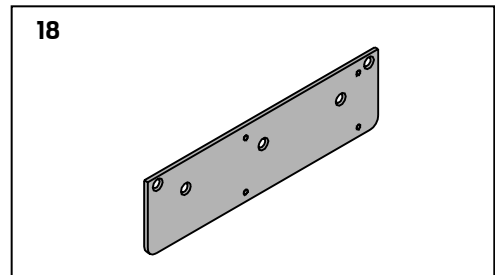
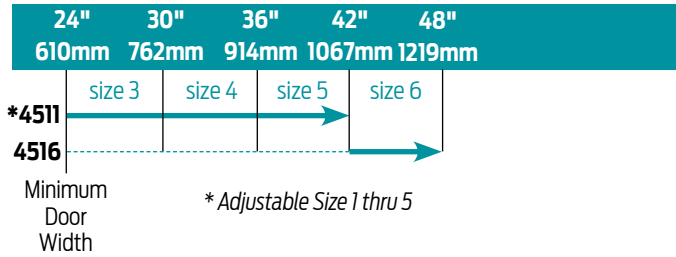


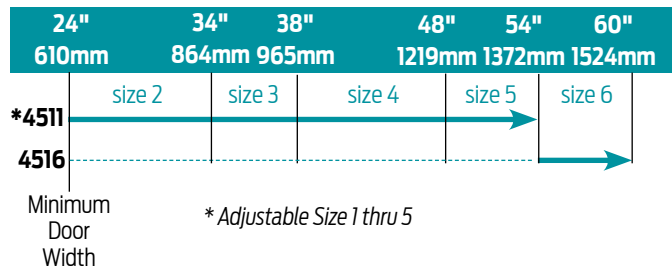
TABLE OF SIZES

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.

EXTERIOR (and VESTIBULE) DOOR



INTERIOR DOOR WIDTH



→ Indicates recommended range of door width for closer size.

REDUCED OPENING FORCE 4510 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.

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

* Maximum opening force.

HOW-TO-ORDER 4510 SERIES CLOSERS

1. SELECT CYLINDER SIZE

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

2. SPECIFY HAND

- RH
- LH

3. SPECIFY FINISH

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

Closer will be shipped with:

- SECURITY COVER,
- EXTRA DUTY ARM,
- TORX MACHINE SCREW PACK,
unless options listed below are selected.

CLOSER OPTIONS

CYLINDER

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

FINISH

- 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".

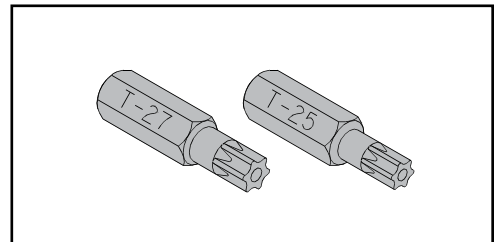
INSTALLATION ACCESSORIES

- PLATE, 4510-18

SPECIAL TEMPLATE

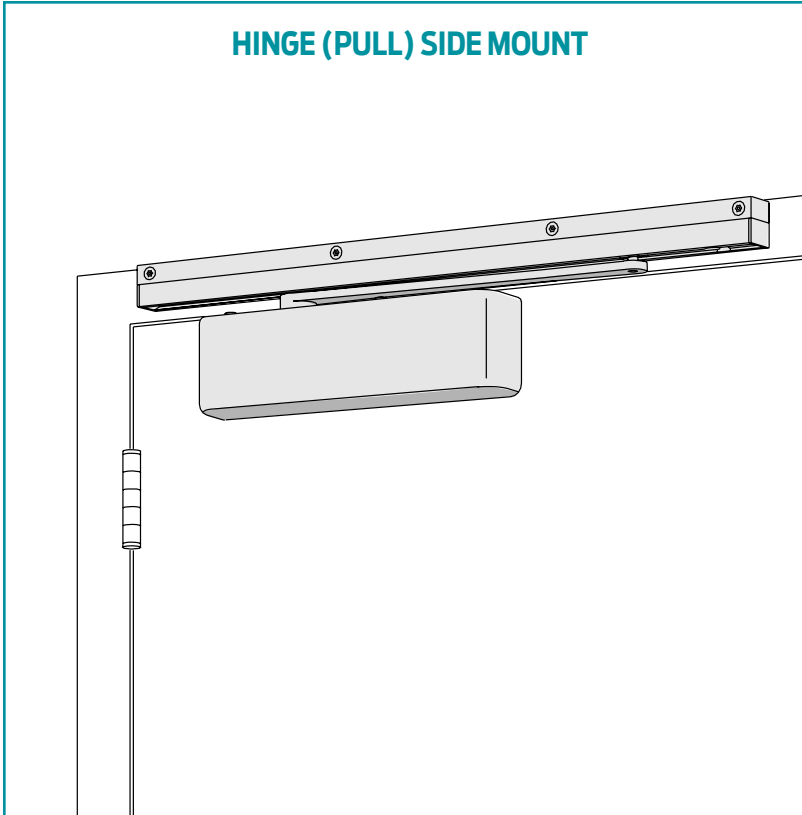
- ST- _____

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



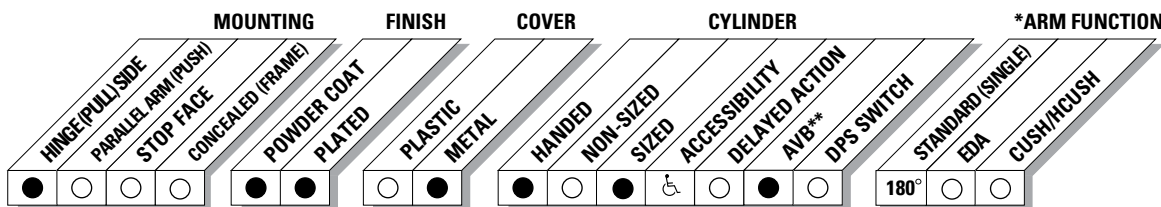
4510T SERIES

FEATURES



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.

- Standard 4510T Series closer shipped with standard arm, security track. (non hold-open), track roller, metal security cover, and TORX Machine Screw pack. See 4510T Series page 21 for options.
- Sized cylinders for interior doors to 4' 0".
- Closer mounts hinge side, specify right or left swinging door.
- 4511T cylinder meets ADA requirements. See 4510T Series page 22.
- Standard or optional custom powder coat finish.
- Optional SRI primer for installations in corrosive conditions. (Available with powder coat finishes only).
- The 4510T Series is UL listed for self-closing doors.
- Tested and certified under ANSI Standard A156.4, grade one.



● AVAILABLE
○ NOT AVAILABLE

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

* Maximum opening with standard template.

** Advanced Variable Backcheck.

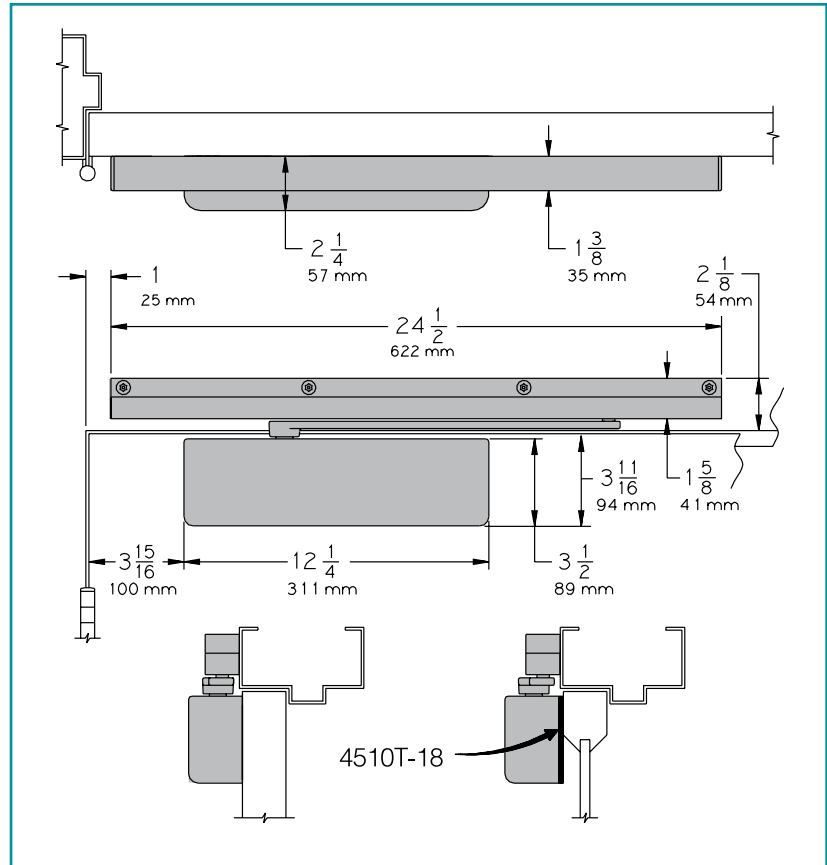
4510T SERIES

HINGE (PULL) SIDE MOUNTING

MAXIMUM OPENING

Templating allows 180°.

Consult factory if door will be held open at 180°.



- Butt Hinges should not exceed 5" (127 mm) in width.
- Auxiliary Stop is recommended where a door cannot swing 180°.
- Reveal should not exceed 1/8" (3 mm).
- Top Rail less than 3-3/4" (95 mm), requires PLATE 4510T-18. Plate requires 2" (51 mm) minimum top rail.
- Head Frame minimum 2-1/8" (54 mm).
- Clearance of 2-1/4" (57 mm) behind door required for installation.
- Advanced Variable Backcheck cylinder starts backcheck at approximately 45° instead of the normal 75°. Add suffix "AVB" to selected cylinder (eg. 4513T AVB).

Options

- Advanced Variable Backcheck cylinder.

Special Templates

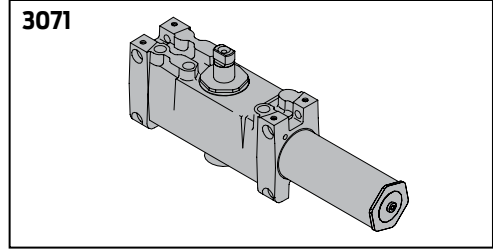
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.

4510T SERIES

CYLINDERS

CYLINDER, 4510T-3071

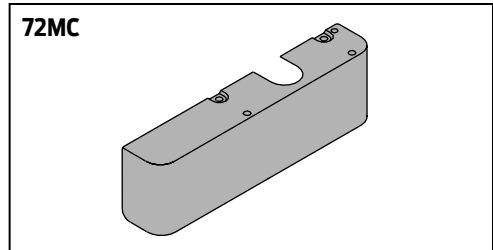
Standard, handed cast iron cylinder assembly.
For various applications see "Table of Sizes" on 4510T Series page 22.



COVER

SECURITY COVER, 4510T-72MC

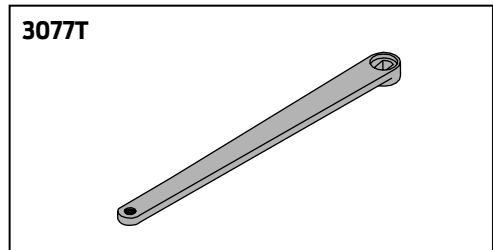
Handed, heavy gauge metal security cover.
Four point TORX mounting for extra security.
Closer adjustments not accessible with cover installed.



ARM

STANDARD SECURITY ARM, 4510T-3077T

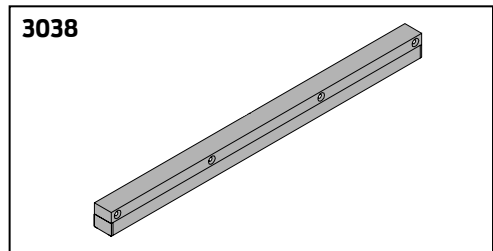
Handed arm features solid forged steel, large cross section arm.
Special threaded attachment of track roller for potentially abusive installations.
Double slab arm/pinion attachment for maximum strength.
Can only be used with high security track roller, 4510T-3034.



TRACK

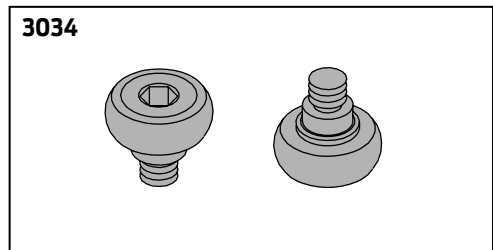
SECURITY TRACK, 4510T-3038

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



SECURITY TRACK ROLLER, 4510T-3034

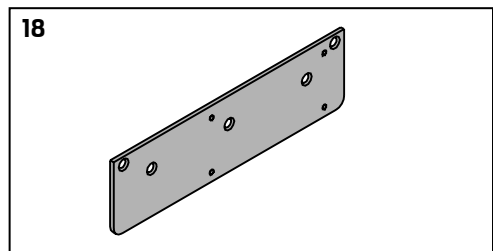
Low friction track roller threads into 4510T-3077T arm for extra strength and security.
Can not be removed without disconnecting arm from closer.



INSTALLATION ACCESSORIES

PLATE, 4510T-18

Required where top rail is less than 3 3/4" (95 mm).
Plate requires minimum 2" (51 mm) top rail.



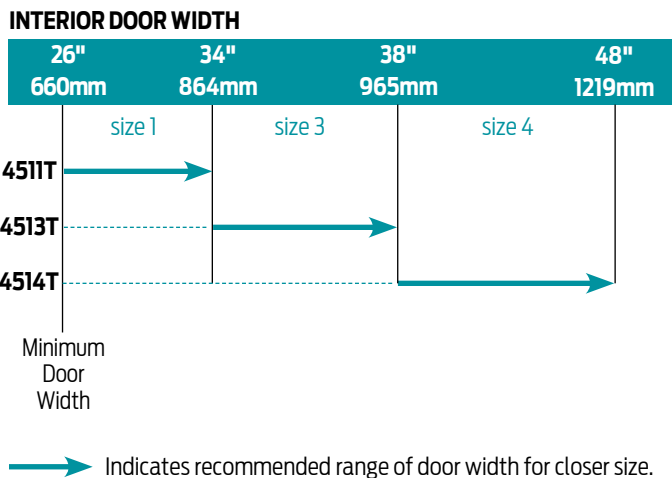
4510T SERIES

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%.



REDUCED OPENING FORCE 4510T 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.

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

* Maximum opening force.

HOW-TO-ORDER 4510T SERIES CLOSERS

1. SELECT CYLINDER SIZE

- 4511T (ADA)
- 4513T
- 4514T

2. SPECIFY HAND

- RH
- LH

3. SPECIFY FINISH

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

Closer will be shipped with:

- SECURITY COVER,
- 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)

FINISH

- 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".

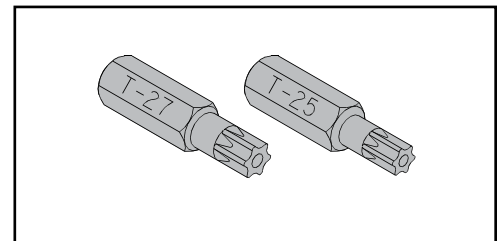
INSTALLATION ACCESSORIES

- PLATE, 4510T-18

SPECIAL TEMPLATE

- ST- _____

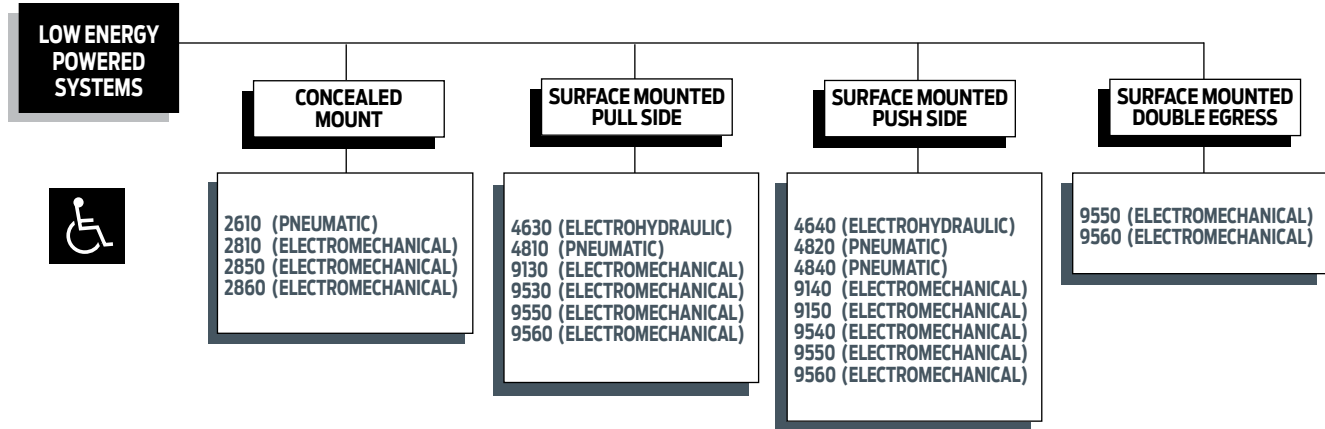
NOTE: Installation of this closer requires T-27 and T-25 driver bits for TORX machine screws with a security pin. Sold separately.



AUTOMATIC OPERATORS

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.



AUTOMATIC OPERATORS

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)	OFFSET PIVOT ARM	CENTER PIVOT ARM	
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.

AUTOMATIC OPERATORS

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"

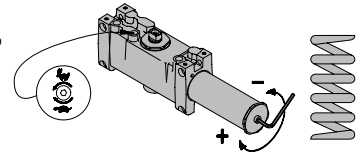
NOTE 1: All fire rated doors should have the minimum opening force allowable by the appropriate administrative authority, typically the local Fire Marshal. Closing and latching a fire door takes precedence over ADA opening force limits.

HOW IS THE DOOR MEASURED?

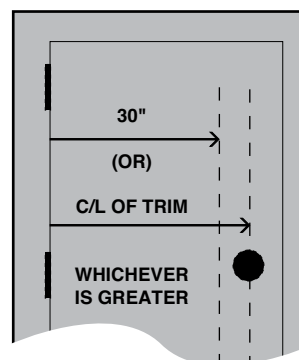
Two ADA criteria affect the door closer selection, adjustments, opening force, and time to close. Since the law does not clearly define the method of measurement, this is LCN's recommendation.

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".

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.

AUTOMATIC OPERATORS

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.

MANUAL CLOSERS

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

1. DOOR WIDTH:

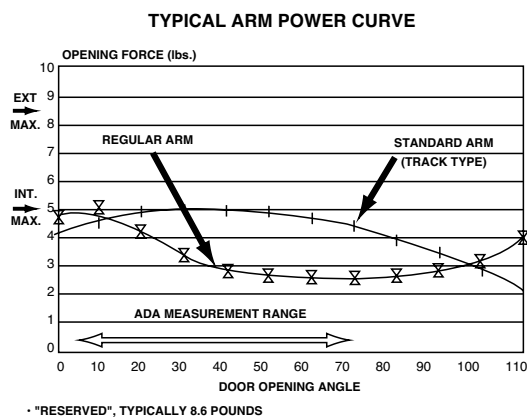
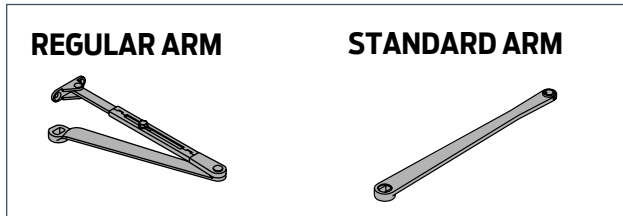
A wider door provides more leverage for the user, thus reducing the opening force required.

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.



4. ADDITIONAL FORCES

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

INFORMATION SOURCES

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

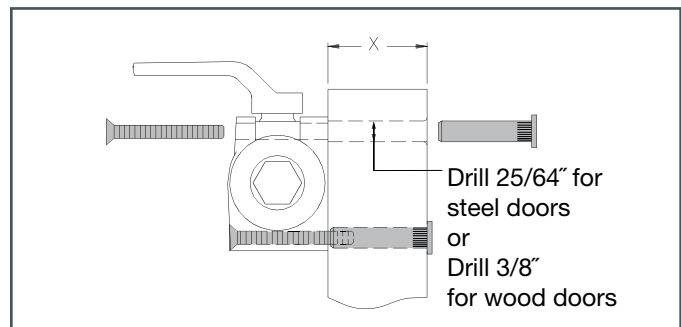
U.S. DEPARTMENT OF JUSTICE
 The Office of the Americans with Disabilities Act, Civil Rights Div.,
 P.O. Box 66118, Washington, D.C. 20035-6118
 (202) 514-0301

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.

AUTOMATIC OPERATORS

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 POWERED SYSTEMS

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 multi-door 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 "blow-open" 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.
- UBC 7.2 (1997) for positive pressure plus UL 10B and UL 10C listing.
- Consult the factory for other listings such as: State or Local Government Regulations.

WARRANTY

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

MAINTENANCE

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

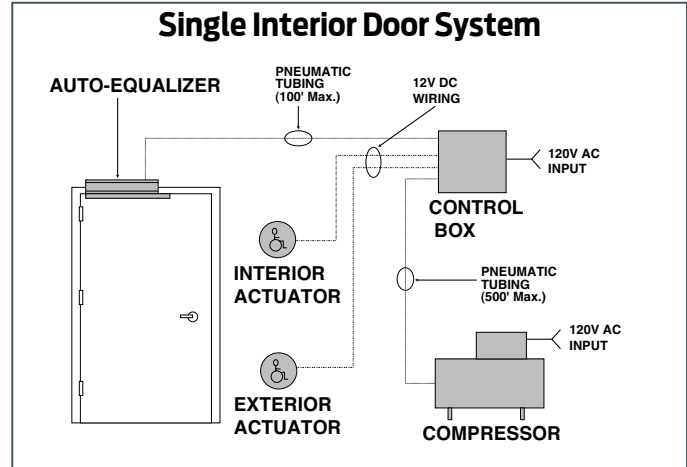
TYPICAL PNEUMATIC POWERED SYSTEMS

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.



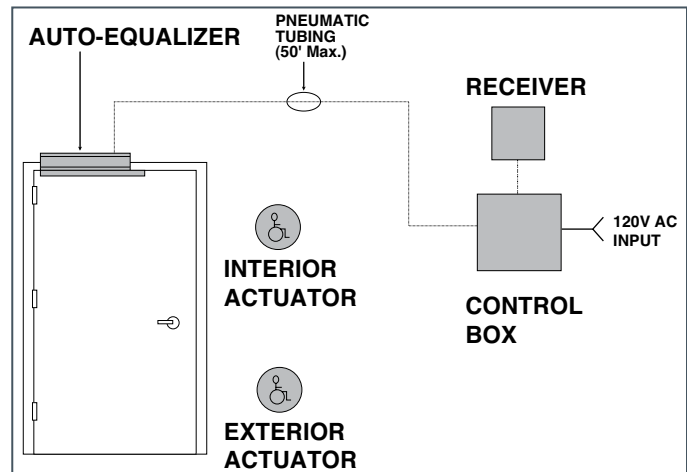
BILL OF MATERIALS

Qty.	Part No.	Description
1	4811	Auto Equalizer
1	8310-856	Actuator (exterior)
1	8310-856	Actuator (interior)
1	7901	Control Box
1	920	Compressor
(as needed)	925	Tubing

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

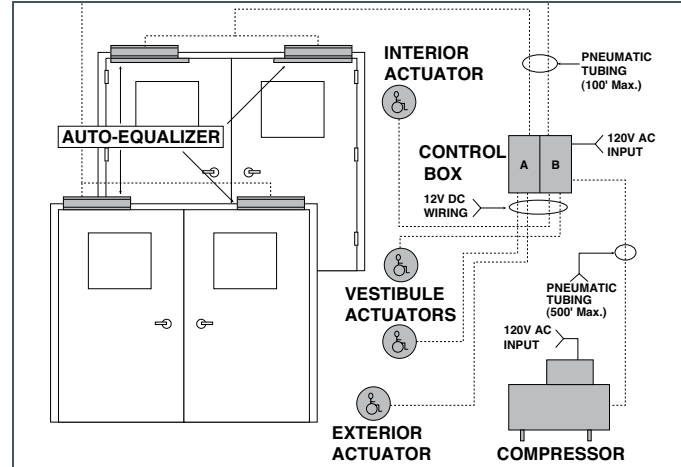
Qty.	Part No.	Description
1	4811	Auto Equalizer
2	8310-3856WS	Wireless Actuator
1	8310-865	Wireless Receiver
1	7981	Control Box
(as needed)	925	Tubing

TYPICAL PNEUMATIC POWERED SYSTEMS

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.



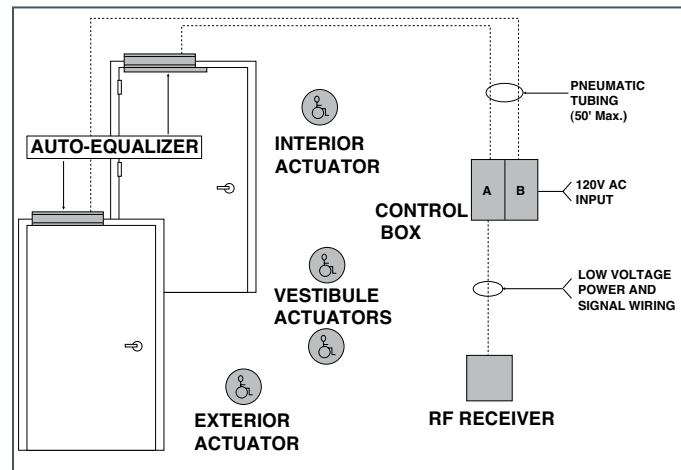
BILL OF MATERIALS

Qty.	Part No.	Description
2	4822	Auto Equalizer (exterior)
2	4811	Auto Equalizer (interior)
1	7902S	Control Box with Sequencer Card
1	922	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.

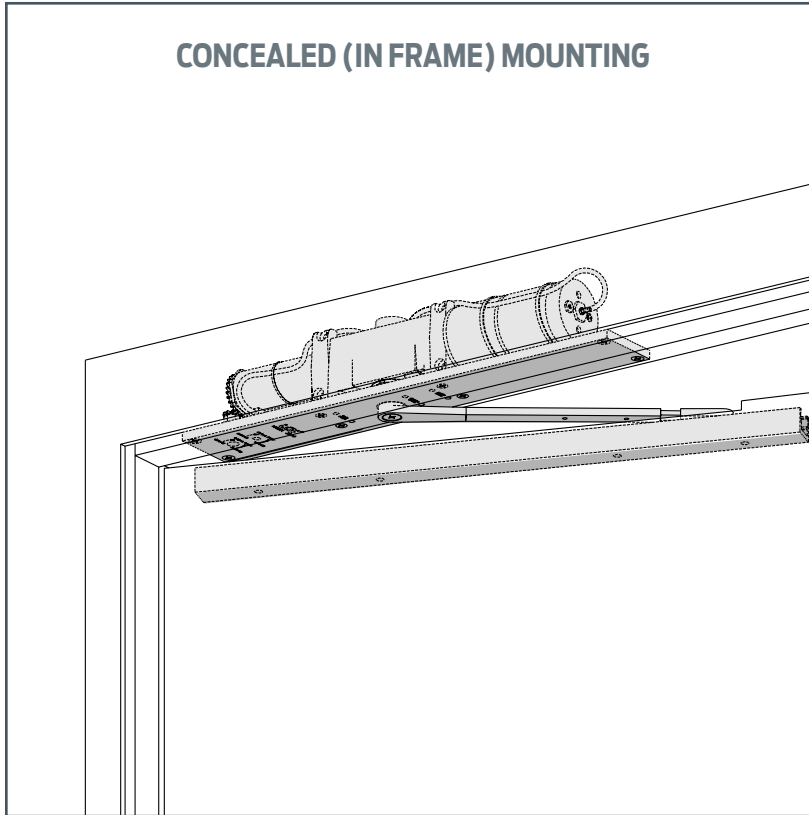
How It Works: People requiring assistance press exterior actuator for entry. The exterior door opens and after a short delay the interior door opens. When the system times out, first the exterior, then the interior door closes. Pressing the interior actuator reverses the process to exit the building.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



BILL OF MATERIALS

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

2610 SERIES

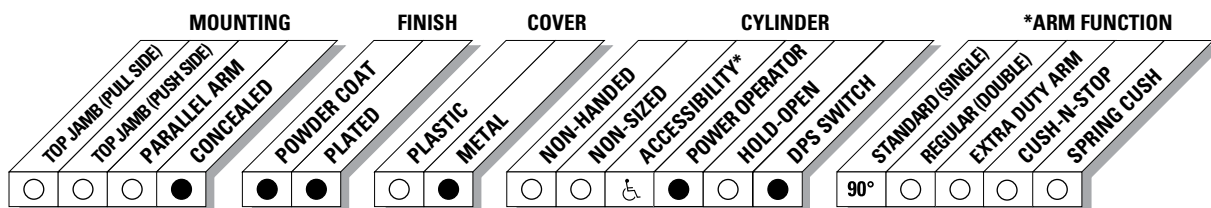


The 2610 AUTO EQUALIZER™ is LCN's pneumatically powered MULTI-DOOR solution. This low-energy power operator provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

- Multi-Door Solution.
- Utilizes a 10,000,000 Cycle Heavy Duty Door Closer.
- Quiet, Efficient & Reliable.
- Requires Control Boxes with integral compressor or control box using auxiliary air supply.
- Guard Rails/Safety Mats not required.

The 2610 Series is UL228 and meets the provisions of ANSI Standard A117.1, A156.19 and the Americans with Disabilities Act.

- Ideal for multi-door applications since cost per door leaf decrease significantly as the number of door leaves increases.
- Standard 2610 Series closer shipped with single lever (standard) arm, mounting/finish plate, standard track and wood and machine screw pack. See 2610 Series page 13 for options.
- Meets ADA requirements (power mode).
- Sized cylinders for interior doors to 4'0" and exterior doors to 3'0".
- Handed for right or left swinging doors.
- Requires additional system components. See CONTROL BOX pages 27-29 and actuators & accessories, pages 122-137.
- Standard or optional custom powder coated finish.
- Optional plated finish on arm, fasteners, and mounting/finish plate.
- Optional Door Position Switch (DPS) that signals when the door has reached the open position.



● AVAILABLE
○ NOT AVAILABLE

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

2610 SERIES

CONCEALED MOUNTING

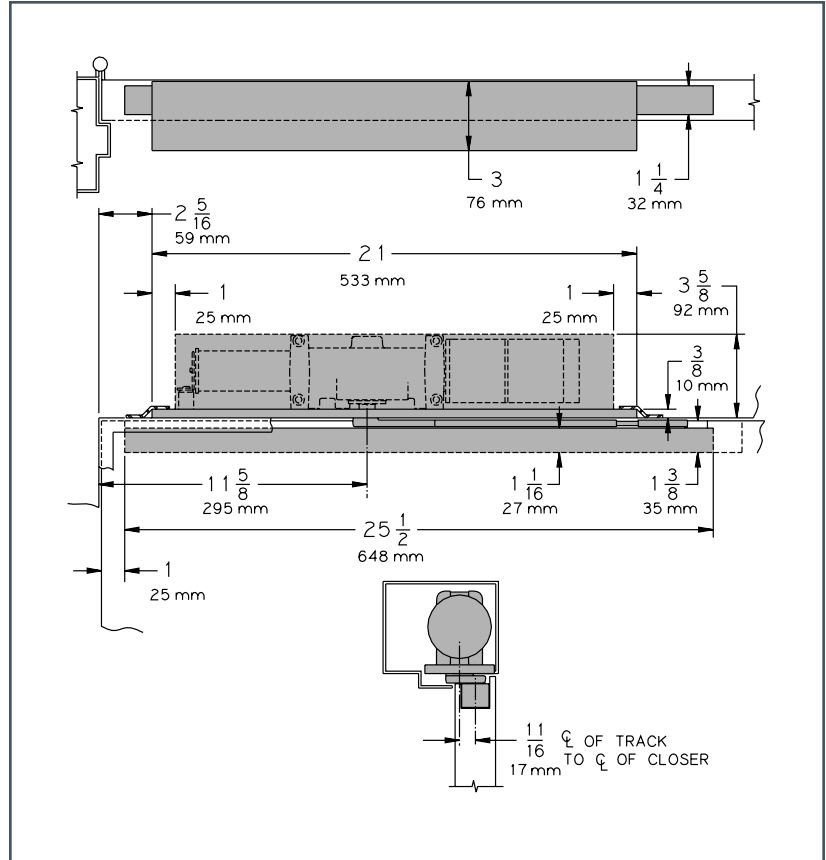
For interior or exterior doors.
Single acting cylinder in head frame.
Concealed arm and track in door top rail.

MAXIMUM OPENING

Butt hinge template allows 90° power opening and 160° manual opening.

Please note that many track style door closers are capable of allowing 180° of door swing. Track style closers are at their weakest closing force at 180°. Consult factory for applications where exterior or large/heavy door must swing 180°.

Consult factory for all pivot mounted installations.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended.
- **Head Frame** minimum 4" (102 mm) x 4" for hollow metal or aluminum tube construction.
- **Top Rail** 1-3/8" (35 mm) mortise required.
5/16" (8 mm) cutout required at top of the door, push side only.
- **System Diagram** See "AUTOMATIC OPERATORS" section pages 8-9 for typical system wiring, and pages 28-29 for electrical and pneumatic data for control boxes.

Special Templates

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

2610 SERIES

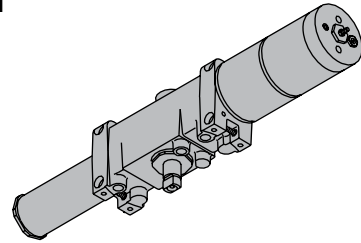
CYLINDERS

CYLINDER ONLY, 2610-3971

Standard, handed, cast iron cylinder.

NOTE: For various applications see "Table of Sizes" on 2610 Series page 14.

3971

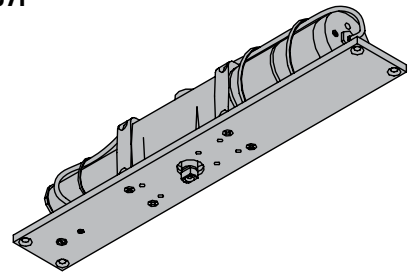


CYLINDER ASSEMBLY, 2610-3071

Standard, handed, cast iron cylinder and mounting plate.

NOTE: For various applications see "Table of Sizes" on 2610 Series page 14.

3071



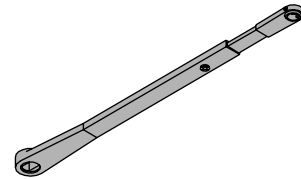
ARMS

STANDARD ARM, 2610-3077T

Handed arm.

Track roller not included with arm.

3077T



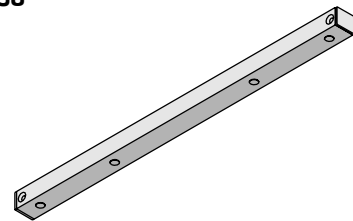
TRACK

STANDARD TRACK, 2610-3038

Standard non-handed track.

Will not accept hold open clip or bumper assembly.

3038



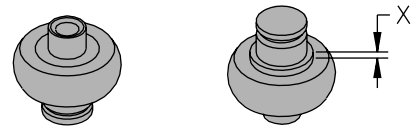
INSTALLATION ACCESSORIES

TRACK ROLLER, 2610-3034

Quiet, low friction roller assembly.

Shoulder dimension "X" = 1/16" (1 mm).

3034

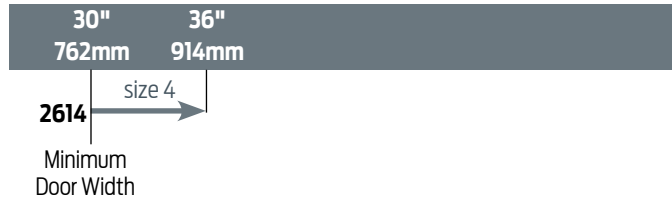


2610 SERIES

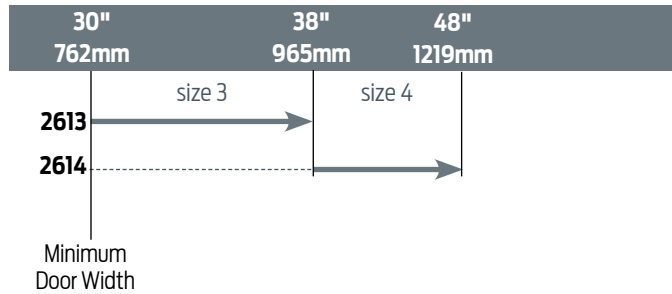
TABLE OF SIZES

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



→ Indicates recommended range of door width for closer size.

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

HOW-TO-ORDER 2610 SERIES CLOSERS

1. SELECT CYLINDER SIZE

- 2613
- 2613 DPS
- 2614
- 2614 DPS

2. SPECIFY HAND

- RH
- LH

3. 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

FINISH

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

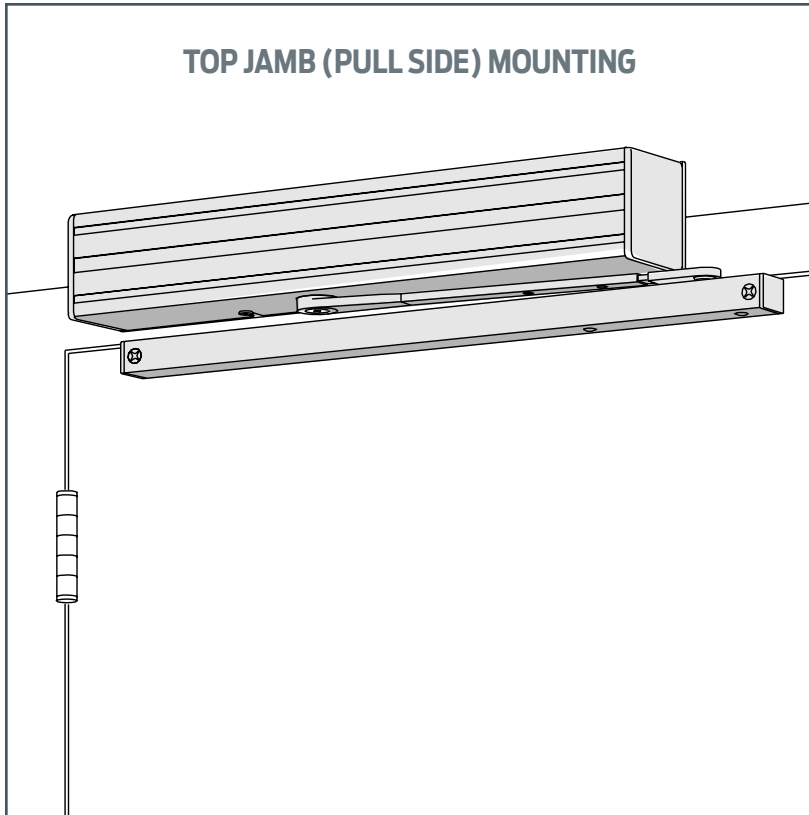
SCREW PACK

- Wood & Machine Screw (WMS)

SPECIAL TEMPLATE

- ST-_____

4810 SERIES



The 4810 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.

- Multi-Door Solution.
- Utilizes a 10,000,000 Cycle Heavy Duty Door Closer.
- Quiet, Efficient & Reliable.
- Requires Control Boxes with integral compressor or control box using auxiliary air supply.
- Guard Rails/Safety Mats not required.

The 4810 Series is UL and cUL228 listed and meets the provisions of ANSI Standards A117.1, A156.19, and the Americans with Disabilities Act.

- Ideal for multi-door applications since cost per door leaf decrease significantly as the number of door leaves increases.
- Standard, plate mounted 4810 Series closer shipped with single lever (standard) arm, metal cover, standard track, and wood and machine screw pack. See 4810 Series page 16 for options.
- Meets ADA requirements (power mode).
- Non-sized cylinders for interior doors to 4'0" and exterior doors to 3'0".
- Non-handed.
- Requires additional system components. See CONTROL BOX pages 27-29 and ACTUATORS & ACCESSORIES, pages 122-137.
- Standard or optional custom powder coated finish, end caps are black.
- Optional plated finish on cover, arm, and fasteners.

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	90°	STANDARD (SINGLE)	REGULAR (DOUBLE)	EXTRA DUTY ARM	CUSH-AL-STOP	SPRING CUSH
●	○	○	○	●	●	○	●	●	○	○	○	○	○	○	○	○	○	○	○

● AVAILABLE
○ NOT AVAILABLE

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

4810 SERIES

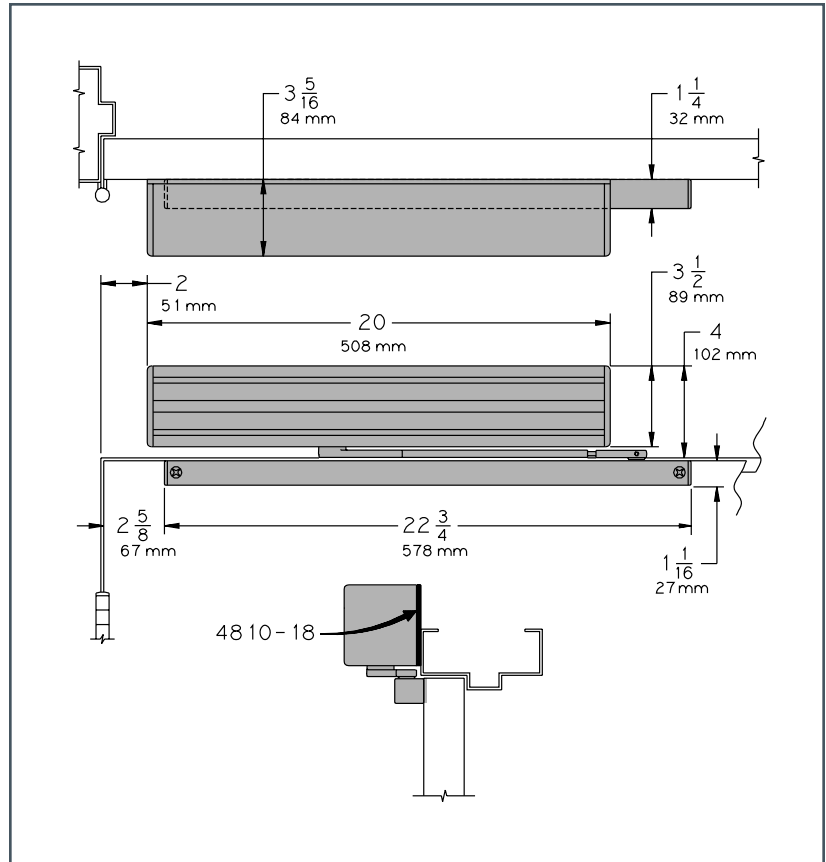
MOUNTING DETAILS

TOP JAMB (PULL SIDE) MOUNTING

MAXIMUM OPENING

Templating allows 90° power opening and 170° manual opening.

Please note that many track style door closers are capable of allowing 180° of door swing. Track style closers are at their weakest closing force at 180°. Consult factory for applications where exterior or large/heavy door must swing 180°.



- Butt Hinges should not exceed 5" (127 mm) in width.
- Auxiliary Stop is recommended.
- Reveal should not exceed 1/8" (3 mm).
- Head Frame minimum 2" (51 mm).
- Top Rail minimum 1-1/8" (29 mm).
- System Diagram See "AUTOMATIC OPERATORS" section pages 7-8 for typical system wiring, and pages 27-29 for electrical and pneumatic data for control boxes.

Special Templates

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

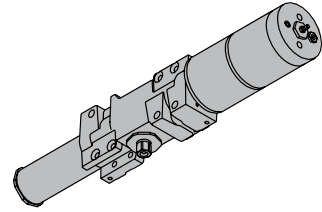
4810 SERIES

CYLINDERS

CYLINDER ONLY, 4811-3971

Standard, non-handed, cast iron cylinder.

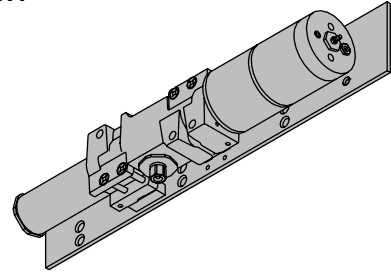
3971



CYLINDER ASSEMBLY, 4811-3071

Standard, non-handed, cast iron cylinder and mounting plate.

3071

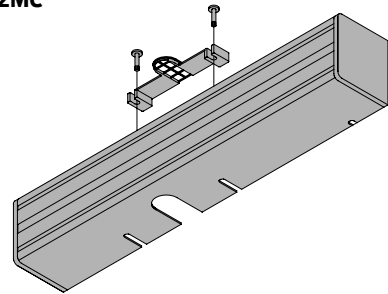


COVERS

COVER, 4810-72MC

Standard, non-handed metal cover with black end caps.

72MC

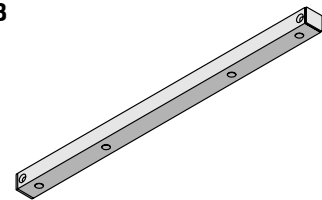


TRACKS

STANDARD TRACK, 4810-3038

Standard non-handed track.
Will not accept hold open clip or bumper assembly.

3038

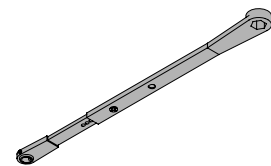


ARMS

STANDARD ARM, 4810-3077T

Non-handed arm.
Track roller not included with arm.

3077T

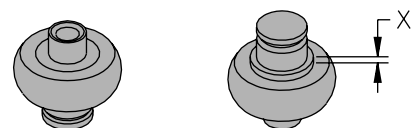


INSTALLATION ACCESSORIES

TRACK ROLLER, 4810-3034

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

3034

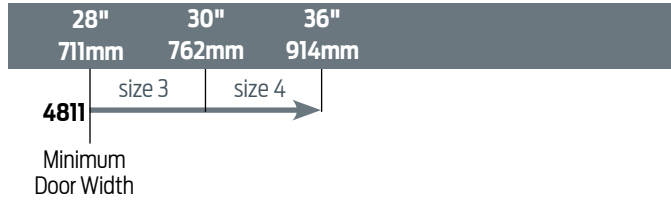


4810 SERIES

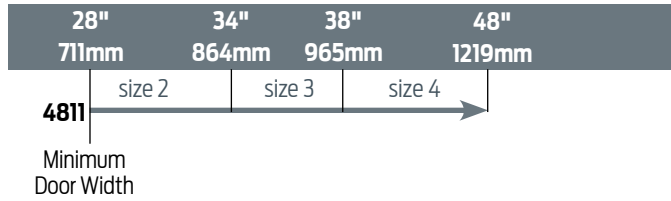
TABLE OF SIZES

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



→ Indicates recommended range of door width for closer size.

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

HOW-TO-ORDER 4810 SERIES CLOSERS

1. SPECIFY FINISH

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

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.

CLOSER OPTIONS

FINISH

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

SCREW PACK

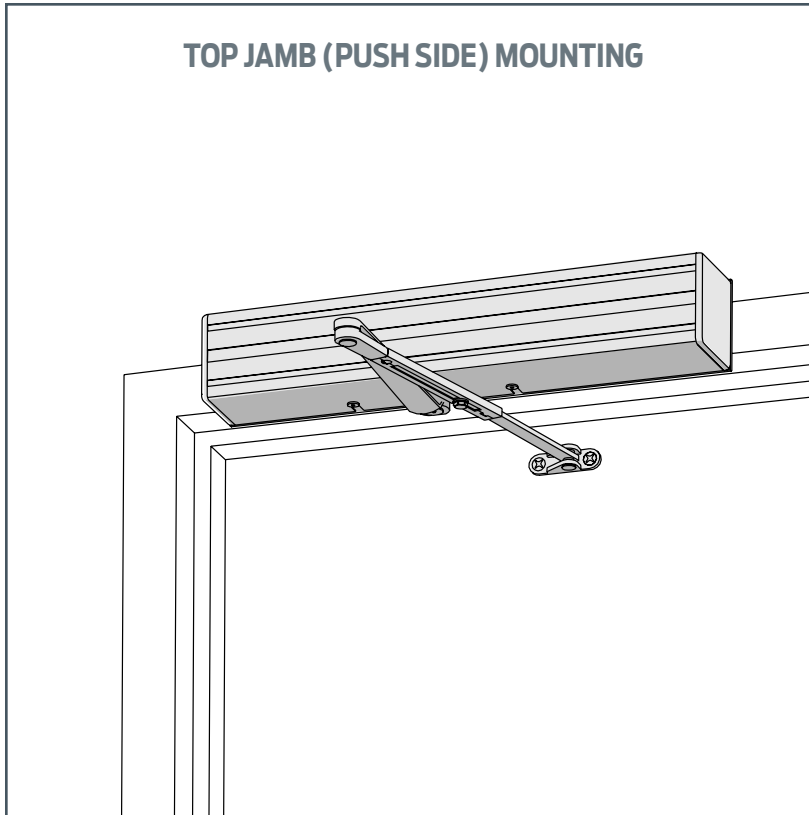
- TB*, Wood & Machine Screw (TBWMS)
*Specify door thickness if other than 1-3/4".

SPECIAL TEMPLATE

- ST- _____

4820 SERIES

FEATURES

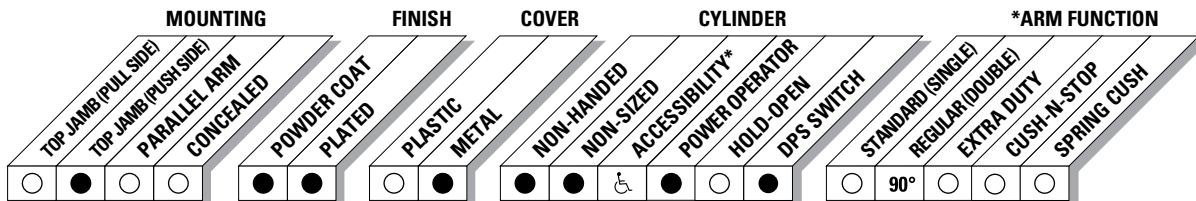


The 4820 AUTO EQUALIZER™ is LCN's pneumatically powered MULTI-DOOR solution. This low-energy automatic operator provides easy access for people with disabilities, or the elderly. Designed primarily for manual opening applications that occasionally require automatic opening.

- Multi-Door Solution.
- Utilizes a 10,000,000 Cycle Heavy Duty Door Closer.
- Quiet, Efficient & Reliable.
- Requires Control Boxes with integral compressor or control box using auxiliary air supply.
- Guard Rails/Safety Mats not required.

- Ideal for multi-door applications since cost per door leaf decrease significantly as the number of door leaves increases.
- Standard, plate mounted 4820 Series closer shipped with regular arm, metal cover, and wood and machine screw pack. See 4820 Series page 20 for options.
- Meets ADA requirements (power mode).
- Non-sized cylinders for interior doors to 4'6" and exterior doors to 3'6".
- Non-handed.
- Requires additional system components. See CONTROL BOX pages 27-29 and ACTUATORS & ACCESSORIES, pages 122-137.
- Standard or optional custom powder coat finish, end caps are black.
- Optional plated finish on cover, arm, and fasteners.
- Optional Door Position Switch (DPS) kit that signals when the door has reached the open position.

The 4820 Series is UL and cUL228 listed and meets the provisions of ANSI Standards A117.1, A156.19, and the Americans with Disabilities Act.



● AVAILABLE
○ NOT AVAILABLE

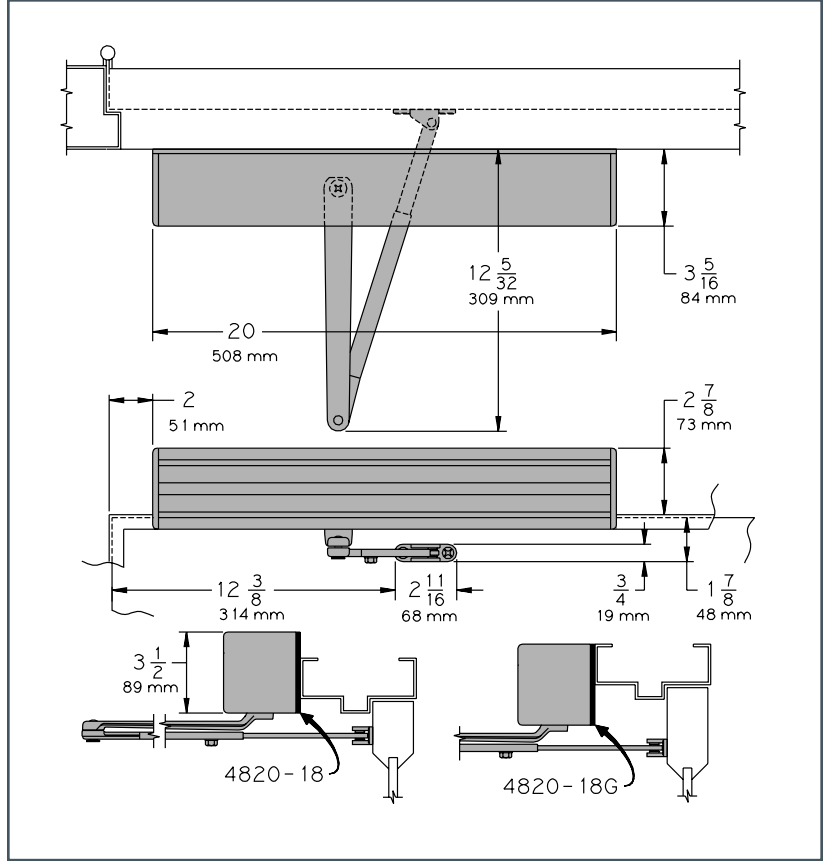
♿ Meets ADA requirements (power mode).
* See individual series for maximum manual opening.

4820 SERIES

TOP JAMB (PUSH SIDE) MOUNTING

MAXIMUM OPENING

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



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended.
- **Reveal** of 4-1/2" (114 mm) allows up to 90° power opening and 100° manual opening. 8" (203 mm) allows up to 90° power opening and 100° manual opening with LONG ARM where standard rod and shoe is replaced with optional LONG ROD AND SHOE, 4820-79LR.
- **Head Frame** minimum 1-3/4" (44 mm).
With flush ceiling use PLATE, 4820-18G substituted for standard plate.
- **Top Rail** minimum 1-3/4" (44 mm).
Closer on 4820-18G plate requires 3" (76 mm) minimum.
- **System Diagram** See "AUTOMATIC OPERATORS" section pages 7-8 for typical system wiring, and pages 27-29 for electrical and pneumatic data for control boxes.

Options

- Long arm.
- 18G plate.

Special Templates

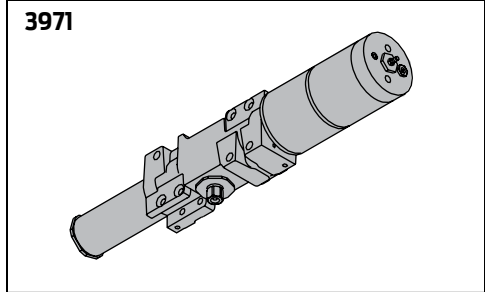
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.

4820 SERIES

CYLINDERS

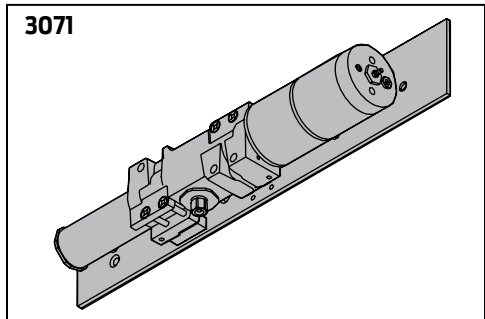
CYLINDER ONLY, 4822-3971

Standard, non-handed, cast iron cylinder.



CYLINDER ASSEMBLY, 4822-3071

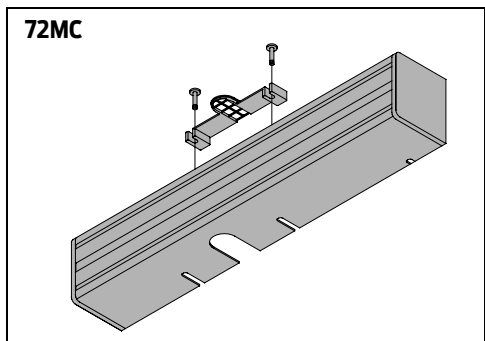
Standard, non-handed, cast iron cylinder.
Includes; 4820-18 Mounting Plate or 4820-18G Mounting Plate (must specify).



COVERS

COVER, 4820-72MC

Standard, non-handed metal cover with black end caps.



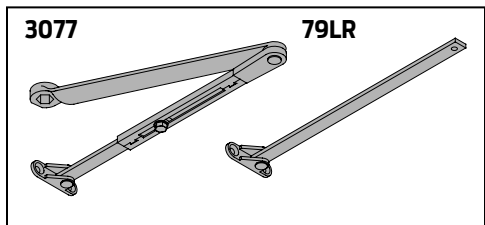
ARMS

REGULAR ARM, 4820-3077

Non-handed arm.

LONG ARM, 4820-3077L

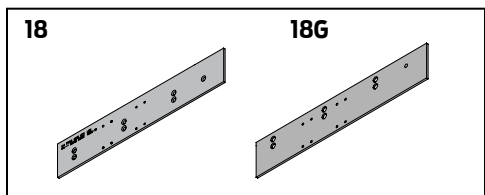
Arm includes LONG ROD AND SHOE, 4820-79LR for deep reveals.



INSTALLATION ACCESSORIES

PLATE, 4820-18

Standard mounting plate.
Plate requires minimum 1-3/4" (44 mm) minimum head frame and 2" (51 mm) top rail.

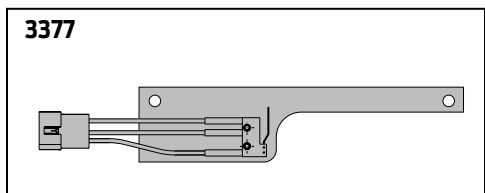


PLATE, 4820-18G

Replaces standard plate for flush ceiling condition.
Plate requires minimum 1-3/4" (44 mm) minimum head frame and 3" (76 mm) top rail.

DOOR POSITION SWITCH KIT, 4820-3377

Provides feedback when the door reaches the fully opened position.
Specifically RH or LH when ordering.



4820 SERIES

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

	24"	30"	36"	42"
	610mm	762mm	914mm	1067mm
	size 3	size 4	size 5	
4822	→			
Minimum Door Width				

INTERIOR DOOR WIDTH

	24"	34"	38"	48"	54"
	610mm	864mm	965mm	1219mm	1372mm
	size 2	size 3	size 4	size 5	
4822	→				
Minimum Door Width					

→ Indicates recommended range of door width for closer size.

HOW-TO-ORDER 4820 SERIES CLOSERS

1. SPECIFY FINISH

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

Closer will be shipped with:

- STANDARD CYLINDER,
- STANDARD METAL COVER,
- REGULAR ARM,
- WOOD and MACHINE SCREW PACK,
unless options listed below are selected.

CLOSER OPTIONS

FINISH

- 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".

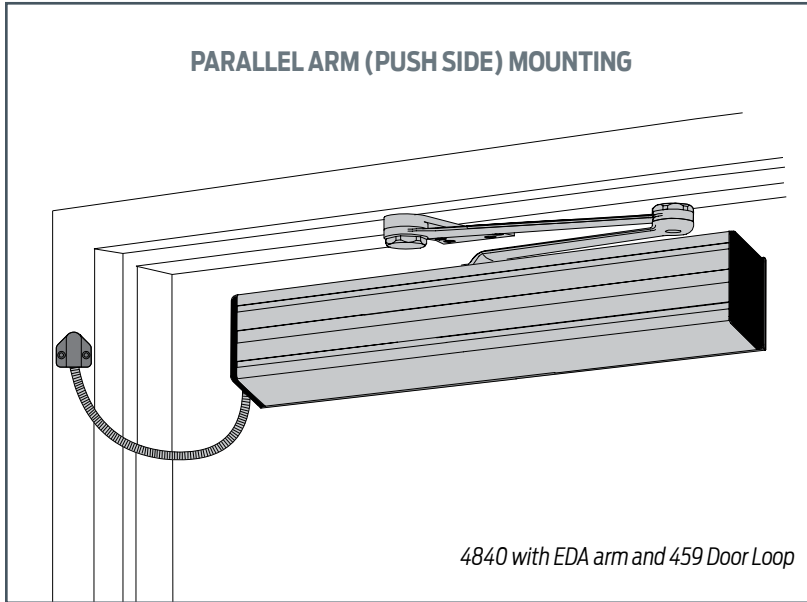
INSTALLATION ACCESSORIES

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

SPECIAL TEMPLATE

- ST-_____

4840 SERIES



The 4840 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.

- Ideal for multi-door applications since cost per door leaf decrease significantly as the number of door leaves increases.
- Standard, plate mounted 4840 Series closer shipped with EXTRA DUTY arm, metal cover and a wood and machine screw pack. See 4840 Series page 24-25 for options.
- Meets ADA requirements (power mode).
- Installation requires use of either DOOR LOOP-459 or TRANSFER HINGE- 460, see page 25 in this section for details.
- Non-sized cylinders for interior doors to 4'6" and exterior doors to 3'6".
- Non-Handed.
- Requires additional system components. See CONTROL BOX pages 27-29 and ACTUATORS & ACCESSORIES, pages 122-137.
- Standard or optional custom powder coated finish, end caps are black.
- Optional plated finish on cover, arm, and fasteners.

The 4840 Series is UL and cUL228 listed and meets the provisions of ANSI Standards A117.1, A156.19, and the Americans with Disabilities Act.

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	CUSH-N-STOP	SPRING CUSH
○	○	●	○	●	●	○	●	●	○	○	○	○	○	○	○	○	○	○

● AVAILABLE
○ NOT AVAILABLE

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

4840 SERIES

PARALLEL ARM (PUSH SIDE) MOUNTING

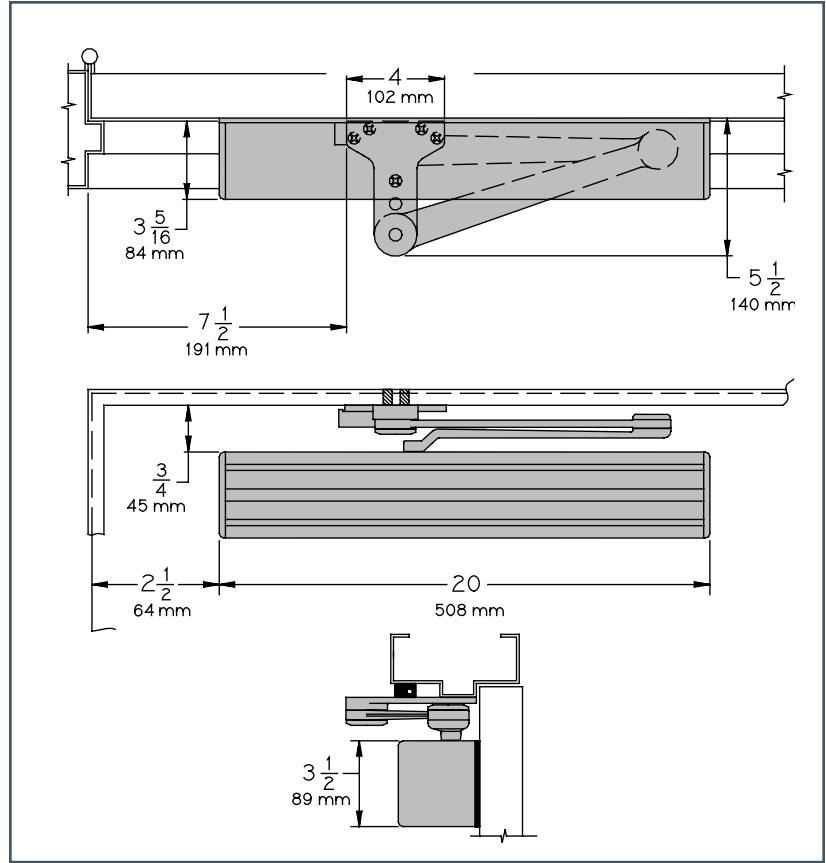
MAXIMUM OPENING

Maximum power opening is 90° with all arms.

Maximum manual opening is 105° with EDA or SPRING CUSH arms.

Maximum manual opening is 100° with CUSH-N-STOP arm.

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



- ▶ **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended when CUSH-N-STOP or SPRING CUSH arms are not used.
- **Clearance** for EDA or CUSH shoes is 5-1/2" (140 mm) from door face.
- **Top Rail** minimum 4-1/8" (105 mm). 6" minimum top rail for screw not to show in glass.
- **Head Frame** (flush) requires PA SHOE ADAPTER, 4840-419.
- **Stop Width** minimum 1" (25 mm).
- **Blade Stop** clearance requires 1/2" (13 mm) BLADE STOP SPACER, 4840-61.
- **System Diagram** See "AUTOMATIC OPERATORS" section pages 7-8 for typical system wiring, and pages 27-29 for electrical and pneumatic data for control boxes.

Options

- CUSH or SPRING CUSH arms.

Special Templates

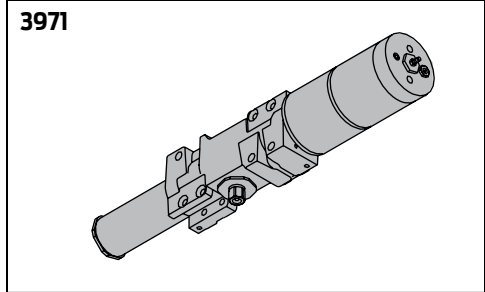
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.

4840 SERIES

CYLINDERS

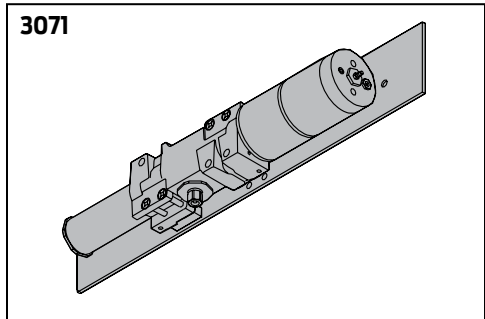
CYLINDER ONLY, 4841-3971

Standard, non-handed, cast iron cylinder.



CYLINDER ASSEMBLY, 4841-3071

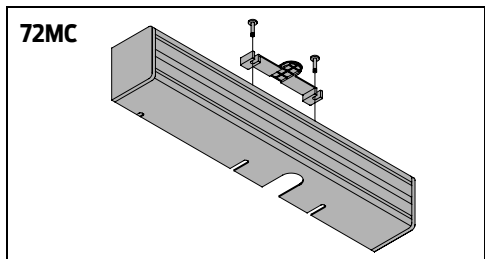
Standard, non-handed, cast iron cylinder and mounting plate.



COVERS

COVER, 4840-72MC

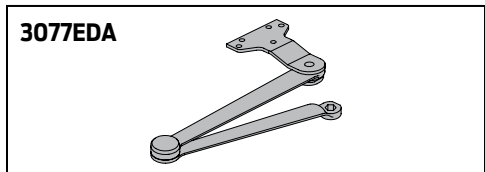
Standard, non-handed metal cover with black end caps.



ARMS

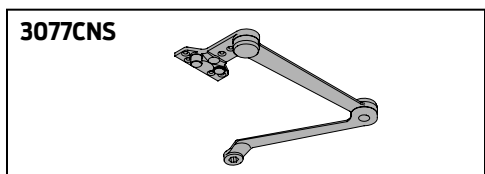
EXTRA DUTY ARM, 4840-3077EDA

Standard, non-handed parallel arm features forged solid steel main arm and forearm for potentially abusive installations.



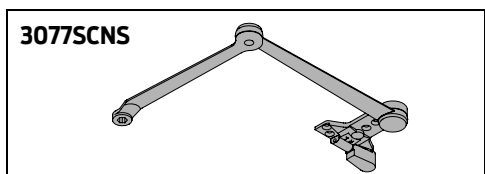
CUSH-N-STOP ARM, 4840-3077CNS

Optional, non-handed parallel arm features forged solid steel main arm and forearm with stop in soffit shoe.



SPRING CUSH ARM, 4840-3077SCNS

Optional, non-handed parallel arm for abusive applications features forged solid steel main arm and forearm with spring loaded stop in soffit shoe.



4840 SERIES

INSTALLATION ACCESSORIES

CUSH SHOE SUPPORT, 4840-30

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

BLADE STOP SPACER, 4840-61

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

PA FLUSH PANEL ADAPTER, 4840-419

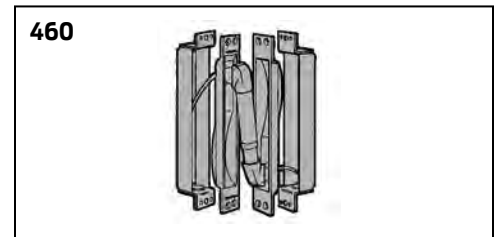
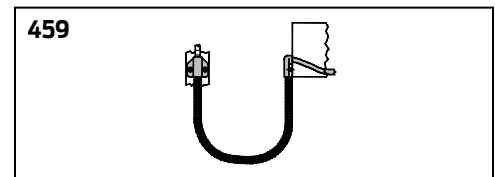
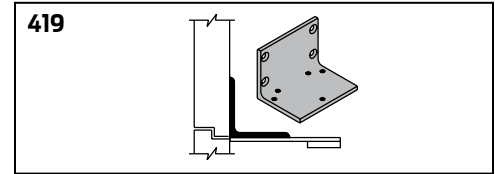
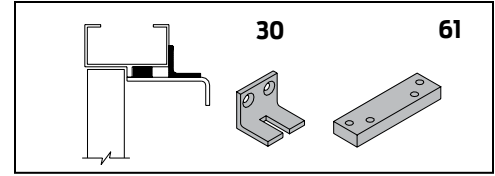
Provides horizontal mounting surface for parallel arm shoe on single rabbeted or flush frame.

DOOR LOOP KIT, 4840-459

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.

PNEUMATIC TRANSFER HINGE, 4840-460

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.



4840 SERIES

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

	24" 610mm	30" 762mm	36" 914mm	42" 1067mm
4841	size 3	size 4	size 5	

Minimum Door Width

INTERIOR DOOR WIDTH

	24" 610mm	34" 864mm	38" 965mm	48" 1219mm	54" 1372mm
4841	size 2	size 3	size 4	size 5	

Minimum Door Width

→ Indicates recommended range of door width for closer size.

NOTE: Minimum door width 24" (610 mm).

HOW-TO-ORDER 4840 SERIES CLOSERS

1. SPECIFY FINISH

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

Closer will be shipped with:

- STANDARD CYLINDER,
- STANDARD METAL COVER,
- EXTRA DUTY ARM,
- WOOD and MACHINE SCREW PACK,
unless options listed below are selected.

CLOSER OPTIONS

FINISH

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

ARMS

- 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- _____

7900 SERIES CONTROL BOXES

CONTROL BOXES

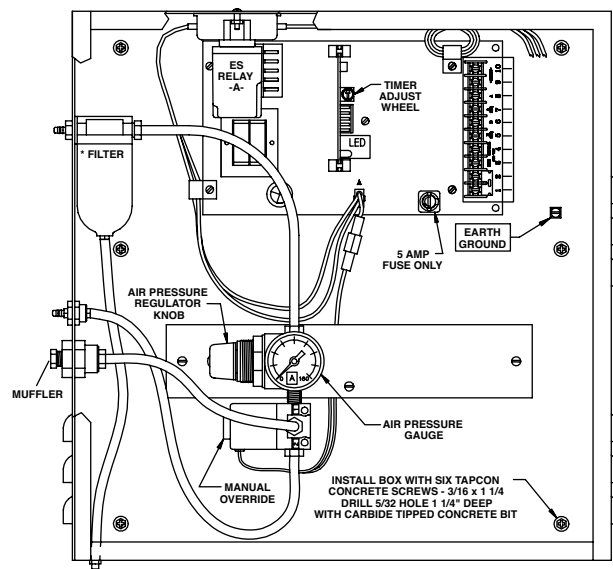
Heavy duty, surface mounted control box contains one or two electrically controlled pneumatic circuits. Air filtration, pneumatic regulation, and system timing is performed by the control box. 7980 Series control boxes also contain a built-in air pump to power the system. Each pneumatic circuit can be 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.

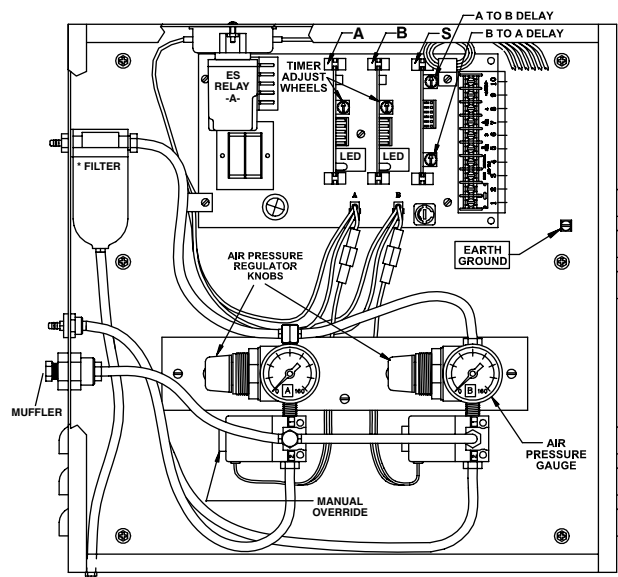
7901 AND ES7901 CONTROL BOX

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

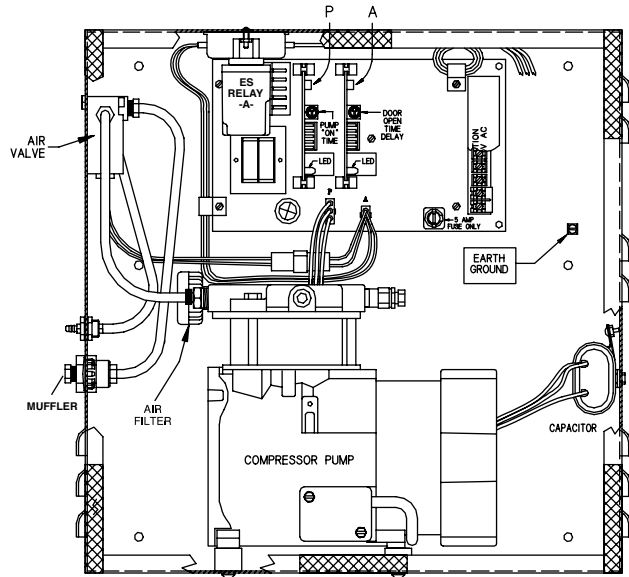
For independent operation of two door or four door leaves, if pairs are actuated simultaneously. Two independent pneumatic circuits accept Normally Open (N.O.) inputs from hardwired or RF (wireless) actuator/receiver combinations. Sequential operation (add suffix "S") is available for 7902. The 7902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



7900 SERIES CONTROL BOXES

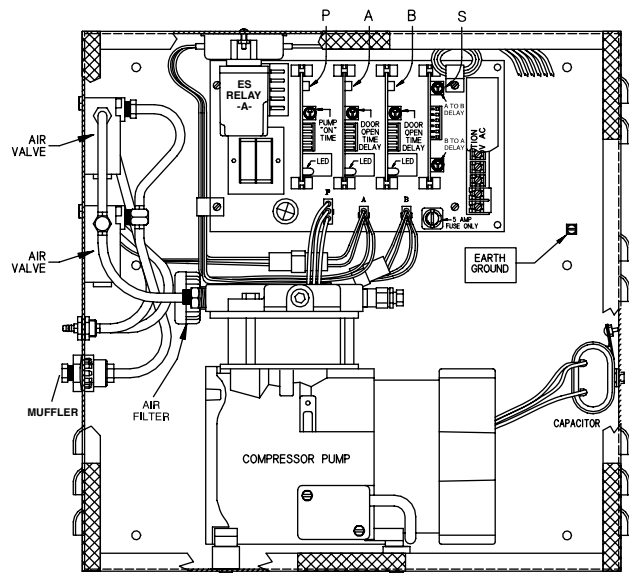
7981 AND ES7981 CONTROL BOX

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.



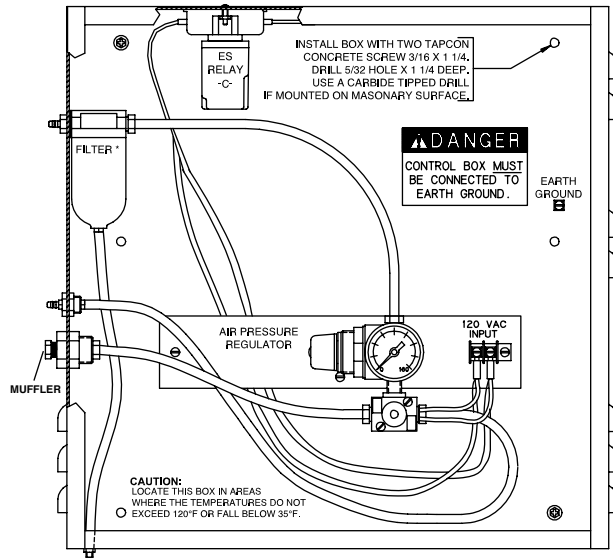
7900 SERIES CONTROL BOXES

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

1. 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.
2. Locate a 7900/7980/7949 Series control box where the temperatures do not exceed 120°F or fall below 35°F.
3. 7901, 7902 and 7949 control box input 120V AC @ 1 amp. 7981 and 7982 control boxes input 120V AC @ 5 amp.
4. Output voltage is 12V DC @ 0.25 amp. max.
5. Air pressure input, 80 PSI minimum/100 PSI maximum, required for 7901, 7902 and 7949.
6. Regulated air output up to 80 PSI for Auto Equalizer.
7. Auto Equalizers require approximately 0.5 cfm airflow in heavy traffic.
8. All control boxes are 15" x 15" x 6".

7900 SERIES CONTROL BOX

AIR FILTER, -329

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

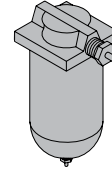
329



AIR FILTER, -329G

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

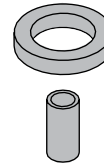
329G



FILTER AND SEAL, -929

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

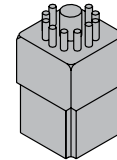
929



RELAY, -390

Single pole, double throw (SPDT) relay only for 7901, 7902, 7981, or 7982 Series control boxes.

390 (A & B)
390C



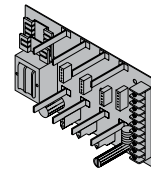
RELAY, -390C

Double pole, double throw (DPDT) relay only for 7949 Series blow open control box.

POWER SUPPLY BOARD, -900

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

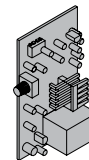
900



TIMER CARD, -903

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.

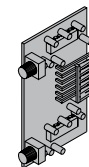
903



SEQUENCER CARD, -3426

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.

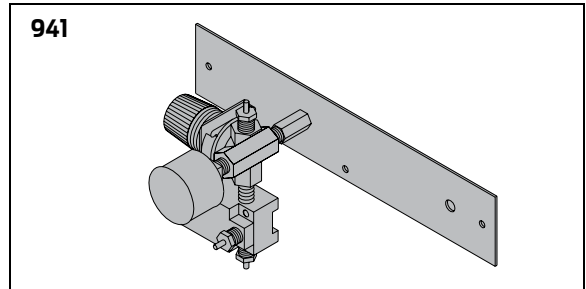
3426



7900 SERIES CONTROL BOX

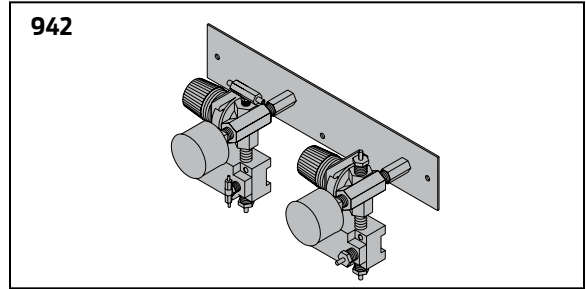
VALVE ASSEMBLY, -941

Regulator valve assembly for 7901 Series control box.



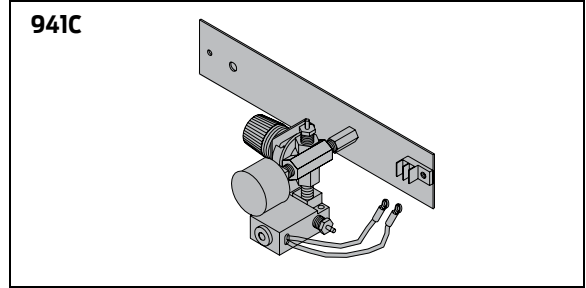
VALVE ASSEMBLY, -942

Regulator valve assembly for 7902 Series control box.



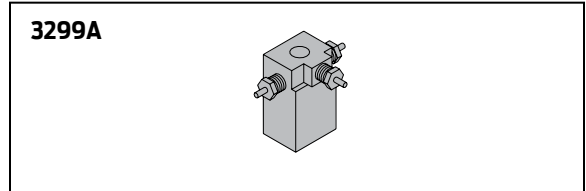
VALVE ASSEMBLY, -941C

Regulator valve assembly for 7949 Series blow open control box.



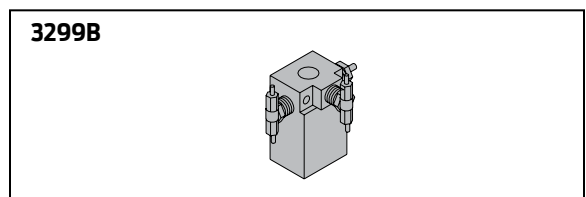
SOLENOID VALVE ASSEMBLY, -3299A

Air valve assembly for 7981 Series control box or the 'A' circuit valve assembly for the 7982 Series control box.



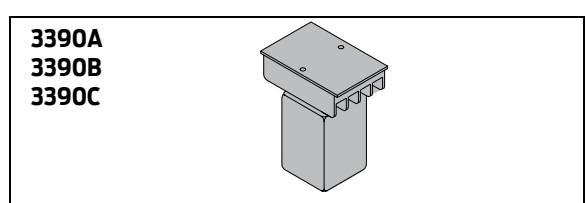
SOLENOID VALVE ASSEMBLY, -3299B

Air valve assembly for the 'B' circuit in the 7982 Series control box.



RELAY PACKAGE 'A', -3390A

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.



RELAY PACKAGE 'B', -3390B

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.

RELAY PACKAGE 'C', -3390C

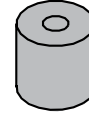
ES relay assembly in 7949 Series blow open control box. Includes -390C relay, base, and wires. Can be added to standard 7949 Series blow open control box to convert to ES operation. Relay package, -3390C is included when ordering a 7949ES Series control box.

7900 SERIES CONTROL BOX

ISOLATOR, -962

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

962



MUFFLER, -293G

Exhaust muffler for 7901, 7902, 7949, 7981, and 7982 Series control boxes.

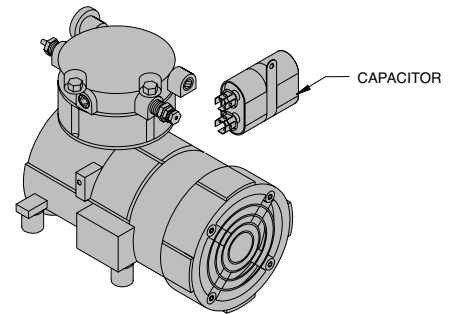
293G



COMPRESSOR ASSEMBLY, -3960

Internal air pump assembly for 7981 or 7982 Series control box. Includes starter capacitor, -962 Isolators, and -329 air filter.

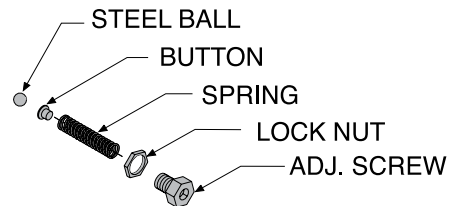
3960



COMPRESSOR SERVICE KIT, -3592

Internal components for pressure release valve on -3960 Compressor Assembly.

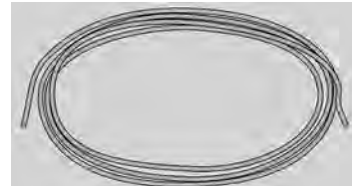
3592



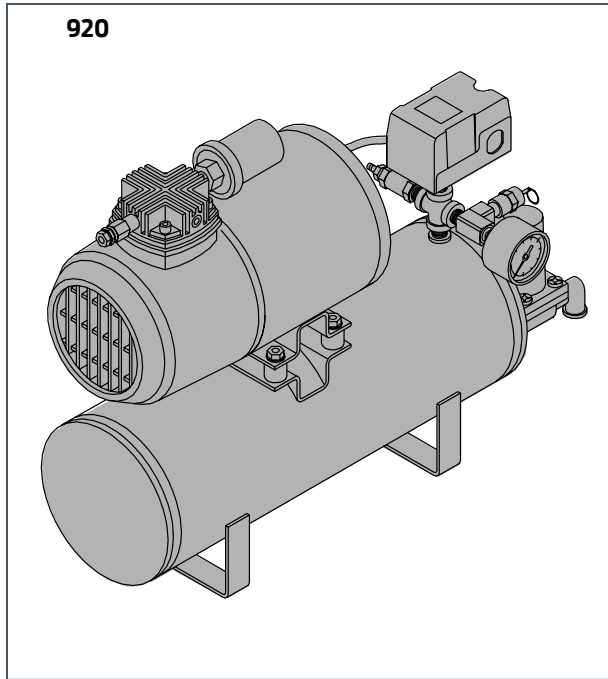
PNEUMATIC TUBING, 925

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.

925



900 SERIES COMPRESSORS



Compressor size recommendations are based on normal usage for the number of operators listed. All LCN supplied compressors include an automatic drain feature to periodically exhaust condensation from the pressure tank. Consider sound level, vibration, space requirements, condensation drainage, mounting, and placement of air lines when selecting compressor location. Provide adequate ventilation to avoid overheating the compressor. Compressors carry the compressor manufacturer's limited one year warranty. Contact LCN for details.

COMPRESSOR INSTALLATION NOTES

1. When usage is infrequent (less than two activations per minute), use one size smaller compressor.
2. Locate compressor so less than 500 linear feet of LCN 925 tubing is required between compressor and control box.
3. Locate compressor where the temperatures do not exceed 120° F or fall below 35° F.
4. Projects requiring ASME certification of the pressure tank require a 921 or larger compressor.
5. LCN 925 tubing or 3/16" metal tubing (by others) must be used to maintain warranty. Contact LCN for details.

LCN does not manufacture the compressors listed. For warranty information and service parts, contact the compressor manufacturer.

920 (illustrated)

Operators	Up to 2 Auto Equalizers.
Capacity	2 gallon pressure tank.
Dimensions	23" long, 9" wide, 17" high.
Electrical	115V AC 60 Hz, Single Phase.
Amperage	6.0 in-rush, 4.0 continuous.
Motor H.P.	0.17
Acoustical	73 dba @ 3', 68 dba @ 20'

921

Operators	Up to 4 Auto Equalizers.
Capacity	12 gallon pressure tank.
Dimensions	31" long, 14" wide, 21" high.
Electrical	115V AC 60 Hz, Single Phase.
Amperage	9.0 in-rush, 6.0 continuous.
Motor H.P.	0.25
Acoustical	78 dba @ 3', 71 dba @ 20'

922

Operators	Up to 8 Auto Equalizers.
Capacity	20 gallon pressure tank.
Dimensions	33" long, 16" wide, 27" high.
Electrical	115V AC, 60 Hz, Single Phase.
Amperage	25.0 in-rush, 10.0 continuous
	or
	230V AC, 60 Hz, Single Phase
	19.0 in-rush, 5.0 continuous.
Motor H.P.	0.50
Acoustical	81 dba @ 3', 73 dba @ 20'

923

Operators	Up to 20 Auto Equalizers.
Capacity	30 gallon pressure tank.
Dimensions	38" long, 23" wide, 30" high.
Electrical	115V AC, 60 Hz, Single Phase
Amperage	85.0 in-rush, 22.0 continuous
	or
	230V AC, 60 Hz, Single Phase
	50.0 in-rush, 11.0 continuous.
Motor H.P.	1.50
Acoustical	83 dba @ 3', 75 dba @ 20'

ELECTROHYDRAULIC POWERED SYSTEMS

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.

■ "Plug & Play" Sensors

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

■ "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.

Continued on page 36

ELECTROHYDRAULIC POWERED SYSTEMS

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.
- UBC 7.2 (1997) for positive pressure plus UL 10B and UL 10C listing.
- 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.
- cUL 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.

ELECTROHYDRAULIC POWERED SYSTEMS

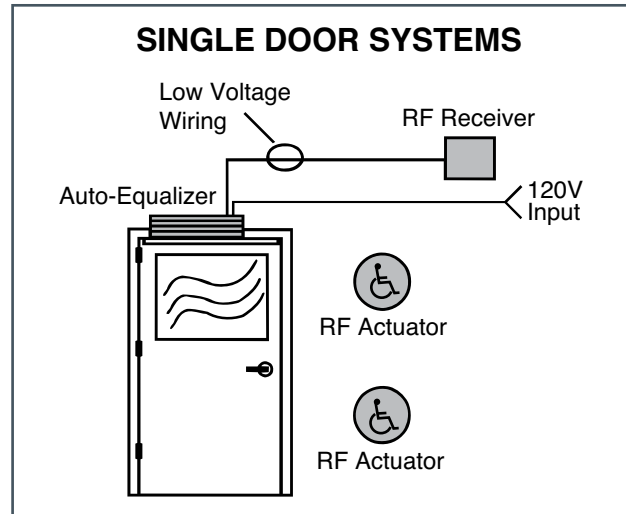
This page illustrates examples of typical Electric LCN systems. Please consult your local SSC representative or LCN for assistance with specific installations and material requirements.

SINGLE DOOR SYSTEM (WIRELESS)

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

How It Works:

Wireless RF actuators and receiver, powered by the Auto Equalizer simplify installation and minimize installation costs. For automatic door operation, touching either actuator signals the receiver and controller module to open the door to 90°. The door is held there until the system times out, then full spring power is applied to reliably close and latch the door. Door opening speed and hold open time are adjustable on the controller. Closing power and speed are adjustable on the cylinder assembly. If not actuated, the Auto Equalizer functions as a full featured door closer.



BILL OF MATERIALS

Qty.	Part No.	Description
1	4631	Auto Equalizer
2	8310-3856WS	Wireless Actuators
1	8310-865	Wireless Receiver

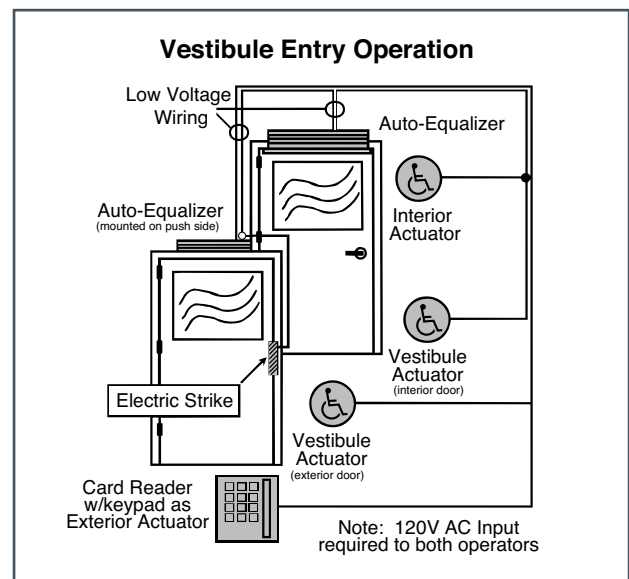
VESTIBULE ENTRY SYSTEM (WIRED)

- 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.

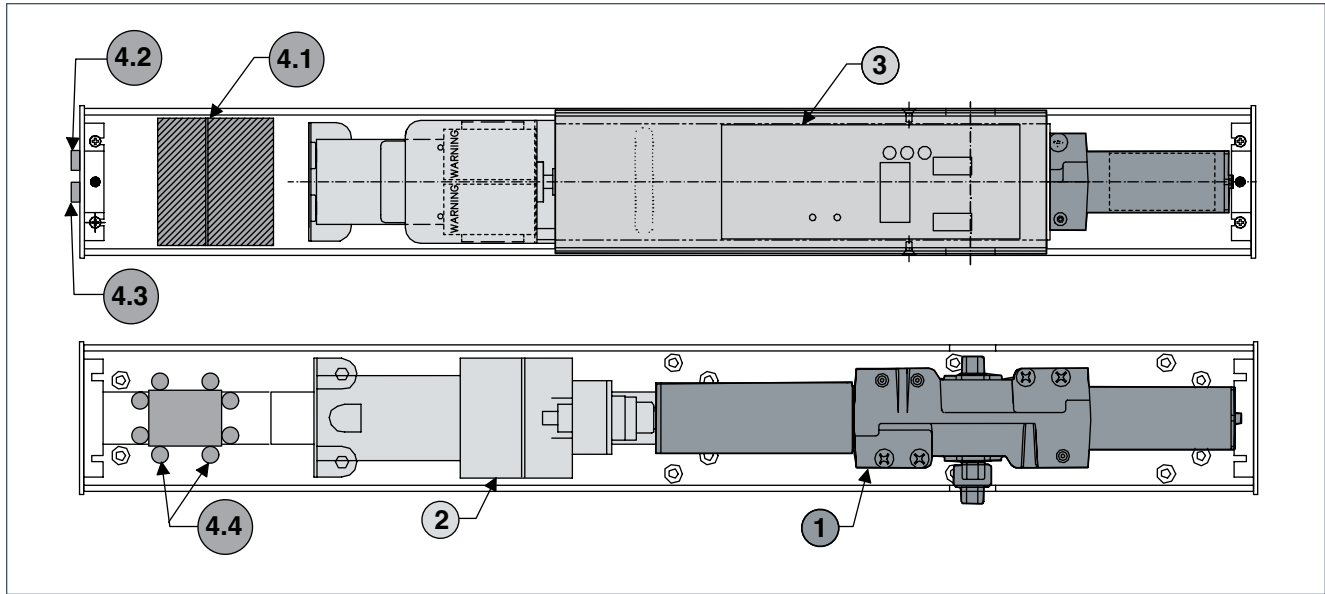


BILL OF MATERIALS

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

4630/4640 ELECTROHYDRAULIC POWERED SYSTEMS



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.

ELECTROHYDRAULIC POWERED SYSTEMS

LCN DIGITAL CONTROL BOX

Opening Speed Adjustment

Limited to a minimum of 3 seconds to backcheck (approx. 70°)

Opening Force Adjustment

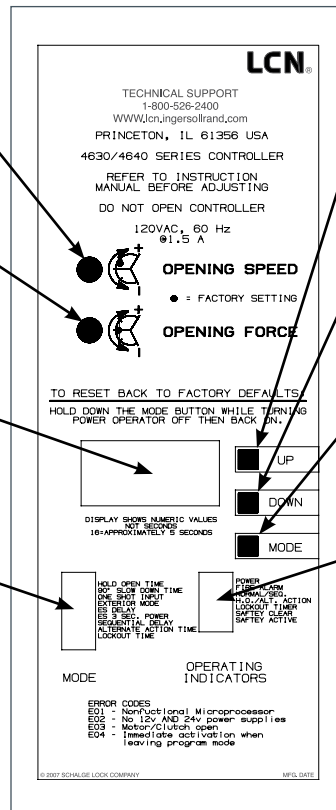
Maximum of 15 lb-f to stop door swing

Time Display

Displays numeric value relating to timing adjustments (16 = approx. 5 seconds)

Mode Indicator

Indicates programming mode currently being displayed



Up Button

Increases time or changes from OFF to ON when programming

Down Button

Decreases time or changes from OFF to ON when programming

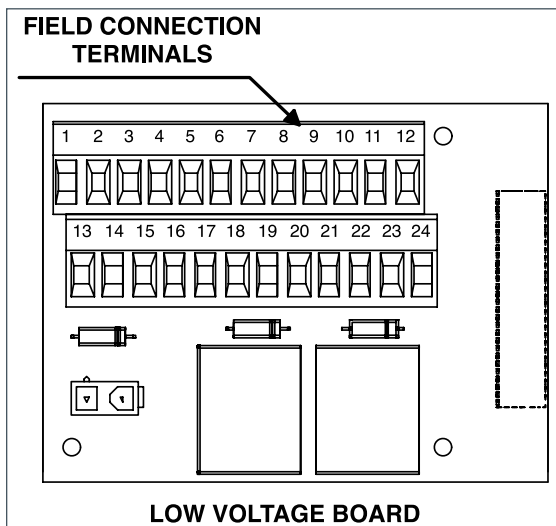
Mode Button

Advances through programming setups on Mode Indicator

Operating Indicators

Displays operating information about internal functions and external hardware

LCN LOW VOLTAGE (CLASS 2 NEC) ELECTRICAL CONNECTIONS



FUNCTION

Actuator - Normal Input (N.O.)
Actuator - Sequential Input (N.O.)
Actuator - Alternate Action (N.O.)
Actuator - Continuous (N.O.)
Sequential Output
Stop Side Safety (N.O.)
Swing Side Safety (N.O.)
Fire Alarm Contact (N.C.)
Auxiliary Relay Contacts (5 amp max)

E.S. Relay Contacts (5 amp max)

12V DC & 24V DC Negative*
12V DC Positive*
24V DC Positive*

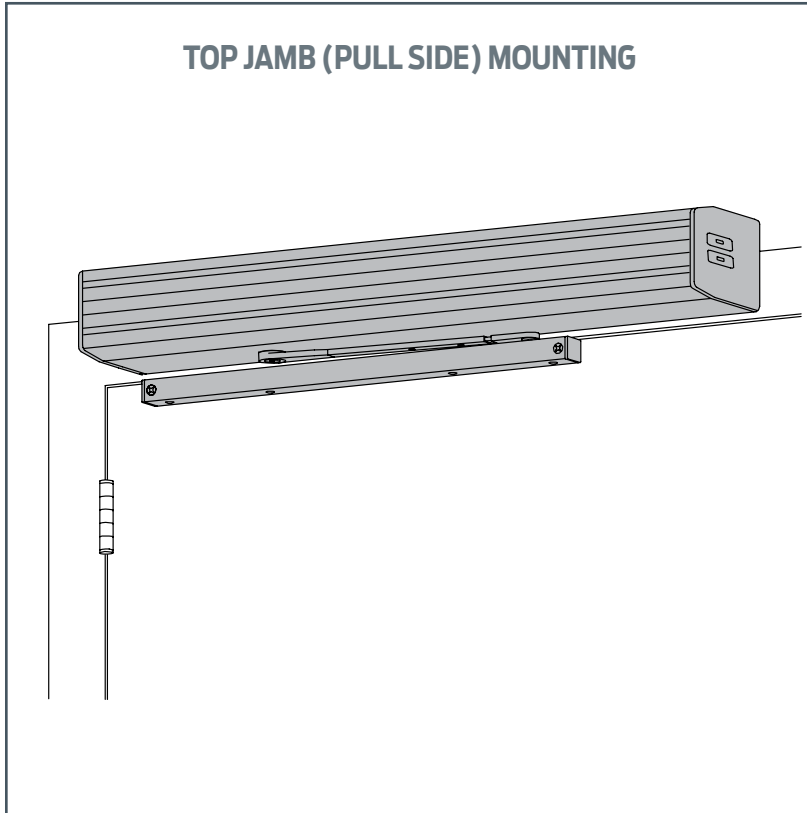
TERMINAL

16 & 17 or 18 & 19
8 & 19
15 & 17
6 & 17
9
19 & 20
19 & 21
13 & 14 (Fire Shunt)
10 - Common
11 - N.O.
12 - N.C.
22 - Common
23 - N.O.
24 - N.C.
2, 4, 13, 17, & 19
5 & 7
1 & 3

* NOTE: 1 Amp max load between 12V and 24V DC outputs.

4630 SERIES

FEATURES



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.

- Digital Control Box.
- Utilizes a 4040 Heavy Duty Door Closer.
- On-Board Diagnostics.
- On-Board Power Supply.
- Factory-Default Memory.
- Includes "No Destruct" Drive System.
- Guard Rails or Safety Mats not required.

4630 Series is UL and cUL listed with standard arm for self-closing doors and meets the provisions of ANSI Standards A117.1, A156.19, and the Americans with Disabilities Act.

- Standard, top jamb (pull side) mounted 4630 Series closer shipped with single lever (standard) arm, metal cover, standard track, and wood and machine screw pack. Actuators available separately, see pages 122-137.
- Meets ADA requirements (power mode).
- Non-sized cylinders for interior doors to 4'0" and exterior doors to 3'0".
- Non-handed for either right or left swinging door.
- 4630 has easily accessible switches to provide on/off and continuous hold open functions. 4630 with CS option provides concealed on/off power switch. Control module provides all timing and sequential door functions, electric strike controls and adjustments for opening speed and force.
- Standard or optional custom powder coated finish, end caps are black.
- Optional plated finish on cover, arm, and fasteners.

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	90°	STANDARD (SINGLE)	REGULAR (DOUBLE)	EXTRA DUTY	CUSH-N-STOP	SPRING CUSH
●	○	○	○	●	●	○	●	●	○	○	○	○	○	○	○	○	○	○	○

● 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

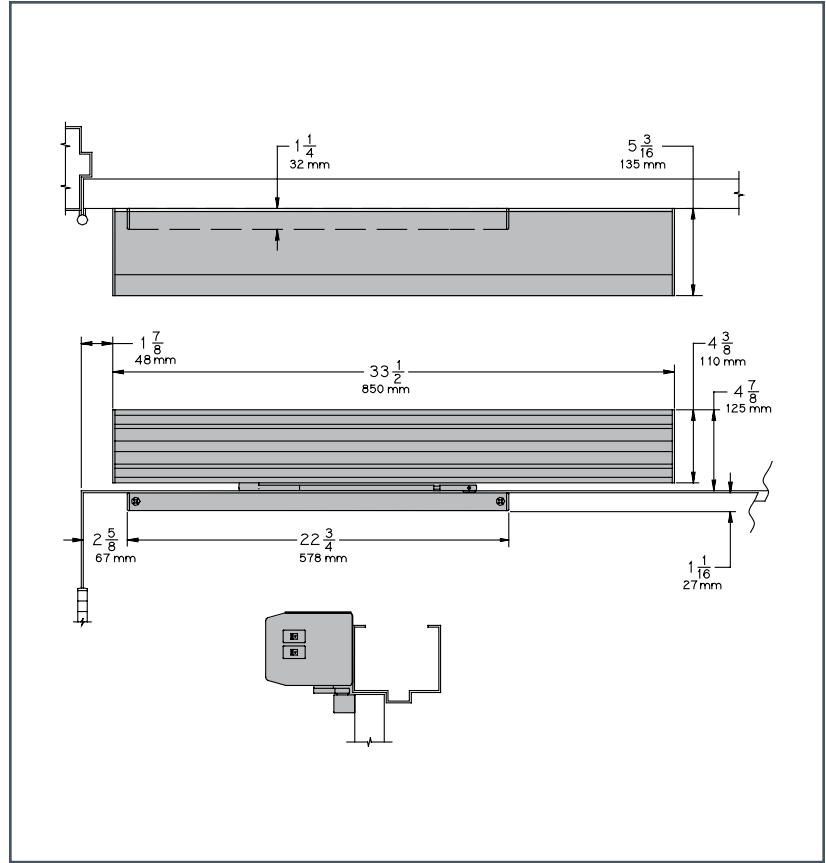
TOP JAMB (PULL SIDE) MOUNTING

MAXIMUM OPENING

Templating allows 90° power opening and 170° manual opening.

Please note that many track style door closers are capable of allowing 180° of door swing. Track style closers are at their weakest closing force at 180°. Consult factory for applications where exterior or large/heavy door must swing 180°.

Consult factory for all pivot mounted installations.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended.
- **Reveal** should not exceed $\frac{1}{8}$ " (3 mm).
- **Head Frame** minimum 2" (51 mm).
- **Top Rail** minimum $1\frac{1}{8}$ " (29 mm).
- **Opening Time and Force** are variable by adjustments to the electronic control module located on the operator assembly. Maximum hold open time adjustable up to approximately five minutes.
- **System Diagram** See "AUTOMATIC OPERATORS" section pages 36 for typical system wiring and pages 37-38 for electrical data.

Special Templates

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

4630 SERIES

CYLINDERS

CYLINDER ONLY, 4631-3971

Standard, non-handed, cast iron cylinder.

CYLINDER ASSEMBLY, 4631-3071

Standard, non-handed, cast iron cylinder and mounting plate.
Includes; 4630-3454 Motor Clutch, 4630-3180 I/O Board Assembly and 4630-3462 Controller.

CYLINDER ASSEMBLY, 4631-3071CS

Standard, non-handed, cast iron cylinder and 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).

COVERS

COVER, 4630-72MC

Standard, non-handed metal cover.

TRACKS

STANDARD TRACK, 4630-3038

Standard non-handed track.
Will not accept hold open clip or bumper assembly.

ARMS

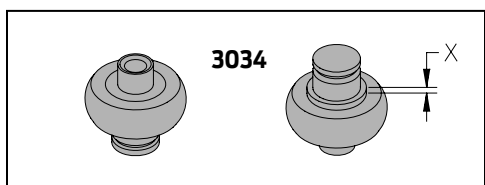
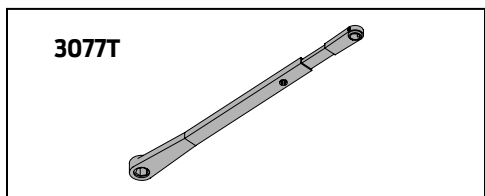
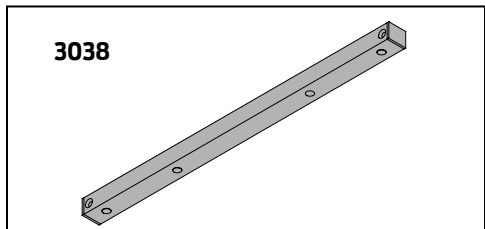
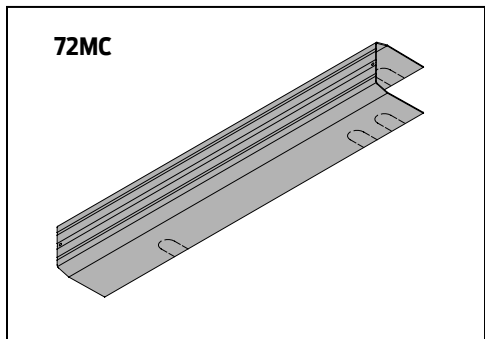
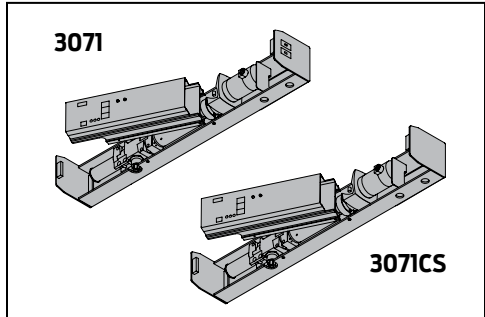
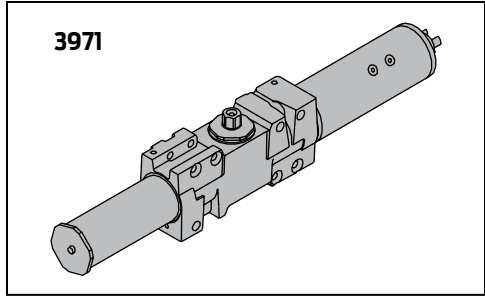
STANDARD ARM, 4630-3077T

Non-handed arm.
Track roller not included with arm.

INSTALLATION ACCESSORIES

TRACK ROLLER, 4630-3034

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



4630 SERIES

INSTALLATION ACCESSORIES

SWITCH END CAP, 4630-334

End cap (black powder coat finish only) with cut outs for installing on/off and hold open switches.

BLANK END CAP, 4630-334-2

Black powder coat only.

SWITCH END CAP, 4630-334CS

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

ON/OFF SWITCH ASSEMBLY, 4630-3179-1

Black rocker switch. Plugs into high voltage PC board.

HOLD OPEN SWITCH ASSEMBLY, 4630-3179-2

Black rocker switch. Field wired to low voltage PC board.

PC BOARD ASSEMBLY, 4630-3180

High and low voltage PC boards connected to mounting bracket.

MOTOR/CLUTCH ASSEMBLY, 4630-3454

A geared assembly in an LCN power operator that incorporates a "no destruct" feature.

CONTROL BOX ASSEMBLY, 4630-3462

Digital controller with built-in 12/24 VDC power supply. Programming and timing functions are adjusted on controller.

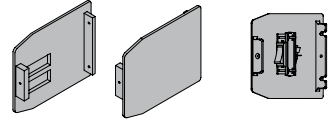
AC POWER CABLE, 4630-3498-2

2 wire cable to connect 120 VAC from PC board assembly to controller.

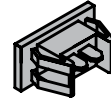
RIBBON CABLE CONNECTOR, 4630-3498-1

16 wire ribbon cable connecting 1-24 pin terminal connectors to controller.

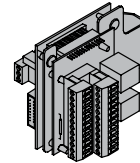
334
334-2
334CS



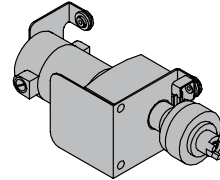
3179-1
3179-2



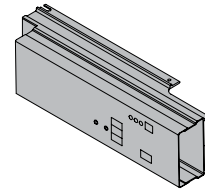
3180



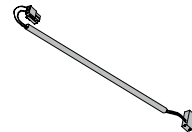
3454



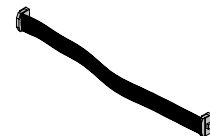
3462



3498-2



3498-1



4630 SERIES

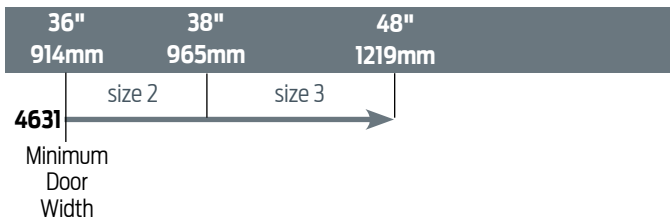
TABLE OF SIZES

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).

HOW-TO-ORDER 4630 SERIES CLOSERS

1. SPECIFY FINISH

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

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.

CLOSER OPTIONS

CYLINDER ASSEMBLY

- CS (concealed on/off switch)
(separate key switches suggested)

FINISH

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

SCREW PACK

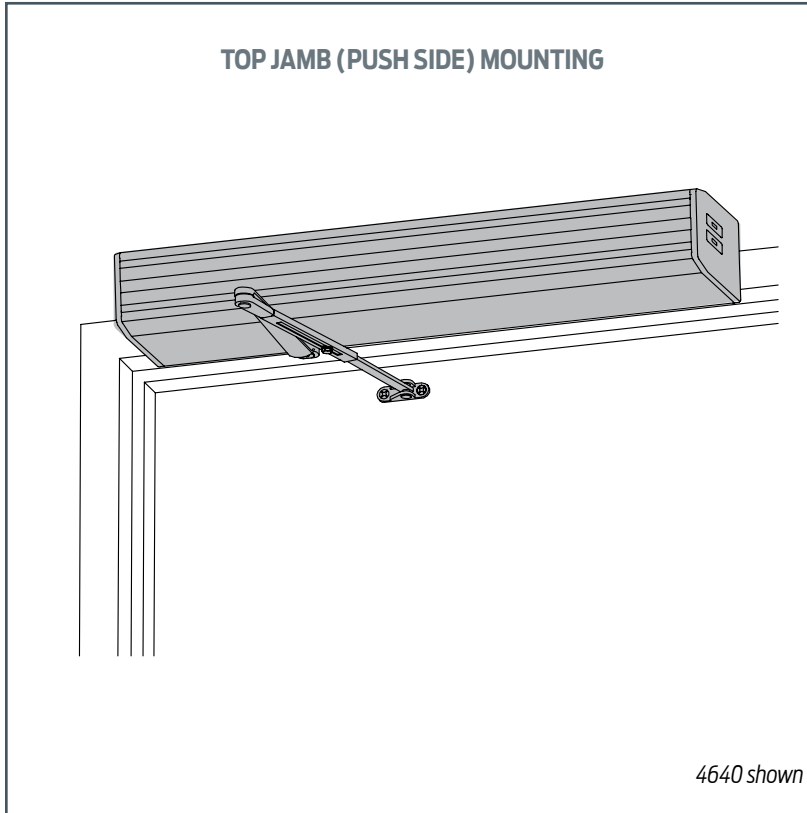
- TB*; Wood & Machine Screw (TBWMS)
- TORX Machine Screw (TORX)
- TB* & TORX Machine Screw (TBTRX)
*Specify door thickness if other than 1-3/4".

SPECIAL TEMPLATE

- ST-_____

4640 SERIES

FEATURES



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.

- NEW Digital Control Suite
- Utilizes a 4040 Heavy Duty Door Closer
- On-Board Diagnostics
- On-Board Power Supply
- Factory-Default Memory
- Includes "No Destruct" Drive System
- Guard Rails or Safety Mats not required

- Standard, top jamb (push side) mounted 4640 Series closer shipped with regular arm, metal cover, and wood and machine screw pack. Actuators available separately, see pages 122-137.
- Meets ADA, requirements (power mode).
- Non-sized cylinders for interior doors to 4' 6" and exterior doors to 3' 6".
- Non-handed for either right or left swinging door.
- 4640 has easily accessible switches to provide on/off and continuous hold open functions. 4640 with CS option provides concealed on/off power switch. Control module provides all timing and sequential door functions, electric strike controls and adjustments for opening speed and force.
- Standard or optional custom powder coated finish, end caps are black.
- Optional plated finish on cover, arm, and fasteners.

The 4640 Series is UL and cUL listed with regular arm for self-closing doors and meets the provisions of ANSI Standards A117.1, A156.19, and the Americans with Disabilities Act.

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	CUSH-N-STOP	SPRING CUSH
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

● AVAILABLE
○ NOT AVAILABLE

♿ Meets ADA requirements (power mode).
* See individual series for maximum manual opening.
** Switch provided for continuous hold open (4640 only).

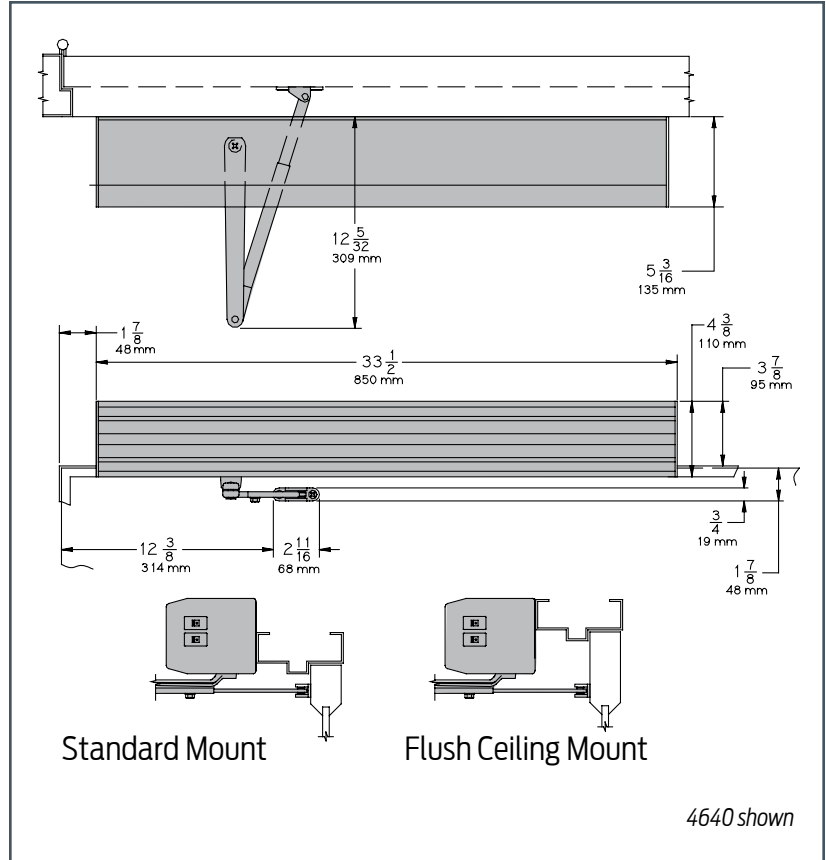
4640 SERIES

TOP JAMB (PUSH SIDE) MOUNTING

MAXIMUM OPENING

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

Consult factory for all pivot mounted installations.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Auxiliary Stop** is recommended.
- **Reveal** of 4-1/2" (114 mm) allows up to 90° power opening and 100° manual opening. 8" (203 mm) allows up to 90° power opening and 100° manual opening with LONG ARM where standard rod and shoe is replaced with optional LONG ROD AND SHOE, 4640-79LR.
- **Head Frame** minimum 1-3/4" (44 mm). The standard mounting plate is also used to meet flush ceiling conditions.
- **Top Rail** minimum 1-3/4" (44 mm).
Flush ceiling installation requires 3-3/4" (95 mm) minimum.
- **Opening Time and Force** are variable by adjustments to the electronic control module located on the operator assembly. Maximum hold open time adjustable up to approximately five minutes.
- **System Diagram** See "AUTOMATIC OPERATORS" section page 36 for typical system wiring and pages 37-38 for electrical data.

Options

- Long arm.

Special Templates

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

4640 SERIES

CYLINDERS

CYLINDER ONLY, 4642-3971

Standard, non-handed, cast iron cylinder.

CYLINDER ASSEMBLY, 4642-3071

Standard, non-handed, cast iron cylinder and mounting plate. Includes; 4640-3454 Motor Clutch, 4640-3180 I/O Board Assembly and 4640-3462 Controller.

CYLINDER ASSEMBLY, 4642-3071CS

Standard, non-handed, cast iron cylinder and 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).

COVERS

COVER, 4640-72MC

Standard, non-handed metal cover.

ARMS

REGULAR ARM, 4640-3077

Non-handed arm.

LONG ARM, 4640-3077L

Arm includes LONG ROD AND SHOE, 4640-79LR for deep reveals.

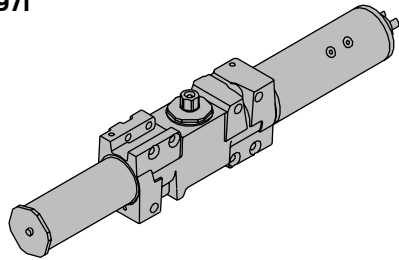
ROD & SHOE, 4640-79

Rod for use with regular arm.

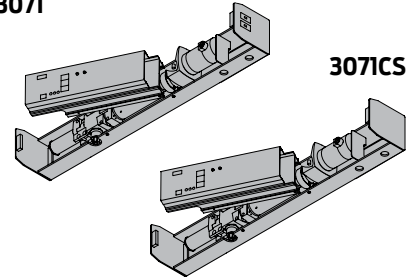
LONG ROD & SHOE, 4640-79LR

Long rod used for long arm with deep reveals.

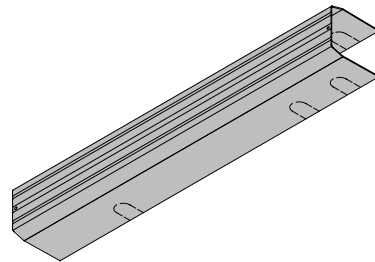
3971



3071

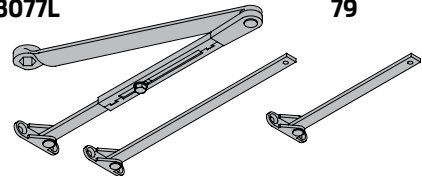


72MC



3077
3077L

79LR
79



4640 SERIES

INSTALLATION ACCESSORIES

SWITCH END CAP, 4640-334

End cap (black powder finish coat only) with cut outs for installing on/off and hold open switches.

BLANK END CAP, 4640-334-2

Black power coat only.

SWITCH END CAP, 4640-334CS

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

ON/OFF SWITCH ASSEMBLY, 4640-3179-1

Black rocker switch. Plugs into high voltage PC board.

HOLD-OPEN SWITCH ASSEMBLY, 4640-3179-2

Black rocker switch. Field wired to low voltage PC board.

PC BOARD ASSEMBLY, 4640-3180

High and low voltage PC boards connected to mounting bracket.

MOTOR/CLUTCH ASSEMBLY, 4640-3454

A geared assembly in an LCN power operator that incorporates a "no destruct" feature.

CONTROL BOX ASSEMBLY, 4640-3462

Digital controller with built-in 12/24 VDC power supply. Programming and timing functions are adjusted on controller.

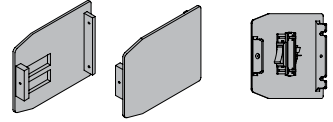
AC POWER CABLE, 4640-3498-2

2 wire cable to connect 120 VAC from PC board assembly to controller.

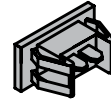
RIBBON CABLE CONNECTOR, 4640-3498-1

16 wire ribbon cable connecting 1-24 pin terminal connectors to controller.

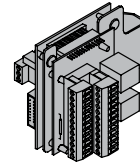
334
334-2
334CS



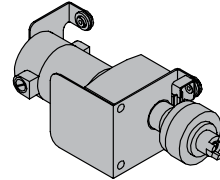
3179-1
3179-2



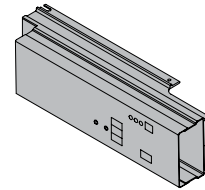
3180



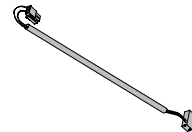
3454



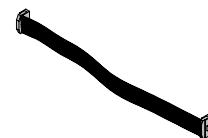
3462



3498-2



3498-1

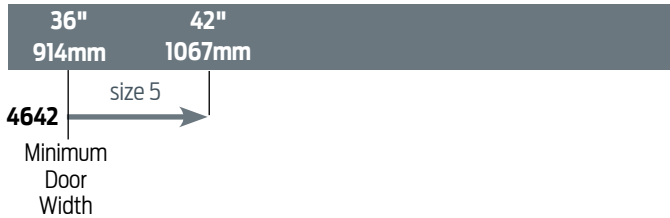


4640 SERIES

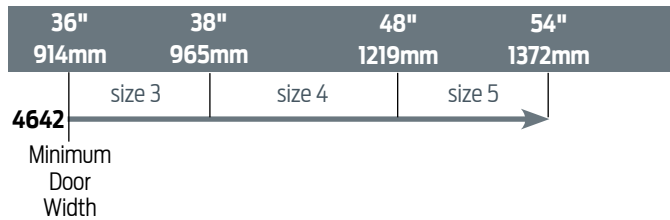
TABLE OF SIZES

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



→ Indicates recommended range of door width for closer size.

NOTE: Minimum door width 36" (914 mm).

HOW-TO-ORDER 4640 SERIES CLOSERS

1. SPECIFY FINISH

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

Closer will be shipped with:

- STANDARD CYLINDER,
- STANDARD METAL COVER,
- REGULAR ARM,
- WOOD and MACHINE SCREW PACK,
unless options listed below are selected.

CLOSER OPTIONS

CYLINDER ASSEMBLY

- CS (concealed on/off switch)
(separate key switches suggested)

FINISH

- 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-_____

ELECTROMECHANICAL POWERED SYSTEMS

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.

ELECTROMECHANICAL POWERED SYSTEMS

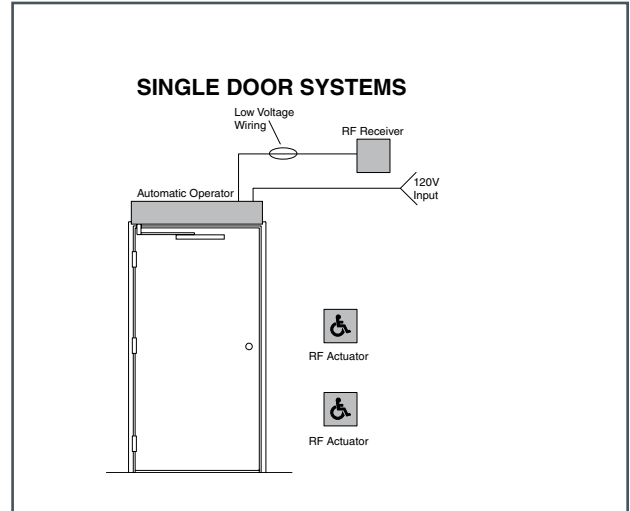
This page illustrates examples of typical Electromechanical LCN systems. Please consult your local SSC representative of LCN for assistance with specific installations and material requirements.

SINGLE DOOR 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

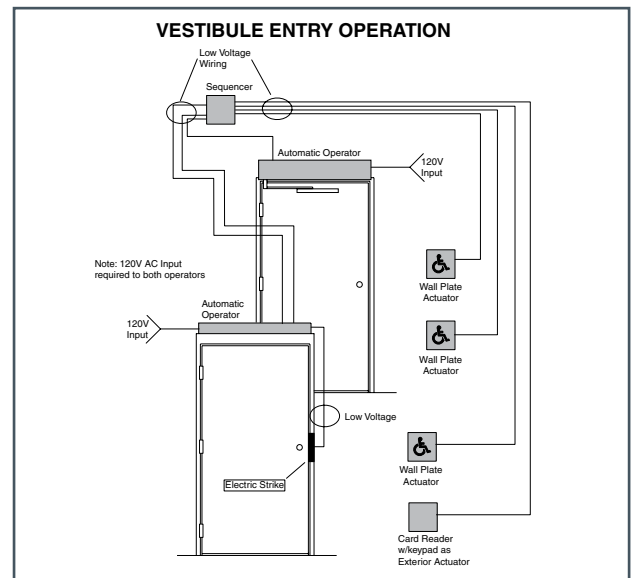
Qty.	Part No.	Description
1	9531	Automatic Operator (RH)
2	8310-3853WS	Wireless Actuators
1	8310-865	Wireless Receiver

VESTIBULE ENTRY 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.



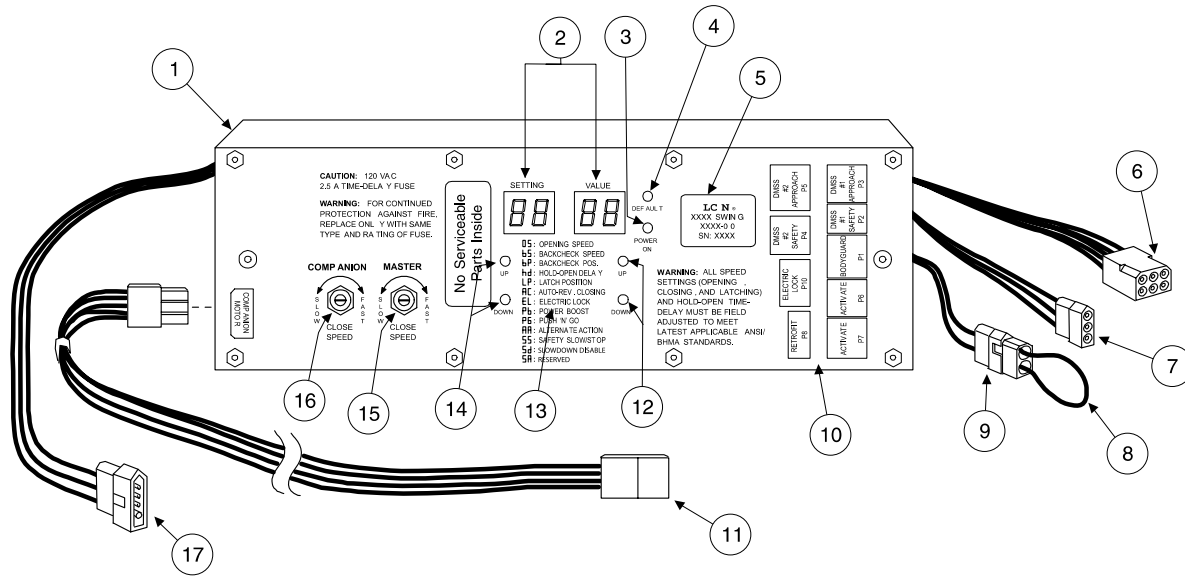
BILL OF MATERIALS

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

ELECTROMECHANICAL POWERED SYSTEMS

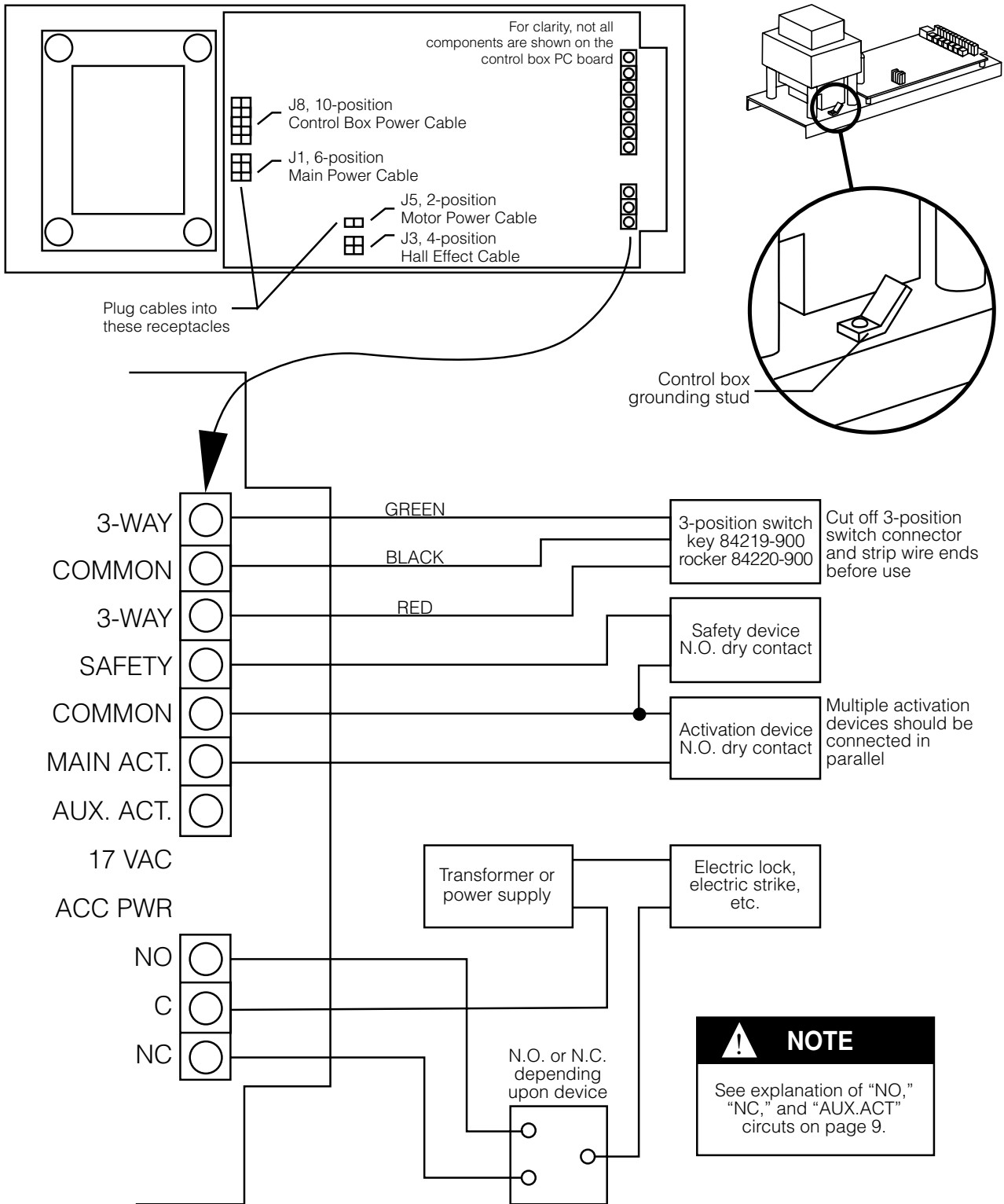
CONTROL BOX - 2800, 9500 SERIES



1. Control Box, 115VAC 60Hz, or 240 VAC 50/100 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

ELECTROMECHANICAL POWERED SYSTEMS

STANDARD CONTROL BOX - 9100 SERIES



ELECTROMECHANICAL POWERED SYSTEMS

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 7500 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.

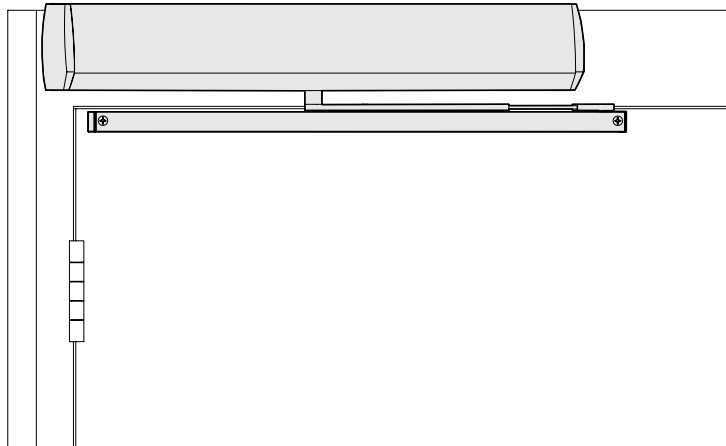
Programming Mode

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

9130 SERIES

SINGLE DOOR, SURFACE MOUNT (PULL) OFFSET PIVOT/BUTT HINGE

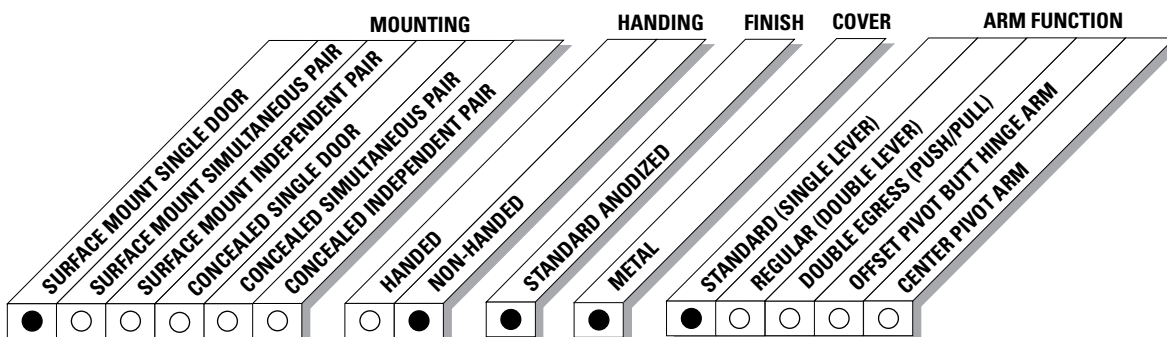


The 9130 BENCHMARK by LCN is an electrically powered low-energy operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for automatic opening applications that occasionally require manual opening. The BENCHMARK is a cost-effective solution for retrofitting an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

- Push 'N Go permits non-switch activation.
- Microprocessor control box ensures reliability and maintains customer settings.
- Power Boost allows for increased closing force near latch.

9130 Series is fully compliant with UL 325 and meets the provisions of ANSI A156.19. The 9130 Series is UL listed for fire-rated applications. The 9130 Series also meets the provisions of the Americans with Disabilities Act.

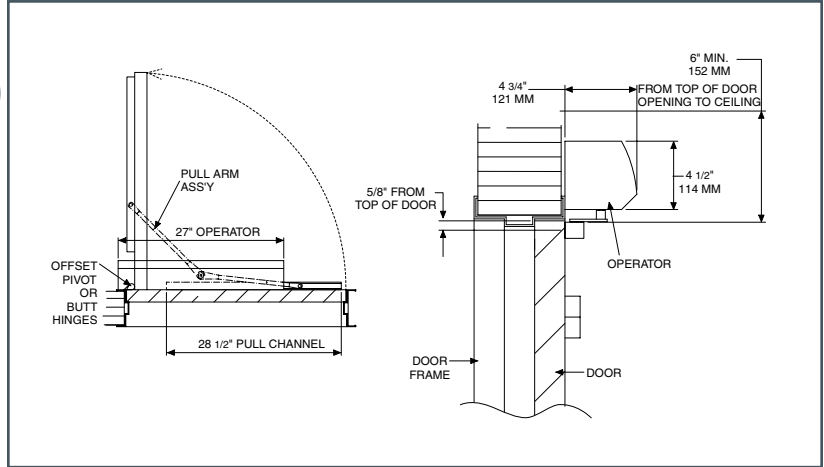
- 9130 Series operator is shipped with motor gearbox, control box, mounting plate, standard arm, metal cover, standard track, wood and machine screws. Actuators available separately, see pages 122-137.
- Single interior door, surface mounted.
- ADA compliant.
- On/Off switch included as standard.
- Non-handed for either right or left swinging door.
- 27" cover is standard. 36" optional.
- All potentiometers clearly labeled with their functions.
- LED lights indicate power to control box and motor gearbox.



● AVAILABLE
○ NOT AVAILABLE

9130 SERIES

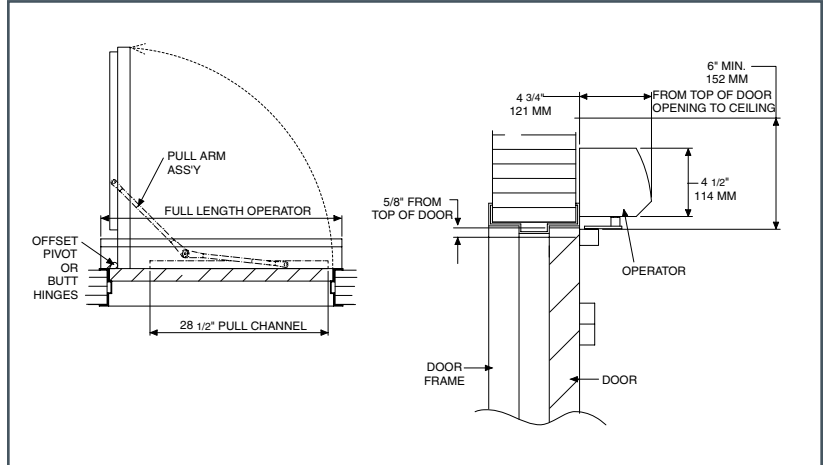
TOP JAMB SINGLE DOOR (OFFSET/BUTT HINGE, CENTER PIVOT, PULL, STANDARD COVER) MOUNTING



TOP JAMB SINGLE DOOR (OFFSET/BUTT HINGE, CENTER PIVOT, PULL, FULL COVER) MOUNTING

MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Reveal** should not exceed 1/8" (3 mm).
- **Head Frame** minimum 2" (51 mm).
- **Top Rail** minimum 2" (51 mm).
- **Opening and Closing Time** are variable by adjustments to the electronic control module located on the operator assembly. Maximum hold open time adjustable up to approximately 30 seconds.
- **System Diagram** see "AUTOMATIC OPERATORS" section pages 53 for typical system wiring and page 56 for electrical data.

Contact LCN Product Support for installation assistance.

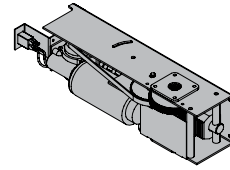
9130 SERIES

MOTOR GEARBOX

MOTOR GEARBOX ASSEMBLY, 9130-3454S

Driving mechanism for operator. (Switch included).
For 27" unit.

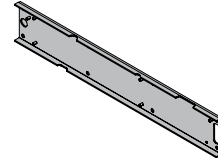
3454
3454S



MOTOR GEARBOX ASSEMBLY (W/O SWITCH), 9130-3454

Driving mechanism for operator. (Switch not included).
For full length unit (36").

3018



BRACKETS

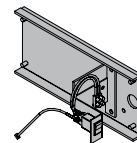
MOUNTING BRACKET, 9130-3018

Standard mounting bracket.

SWITCH BRACKET – 29" CABLE, 9130-3351-1

Bracket used to locate switch at end of cover on full length unit.

3351-1
3351-2



SWITCH BRACKET – 41" CABLE, 9130-3351-2

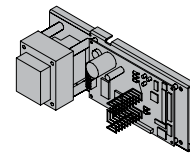
Bracket used to locate switch at end of cover on full length unit.

CONTROL BOXES

CONTROL BOX, (120v), 9130-3462

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

3462

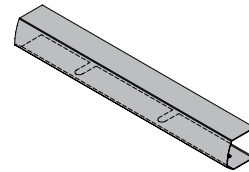


COVERS

METAL COVER, 9130-72MC

Standard, 27", non-handed, extruded aluminum cover.

72MC
72FC



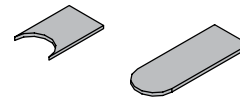
FULL METAL COVER, 9130-72FC

36", non-handed, extruded aluminum cover.

COVER INSERT 9130-163

Used to cover operator shaft opening. (Includes 2 pieces).

163



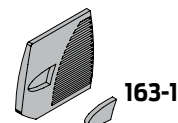
COVER END CAP INSERT, 9130-163-1

Used to cover switch hole opening.

COVER END CAP, 9130-334

Black plastic end caps. (Includes 9130-163-1 cover and cap insert).

334



Note (*334 includes 163-1)

9130 SERIES

TRACKS

STANDARD TRACK, 9130-3038

Standard, non-handed track.

TRACK END CAP, 9130-73

Black plastic end caps.

ROLLER, 9130-3034

Quiet low friction roller assembly.

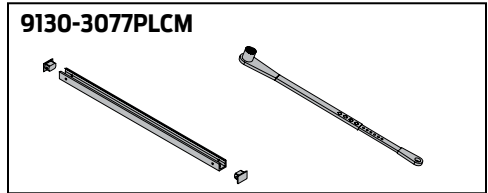
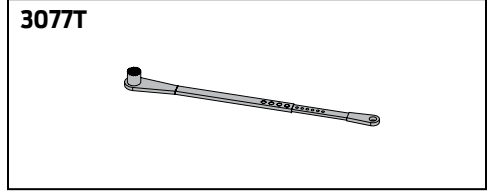
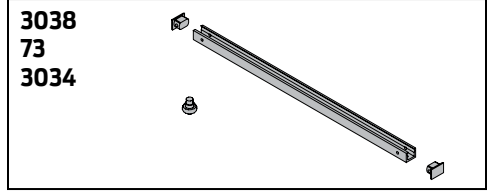
ARMS

STANDARD ARM, 9130-3077T

Non-handed arm. Track roller not included.

STANDARD ARM with 9130-3077PLCM

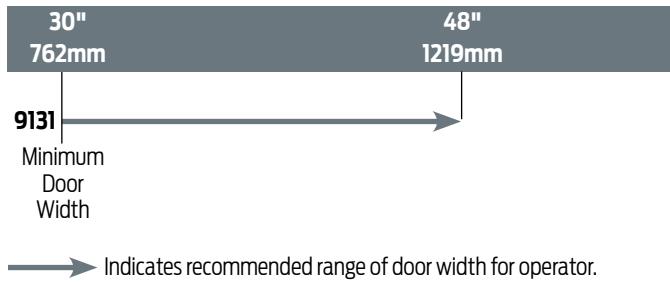
Non-handed arm and standard non handed track.



9130 SERIES

TABLE OF SIZES

DOOR WIDTH



NOTE: For All Benchmark Series.

30" minimum door width for 27" pull operator.

36" door width only for full length pull operator.

HOW-TO-ORDER 9130 SERIES OPERATORS

1. SPECIFY FINISH

- Standard Anodized Finish _____
Aluminum or Dark Bronze.

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.*

OPERATOR OPTIONS

COVER

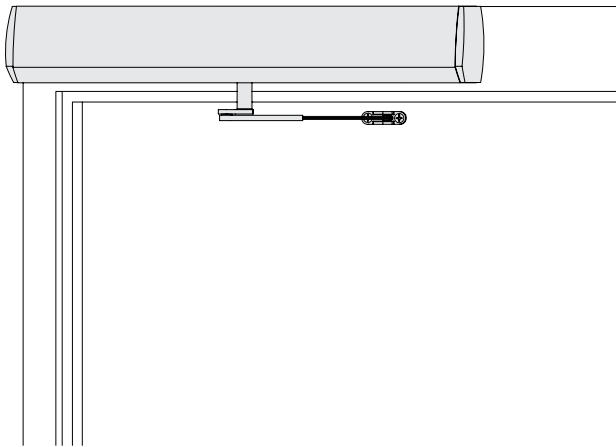
- 36" Full Cover.

ORDERING INFORMATION

9140 SERIES

FEATURES

SINGLE DOOR, SURFACE MOUNT (PUSH) OFFSET PIVOT/BUTT HINGE



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

- Push 'N Go permits non-switch activation.
- Microprocessor control box ensures reliability and maintains customer settings.
- Power Boost allows for increased closing force near latch.

- 9140 Series operator is shipped with motor gearbox, control box, mounting plate, regular arm, metal cover, standard track, wood and machine screw pack. Actuators available separately, see pages 122-137.
- Single interior door, surface mounted.
- ADA compliant.
- On/Off switch included as standard.
- Non-handed for either right or left swinging door.
- 27" cover is standard. 36" optional.
- All potentiometers clearly labeled with their functions.
- LED lights indicate power to control box and motor gearbox.

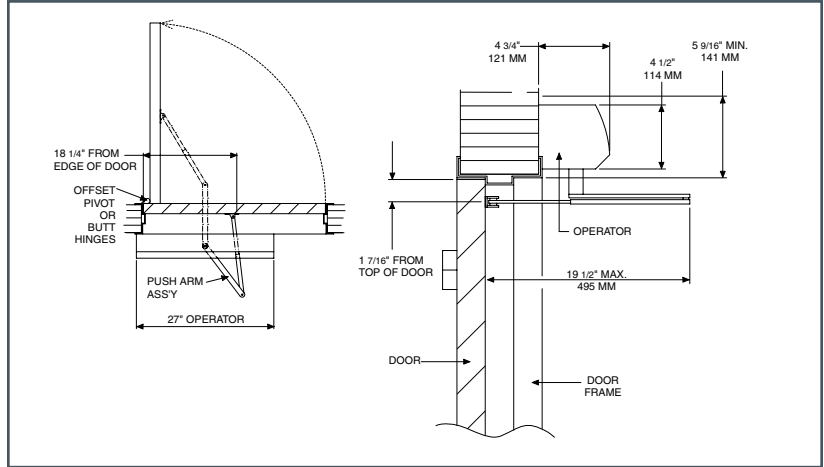
9140 Series is fully compliant with UL 325 and meets the provisions of ANSI A156.19. The 9140 Series is UL listed for fire-rated applications. The 9140 Series also meets the provisions of the Americans with Disabilities Act.

MOUNTING						HANDING		FINISH	COVER	ARM FUNCTION		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

● AVAILABLE
○ NOT AVAILABLE

9140 SERIES

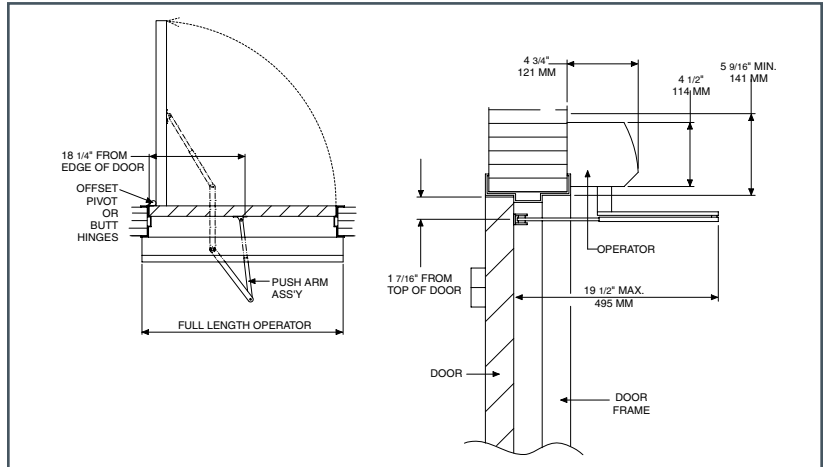
TOP JAMB SINGLE DOOR (OFFSET/BUTT HINGE, CENTER PIVOT, PUSH, STANDARD COVER) MOUNTING



TOP JAMB SINGLE DOOR (OFFSET/BUTT HINGE, CENTER PIVOT, PUSH, FULL COVER) MOUNTING

MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Reveal** for push installations should not exceed 6" (152 mm) for REGULAR ARM and 9-3/4" (248 mm) for LONG ARM.
- **Head Frame** minimum 2" (51 mm).
- **Top Rail** minimum 2" (51 mm). Flush ceiling installation requires 5-1/4" (133 mm) minimum.
- **Opening and Closing Time** are variable by adjustments to the electronic control module located on the operator assembly. Maximum hold open time adjustable up to approximately 30 seconds.
- **System Diagram** see "AUTOMATIC OPERATORS" section pages 53 for typical system wiring and page 56 for electrical data.

Contact LCN Product Support for installation assistance.

9140 SERIES

MOTOR GEARBOX

MOTOR GEARBOX ASSEMBLY, 9140-3454S

Driving mechanism for operator. (Switch included.) For 27" unit.

MOTOR GEARBOX ASSEMBLY (W/O SWITCH), 9140-3454

Driving mechanism for operator. (Switch not included.) For full length unit (36").

BRACKETS

MOUNTING BRACKET, 9140-3018

Standard mounting bracket.

SWITCH BRACKET – 29" CABLE, 9140-3351-1

Bracket used to locate switch at end of cover on full length unit.

SWITCH BRACKET – 41" CABLE, 9140-3351-2

Bracket used to locate switch at end of cover on full length unit.

CONTROL BOXES

CONTROL BOX, (120v), 9130-3462

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

COVERS

METAL COVER, 9140-72MC

Standard, 27", non-handed, extruded aluminum cover.

FULL METAL COVER, 9140-72FC

36" Full length, non-handed, extruded aluminum cover.

COVER INSERT 9140-163

Used to cover operator shaft opening. (Includes 2 pieces).

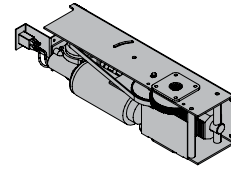
COVER END CAP INSERT, 9140-163-1

Used to cover switch hole opening.

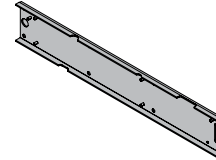
COVER END CAP, 9140-334

Black plastic end caps. (Includes 9130-163-1 cover and cap insert).

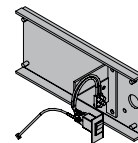
3454
3454S



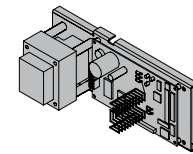
3018



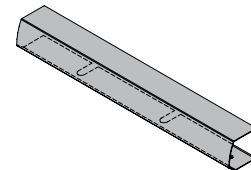
3351-1
3351-2



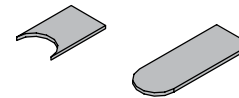
3462



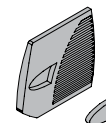
72MC
72FC



163



334



163-1

NOTE (*334 includes 163-1)

9140 SERIES

ARMS

REGULAR ARM, 9140-3077

Non-handed arm.

LONG PUSH ARM, 9140-3077L

Non-handed long arm.

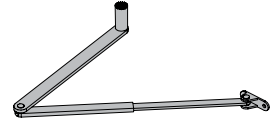
ROD & SHOE, 9140-79

Rod for use with regular arm.

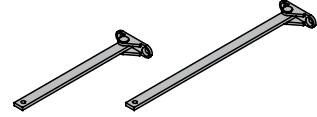
LONG ROD & SHOE, 9140-79LR

Long rod used with long arm, for deep reveals.

3077
3077L



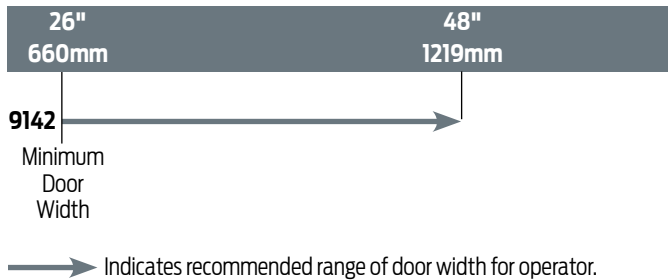
79LR
79



9140 SERIES

TABLE OF SIZES

DOOR WIDTH



NOTE: For All Benchmark Series.

30" minimum door width for 27" pull operator.

36" door width only for full length pull operator.

HOW-TO-ORDER 9140 SERIES OPERATORS

1. SPECIFY FINISH

- Standard Anodized Finish _____
Aluminum or Dark Bronze.

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.*

OPERATOR OPTIONS

COVER

- 36" Full Cover

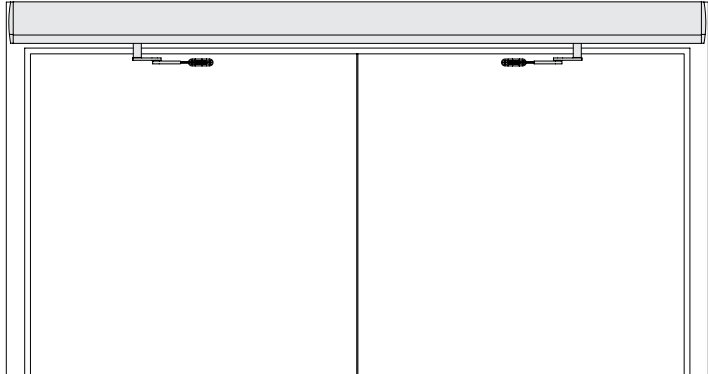
ARM

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

ORDERING INFORMATION

9150 SERIES

**PAIR DOOR, SURFACE MOUNT (PUSH)
OFFSET PIVOT/BUTT HINGE**

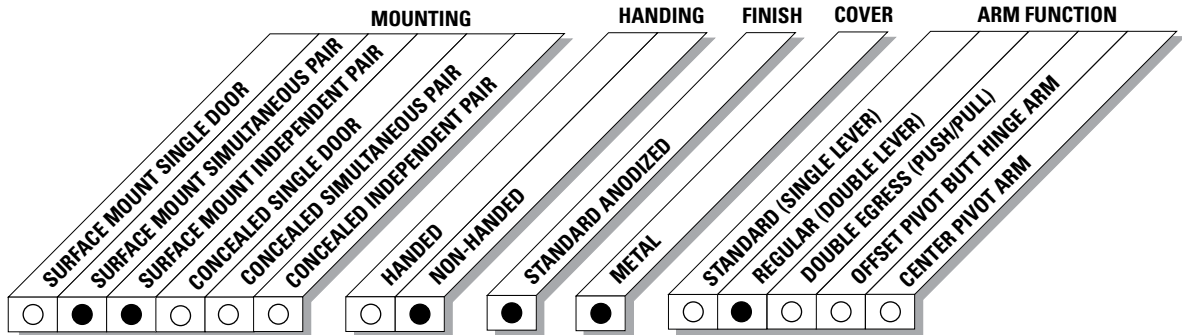


The 9150 BENCHMARK by LCN is an electrically powered low-energy operator. It provides easy access for people with disabilities, or the elderly. Designed primarily for automatic opening applications that occasionally require manual opening. The BENCHMARK is a cost-effective solution for retrofitting an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

- Push 'N Go permits non-switch activation.
- Microprocessor control box ensures reliability and maintains customer settings.
- Power Boost allows for increased closing force near latch.

- 9150 Series operator is shipped with motor gearboxes, control boxes, mounting plate, regular arms, metal cover, wood and machine screw packs. Actuators available separately, see pages 122-137.
- Pair of interior doors, surface mounted.
- ADA compliant.
- On/Off switch included as standard.
- Non-handed for either right or left swinging door.
- 72" cover is standard.
- All potentiometers clearly labeled with their functions.
- LED lights indicate power to control box and motor gearbox.

9150 Series is fully compliant with UL 325 and meets the provisions of ANSI A156.19. The 9150 Series is UL listed for fire-rated applications. The 9150 Series also meets the provisions of the Americans with Disabilities Act.



● AVAILABLE
○ NOT AVAILABLE

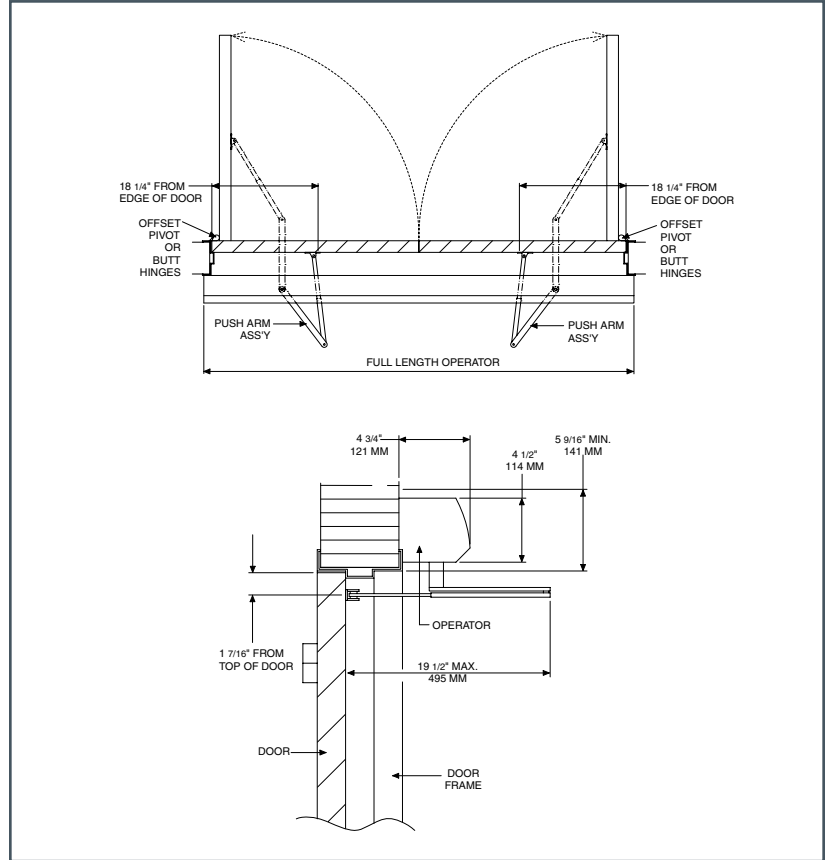
9150 SERIES

TOP JAMB, INDEPENDENT/ SIMULTANEOUS PAIR (OFFSET PIVOT/BUTT HINGE, CENTER PIVOT, PUSH) MOUNTING

Determined by wiring method during installation.

MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Reveal** for push installations should not exceed 6" (152 mm) for REGULAR ARM and 9-3/4" (248 mm) for LONG ARM.
- ▶ **Head Frame** minimum 2" (51 mm).
- **Top Rail** minimum 2" (51 mm). Flush ceiling installation requires 5-1/4" (133 mm) minimum.
- **Opening and Closing Time** are variable by adjustments to the electronic control module located on the operator assembly. Maximum hold open time adjustable up to approximately 32 seconds.
- **System Diagram** see "AUTOMATIC OPERATORS" section pages 53 for typical system wiring and page 56 for electrical data.

Contact LCN Product Support for installation assistance.

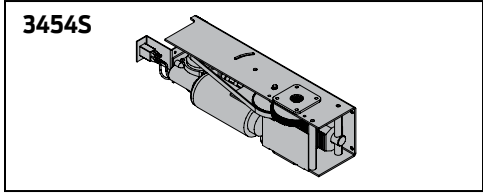
9150 SERIES

ACCESSORIES

MOTOR GEARBOX

MOTOR GEARBOX ASSEMBLY, 9150-3454S

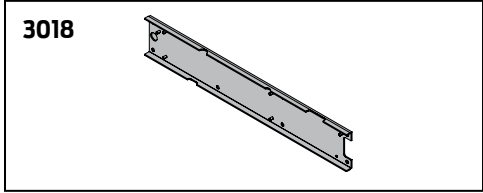
Driving mechanism for operator. (Switch included).



BRACKETS

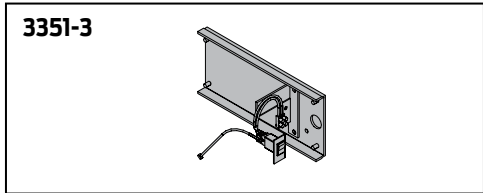
MOUNTING BRACKET, 9150-3018

Standard mounting bracket.



SWITCH BRACKET - 51" CABLE, 9150-3351-3

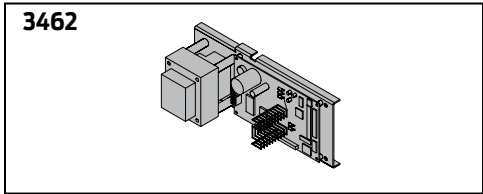
Bracket used to locate switch at end of cover on full length unit.



CONTROL BOXES

CONTROL BOX, (120v), 9150-3462

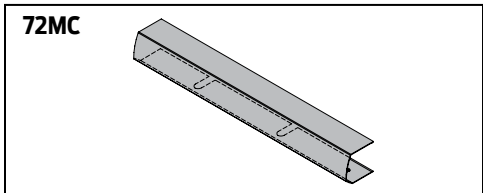
Electronic controlling device with power supply output and power boost feature for Benchmark.



COVERS

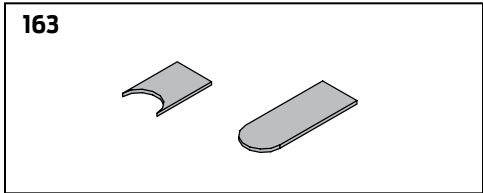
METAL COVER, 9150-72MC

Standard, 72", non-handed, extruded aluminum cover.



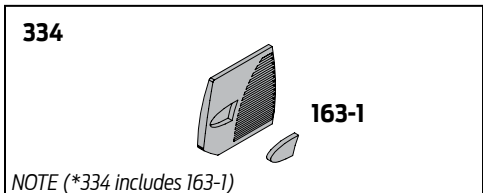
COVER INSERT 9150-163

Used to cover operator shaft opening. (Includes 2 pieces).



COVER END CAP INSERT, 9150-163-1

Used to cover switch hole opening.



NOTE (*334 includes 163-1)

COVER END CAP, 9150-334

Black plastic end Caps. (Includes 9130-163-1 cover and cap insert).

9150 SERIES

ARMS

REGULAR ARM, 9150-3077

Non-handed arm.

LONG ARM, 9150-3077L

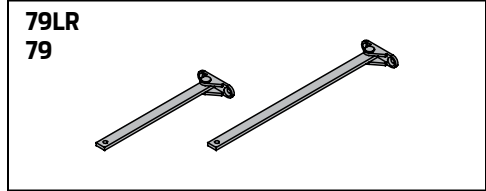
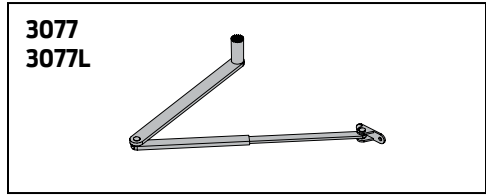
Non-handed long arm.

ROD & SHOE, 9150-79

Rod for use with regular arm.

LONG ROD & SHOE, 9150-79LR

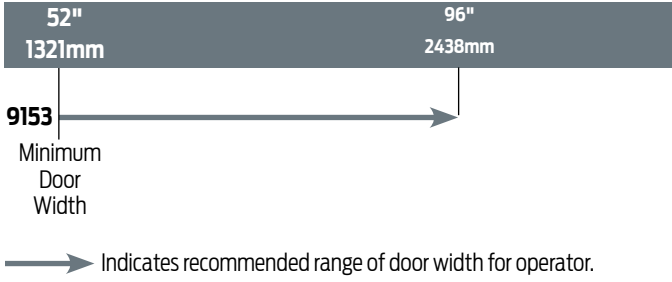
Long rod used with long arm for deep reveal.



9150 SERIES

TABLE OF SIZES

DOOR WIDTH



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

HOW-TO-ORDER 9150 SERIES OPERATORS

1. SPECIFY FINISH

- Standard Anodized Finish _____
Aluminum or Dark Bronze.

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.

OPERATOR OPTIONS

ARM

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

SENIOR SWING UNIQUE FEATURES

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

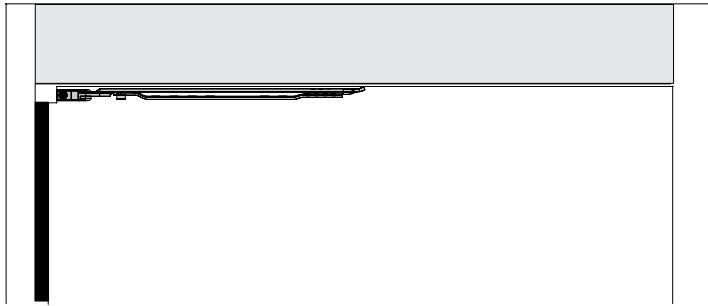
Control unit allows for quiet efficiency in operation. Combined with the all electromechanical unit, it eliminates unnecessary wear and prolongs the life of the unit.

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

**OPERATOR MOUNTS
SINGLE DOOR, OVERHEAD CONCEALED
*CENTER PIVOT
OFFSET PIVOT/BUTT HINGE**



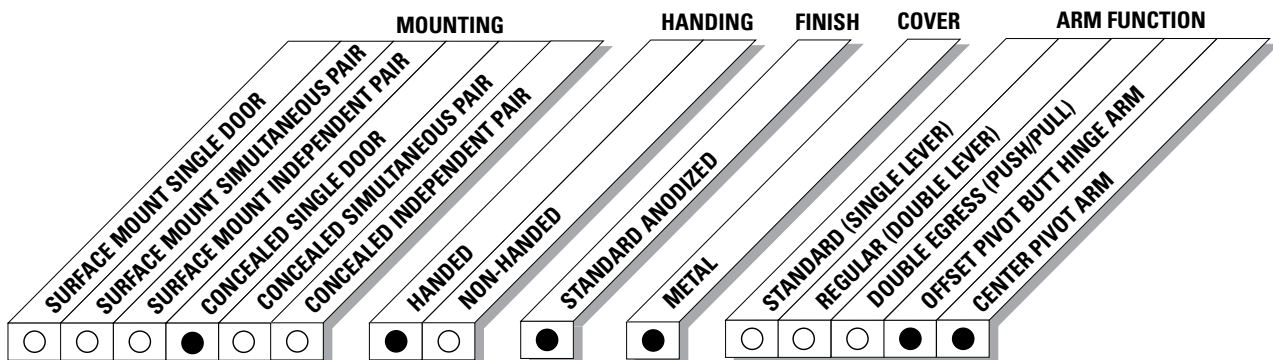
*CENTER PIVOT arm shown

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

- Push 'N Go permits non-switch activation.
- Power Boost provides additional latching force.
- Electromechanical unit with microprocessor control.
- Meets International Building Code requirements and ANSI A156.19.
- UL approved for fire doors.

- 2810 Series operator is shipped with motor gearbox, control box, arm, bottom pivot, header, and mounting hardware. Actuators available separately, see pages 122-137.
- Single door, overhead concealed.
- Meets ADA, requirements (power mode only).
- Handed product.
- 36" header length is standard, specify length 33" to 49" max.
- Double door header available up to 98", specify length 49" to 98" max. Consult factory regarding this option.
- Fixed (Positive) or breakaway stop available with center pivot arm.
- Adjustable hold open time of 1 to 32 seconds.

2810 Series is fully compliant with UL 325 & UL 1998 and meets the provisions of ANSI A156.19. The 2810 Series is UL listed for fire-rated applications. The 2810 Series also meets the provisions of the Americans with Disabilities Act.

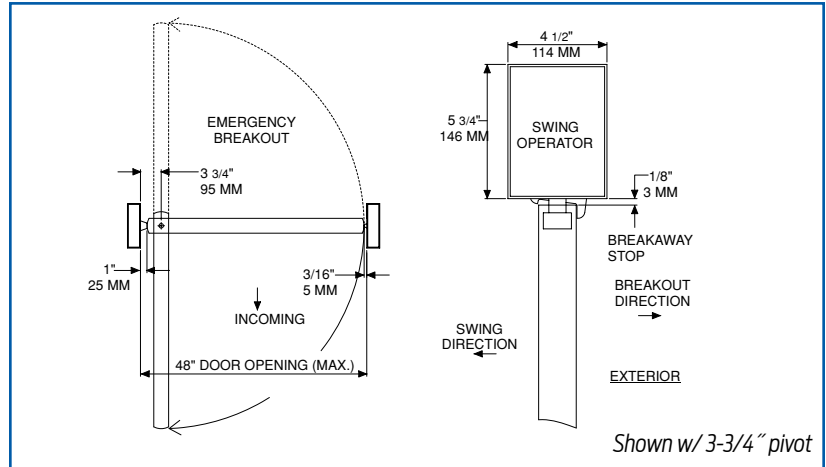


● AVAILABLE
○ NOT AVAILABLE

2810 SERIES

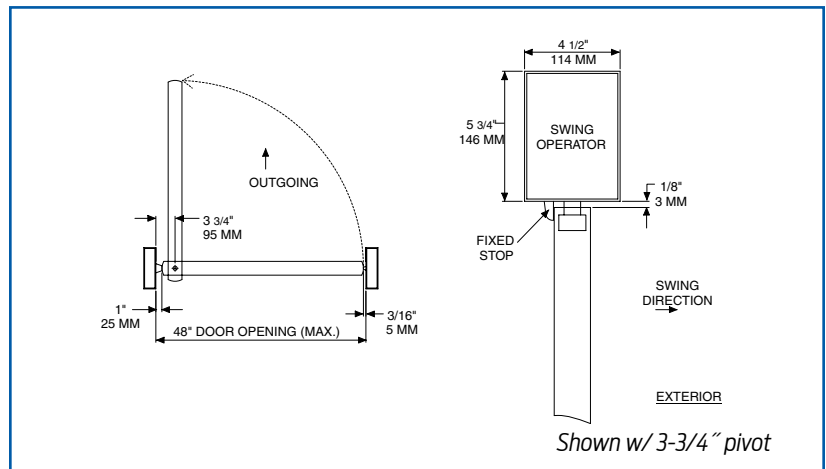
CONCEALED SINGLE DOOR (CENTER PIVOT, EMERGENCY BREAKAWAY, PULL) MOUNTING

Minimum header length 33" with applied stop by others and 36" with LCN fixed or breakaway stop.



CONCEALED SINGLE DOOR (CENTER PIVOT, FIXED STOP, PUSH) MOUNTING

Minimum header length 33" with applied stop by others and 36" with LCN fixed or breakaway stop.



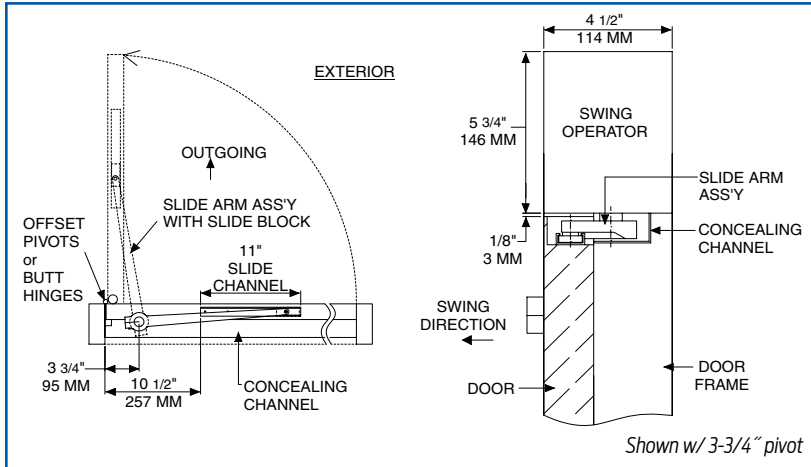
MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

- **Head Frame** minimum 36" (L) x 5-3/4" (H) x 4-1/2" (W) (914 mm x 146 mm x 114 mm).
- **Top Rail** minimum 2" (51 mm).
- **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- **Door Stop** required for each door panel.
- **System Diagram** see "AUTOMATIC OPERATORS" section pages 53 for typical system wiring and page 56 for electrical data.

Contact LCN Product Support for installation assistance.

2810 SERIES



CONCEALED SINGLE DOOR (OFFSET PIVOT OR BUTT HINGE, SLIDE ARM, PUSH) MOUNTING

Minimum header length 33".
Installations require bottom pivot and two intermediate pivots.

- **Head Frame** minimum 33" (L) x 5-3/4" (H) x 4-1/2" (W) (838 mm x 146 mm x 114 mm).
- **Top Rail** minimum 2" (51 mm).
- **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- **Door Stop** required for each door panel.
- **System Diagram** see "AUTOMATIC OPERATORS" section pages 53 for typical system wiring and page 56 for electrical data.

MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

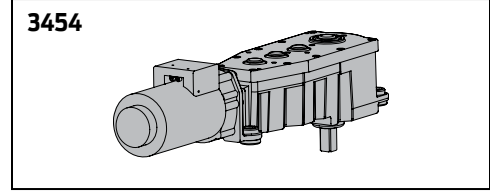
Contact LCN Product Support for installation assistance.

2810 SERIES

MOTOR GEARBOX

MOTOR GEARBOX – SENIOR SWING, 2810-3454

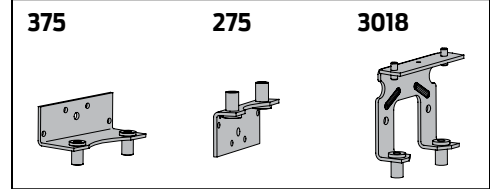
Driving mechanism for operator. Provides maximum 15 lbs opening force. Handed.



MOUNTING BRACKET

MOUNTING BRACKET – 3-3/4", 2810-375

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

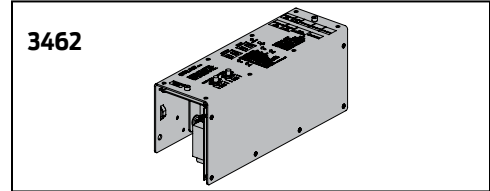


MOUNTING BRACKET – 2-3/4", 2810-275

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

REAR MOUNT BRACKET, 2810-3018

Motor gearbox mounting bracket. Rear bracket.



CONTROL BOXES

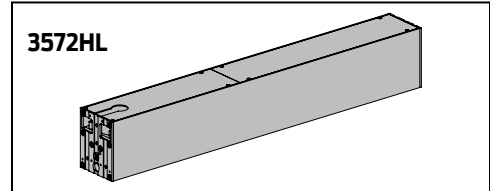
CONTROL BOX - SENIOR SWING, 2810-3462

Electronic controlling device for Senior Swing.

HEADERS

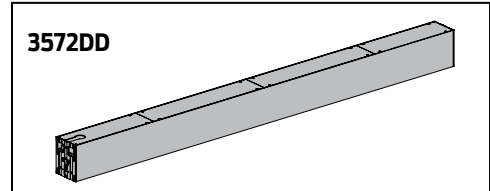
HEADER, 2810-3572HL

Standard, mounting header. Single door, single operator. Specify length 33" to 49" maximum.



HEADER, 2810-3572DD

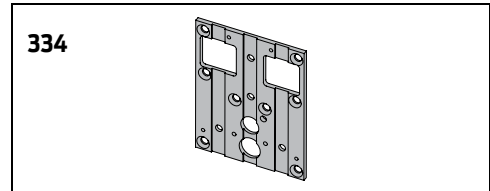
Standard, mounting header. Double door, single operator. Specify length 49" to 98" maximum.



END CAPS

HEADER END CAPS, 2810-334

End cap with openings for wiring.

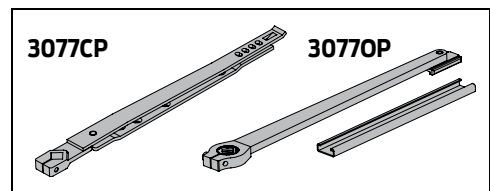


ARMS

CENTER PIVOT ARM, 2810-3077CP

(CENTER PIVOT INSTALLATIONS ONLY)

Used with overhead concealed operators and center pivoted doors.



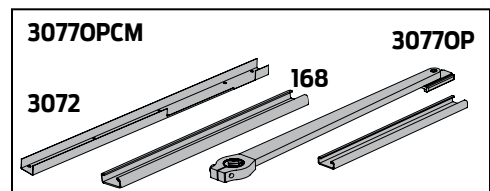
OFFSET PIVOT ARM, 2810-3077OP

(OFFSET PIVOT OR BUTT HUNG INSTALLATIONS ONLY)

Used with overhead concealed operators.

OFFSET PIVOT ARM ASSEMBLY COMPLETE 2810-3077 OPCM

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



2810 SERIES

CHANNELS

CONCEALING CHANNEL, 2810-3072

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

SLIDE CHANNEL, 2810-168

(OFFSET PIVOT or BUTT HINGE INSTALLATIONS ONLY)
Mounts in top rail of door. Allows arm to slide.

INSTALLATION ACCESSORIES

DOOR STOP BREAKAWAY, 2810-384B

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

DOOR STOP FIXED, 2810-384F

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

FILLER PLATE BLANK, 2810-12

Completes length of header box.

SPINDLE PLATE – 2-3/4", 2810-11A

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

SPINDLE PLATE – 3-3/4", 2810-11B

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.

PIVOTS

BOTTOM PIVOT ASSEMBLY, 2810-3107

Includes pivot body, pivot post and bottom pivot plate. For overhead concealed, center pivoted installations. Includes; 2810-107, 2810-110 and 2810-117.

PIVOT BODY, 2810-107

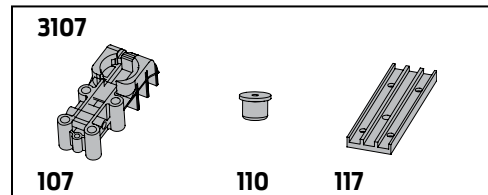
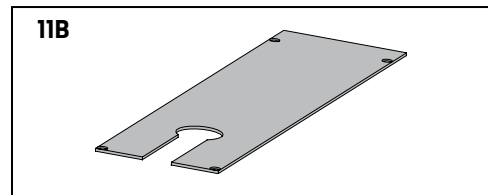
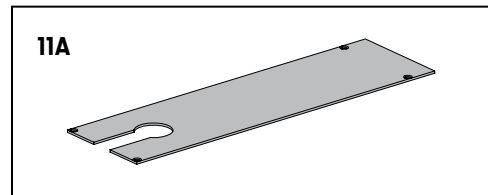
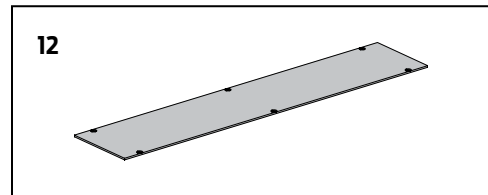
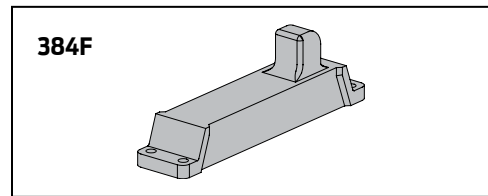
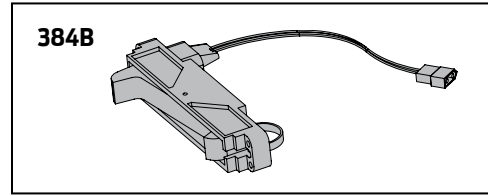
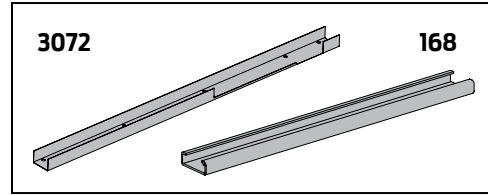
Bottom pivot body for center pivoted installations.

PIVOT POST, 2810-110

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

BOTTOM PIVOT PLATE, 2810-117

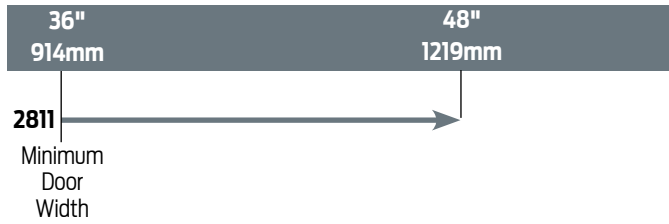
Applied to floor for center pivoted installations.



2810 SERIES

TABLE OF SIZES

DOOR WIDTH



→ Indicates recommended range of door width for operator.

*NOTE: For all Senior Swing Series.
Single Door - Width per leaf 36" minimum, 48" maximum.*

HOW-TO-ORDER 2810 SERIES OPERATORS

1. SELECT INSTALLATION TYPE

2811

2. SPECIFY ARM

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

3. SPECIFY HAND

- RH
- LH

4. 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")

5. 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.*

2850 SERIES

**OPERATOR MOUNTS
SIMULTANEOUS PAIR, OVERHEAD CONCEALED
*CENTER PIVOT
OFFSET PIVOT/BUTT HINGE**



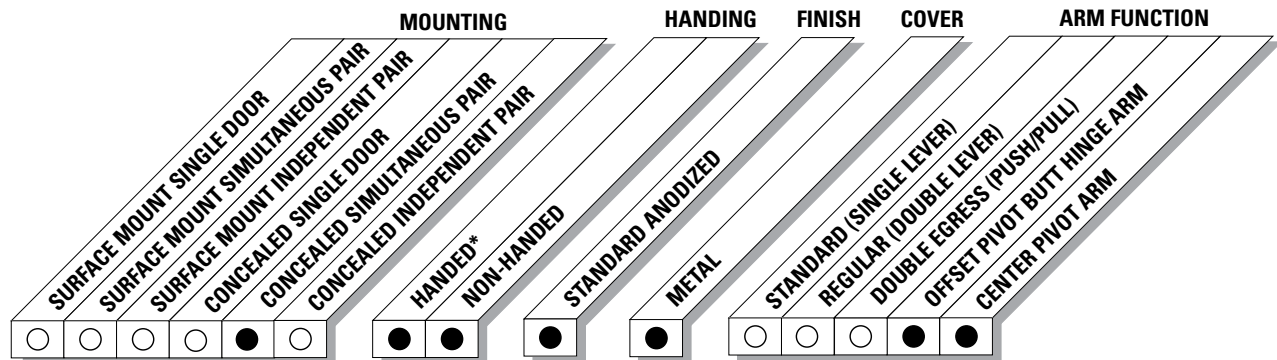
*CENTER PIVOT arm shown

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.

- Push 'N Go permits non-switch activation.
- Power Boost provides additional latching force.
- Electromechanical unit with microprocessor control.
- Digital keypad for easy setup.
- Meets International Building Code requirements and ANSI A156.19.
- UL approved for fire doors.

- 2850 Series operator is shipped with motor gearboxes, control box, arms, bottom pivot, header, and mounting hardware. Actuators available separately, see pages 122-137.
- Simultaneous pair, overhead concealed.
- Meets ADA, requirements (power mode only).
- Handed for double egress applications only.
- 72" header length is standard. Specify other length 52" to 98" max. Consult factory regarding this option.
- Optional fixed (POS) or breakaway stop (BKY) available (center pivot arm). Header lengths 70" to 98" max with either (POS) or (BKY) option.
- Adjustable hold time period of 1 to 32 seconds.

2850 Series is fully compliant with UL 325 & UL 1998 and meets the provisions of ANSI A156.19. The 2850 Series is UL listed for fire-rated applications. The 2850 Series also meets the provisions of the Americans with Disabilities Act.



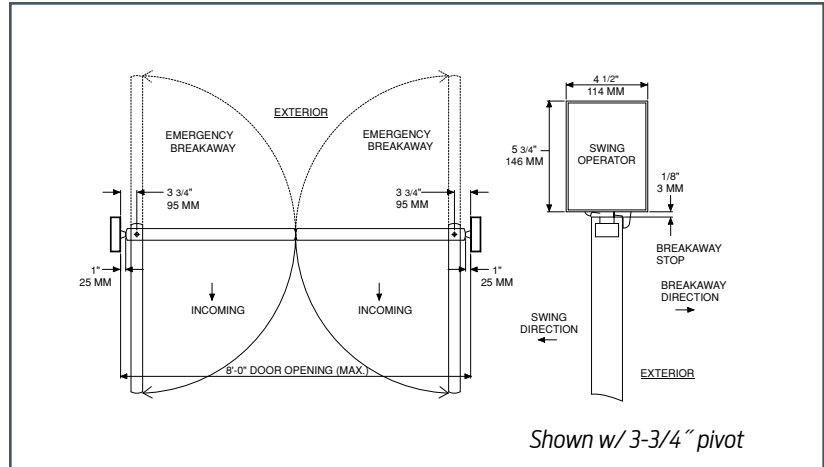
● AVAILABLE
○ NOT AVAILABLE

*For double egress only.

2850 SERIES

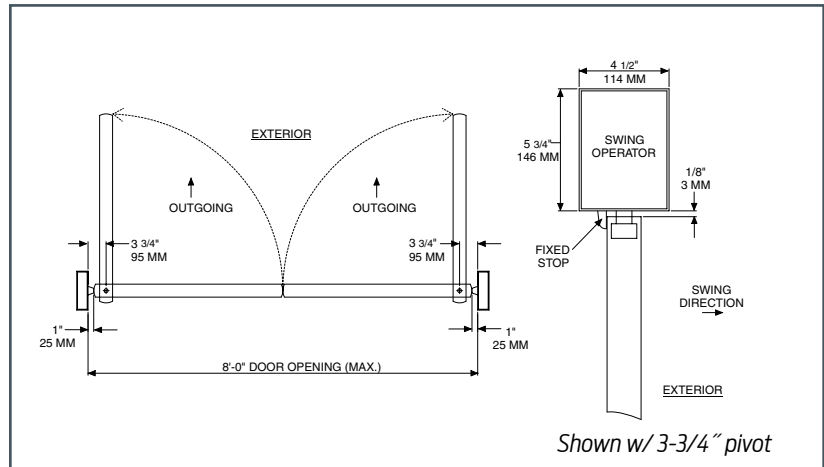
CONCEALED SIMULTANEOUS PAIR (CENTER PIVOT, EMERGENCY BREAKAWAY, PULL) MOUNTING

Minimum header length 52" with applied stop by others and 70" with LCN fixed or breakaway stop.



CONCEALED SIMULTANEOUS PAIR (CENTER PIVOT, FIXED STOP, PUSH) MOUNTING

Minimum header length 52" with applied stop by others and 70" with LCN fixed or breakaway stop.



MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

- **Head Frame** minimum 52" (L) x 5-3/4" (H) x 4-1/2" (W) (1524 mm x 146 mm x 114 mm).
- **Top Rail** minimum 2" (51 mm).
- **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- **Door Stop** required for each door panel.
- **System Diagram** see "AUTOMATIC OPERATORS" section pages 53 for typical system wiring and page 56 for electrical data.

Contact LCN Product Support for installation assistance.

2850 SERIES

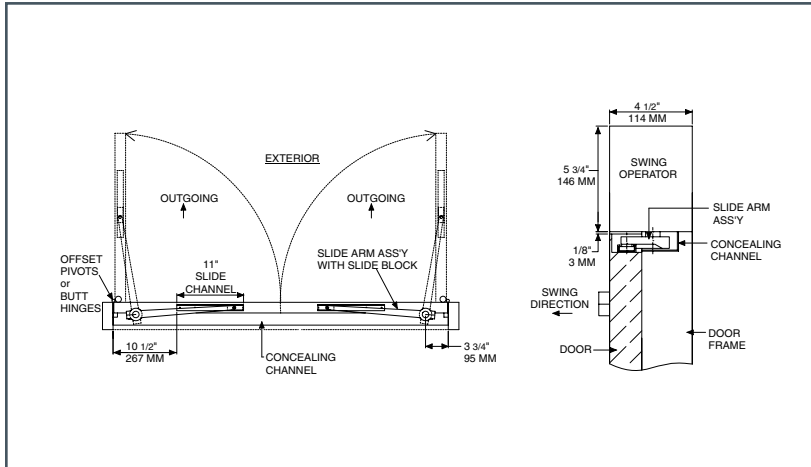
MOUNTING DETAILS

CONCEALED SIMULTANEOUS PAIR (OFFSET PIVOT/BUTT HINGE, PUSH) MOUNTING

Offset pivot installations require a bottom pivot and two intermediate pivots.

MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.



- **Head Frame** minimum 52" (L) x 5-3/4" (H) x 4-1/2" (W) (1524 mm x 146 mm x 114 mm).
- **Top Rail** minimum 2" (51 mm).
- **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- **Door Stop** required for each door panel.
- **System Diagram** see "AUTOMATIC OPERATORS" section pages 53 for typical system wiring and page 56 for electrical data.

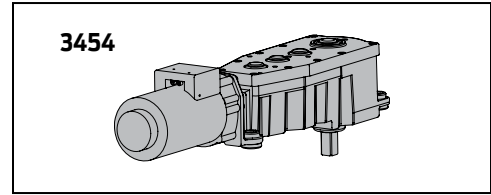
Contact LCN Product Support for installation assistance.

2850 SERIES

MOTOR GEARBOX

MOTOR GEARBOX – SENIOR SWING, 2850-3454

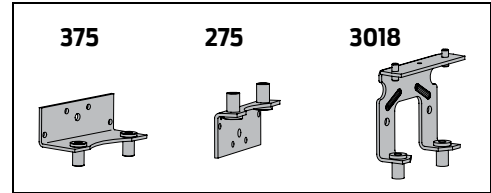
Driving mechanism for operator. Provides maximum of 15 lbs opening force. Handed.



MOUNTING BRACKET

MOUNTING BRACKET – 3-3/4", 2850-375

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

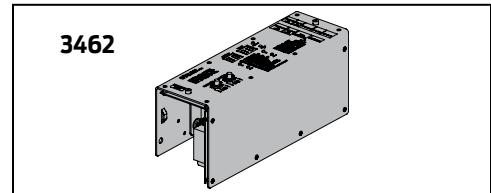


MOUNTING BRACKET – 2-3/4", 2850-275

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

REAR MOUNT BRACKET, 2850-3018

Motor gearbox mounting bracket. Rear bracket.



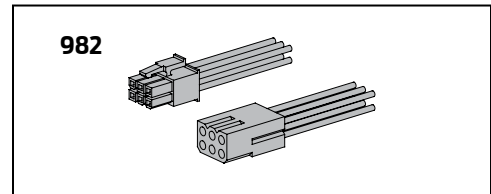
CONTROL BOXES

CONTROL BOX – SENIOR SWING, 2850-3462

Electronic controlling device for Senior Swing.

COMPANION CABLE, 2850-982

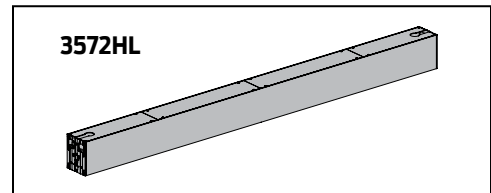
Cable that allows one control box to run two motor gearboxes. For use with Senior Swing.



HEADERS

HEADER, 2850-3572HL

Standard, mounting header. Pair door, two operators. Specify length 52" to 98" maximum.



END CAPS

HEADER END CAPS, 2850-334

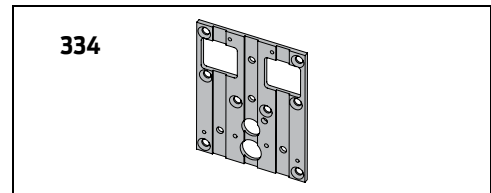
End cap with openings for wiring.

ARMS

CENTER PIVOT ARM, 2850-3077CP

(CENTER PIVOT INSTALLATIONS ONLY)

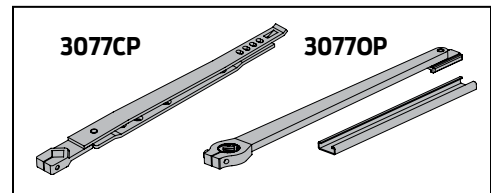
Used with overhead concealed operators and center pivoted doors.



OFFSET PIVOT ARM, 2850-3077OP

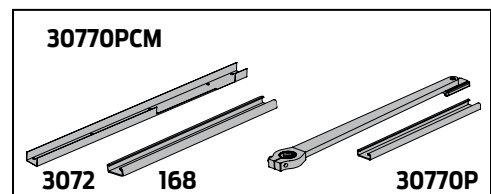
(OFFSET PIVOT OR BUTT HUNG INSTALLATIONS ONLY)

Handed arm. Used with overhead concealed operators.



OFFSET PIVOT ARM ASSEMBLY COMPLETE, 2850-3077OPCM

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



2850 SERIES

CHANNELS

CONCEALING CHANNEL, 2850-3072

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

SLIDE CHANNEL, 2850-168

(OFFSET PIVOT or BUTT HINGE INSTALLATIONS ONLY)
Mounts in top rail of door. Allows arm to slide.

INSTALLATION ACCESSORIES

DOOR STOP BREAKAWAY, 2850-384B

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

DOOR STOP FIXED, 2850-384F

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

FILLER PLATE BLANK, 2850-12

Completes length of header box.

SPINDLE PLATE – 2-3/4", 2850-11A

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

SPINDLE PLATE – 3-3/4", 2850-11B

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.

PIVOTS

BOTTOM PIVOT ASSEMBLY, 2850-3107

Includes pivot body, pivot post and bottom pivot plate. For overhead concealed, center pivoted installations. Includes; 2850-107, 2850-110 and 2850-117.

PIVOT BODY, 2850-107

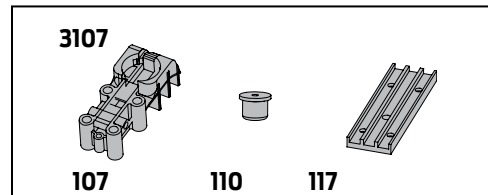
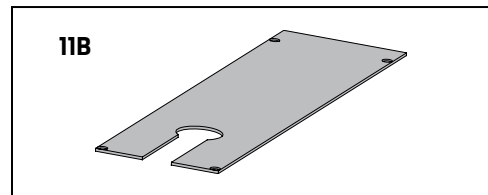
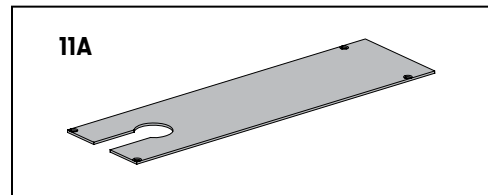
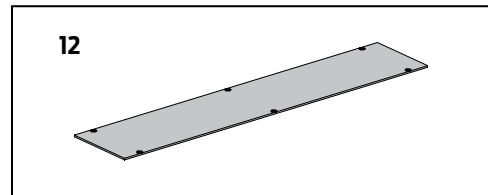
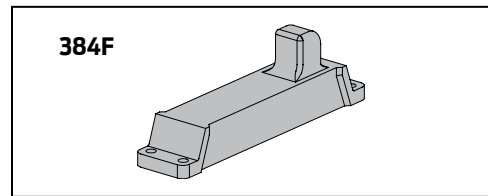
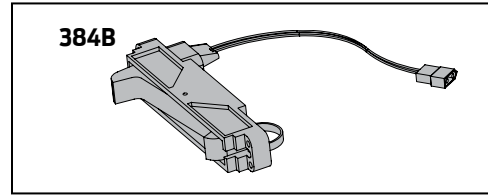
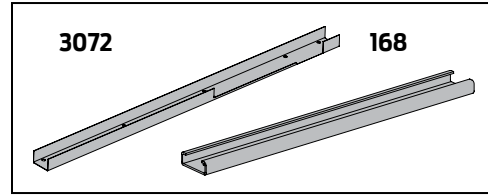
Bottom pivot body for center pivoted installations.

PIVOT POST, 2850-110

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

BOTTOM PIVOT PLATE, 2850-117

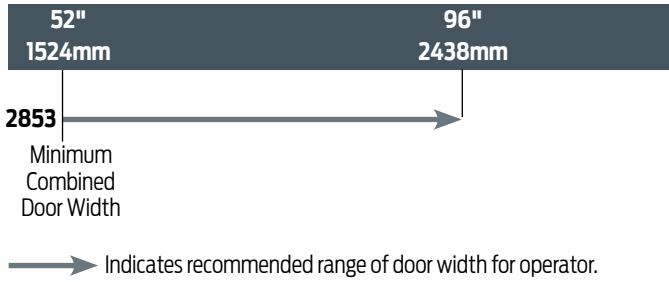
Applied to floor for center pivoted installations.



2850 SERIES

TABLE OF SIZES

COMBINED DOOR WIDTH



NOTE: For all Senior Swing Series.

Simultaneous Pair – Width per leaf 26" minimum to 48" maximum.

HOW-TO-ORDER 2850 SERIES OPERATORS

1. SELECT INSTALLATION TYPE

2853

2. SPECIFY ARMS

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

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

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

3. SPECIFY HAND (if double egress)

RH

LH

4. SPECIFY HEADER/LENGTHS

HL__ (Specify length 52" to 98")

5. 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*

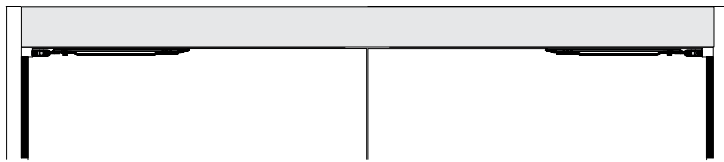
Pair Positive Mechanical Stop (POS)

Pair Panic Breakaway Stop (BKY)

**Available with Center Pivoted installations only.*

2860 SERIES

**OPERATOR MOUNTS
INDEPENDENT PAIR, OVERHEAD CONCEALED
*CENTER PIVOT
OFFSET PIVOT/BUTT HINGE**



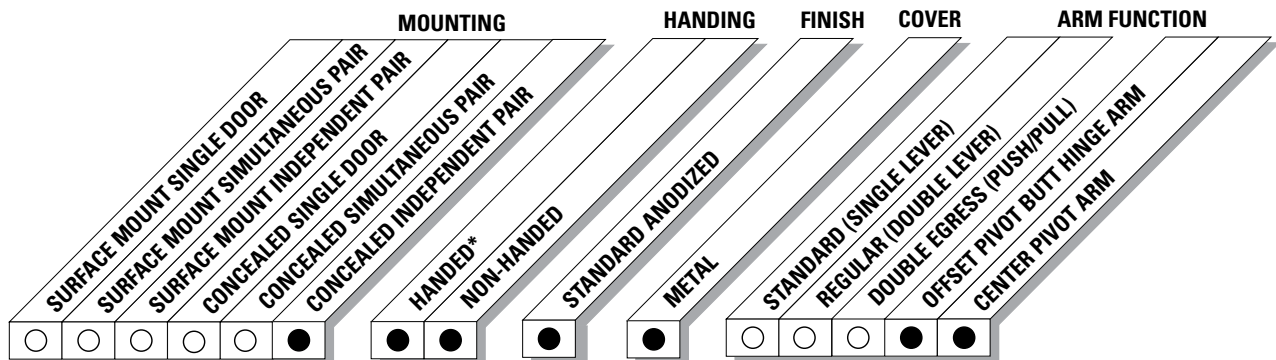
*CENTER PIVOT arm shown

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.

- Push 'N Go permits non-switch activation.
- Power Boost provides additional latching force.
- Electromechanical unit with microprocessor control.
- Digital keypad for easy setup.
- Meets International Building Code requirements and ANSI A156.19.
- UL approved for fire doors.

2860 Series is fully compliant with UL 325 & UL 1998 and meets the provisions of ANSI A156.19. The 2860 Series is UL listed for fire-rated applications. The 2860 Series also meets the provisions of the Americans with Disabilities Act.

- 2860 Series operator is shipped with motor gearboxes, control boxes, bottom pivots, arms, header, and mounting hardware. Actuators available separately, see pages 122-137.
- Independent pair of doors, overhead concealed.
- Meets ADA, requirements (power mode only).
- Handed for double egress applications only.
- 72" header length is standard. Specify other length 65" to 98" max. Consult factory regarding this option.
- Optional fixed (POS) or breakaway stop (BKY) available (center pivot arm) - Header lengths 70" to 98" max with either (POS) or (BKY).
- Adjustable hold open time of 1 to 32 seconds.



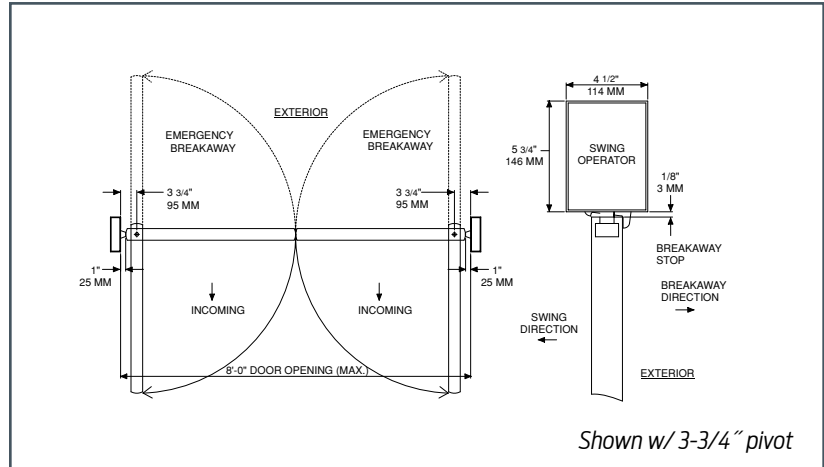
● AVAILABLE
○ NOT AVAILABLE

* For double egress only.

2860 SERIES

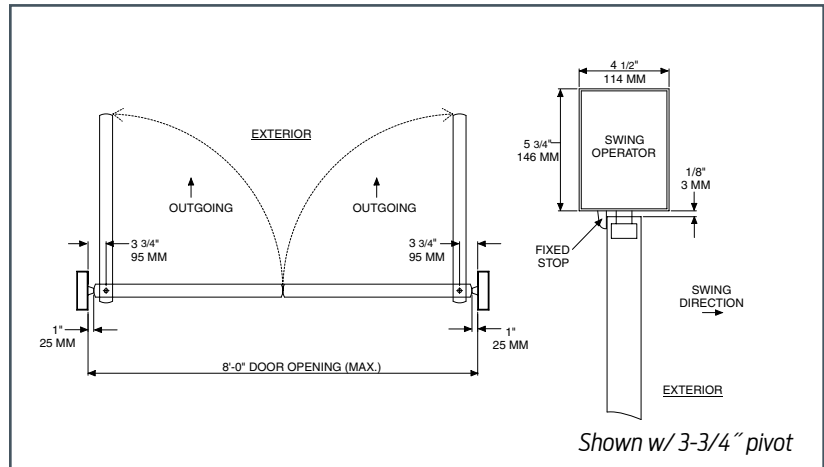
CONCEALED INDEPENDENT PAIR (CENTER PIVOT, EMERGENCY BREAKAWAY, PULL) MOUNTING

Minimum header length 65" with applied stop by other and 70" with LCN Positive or Breakaway Stop.



CONCEALED INDEPENDENT PAIR (CENTER PIVOT, FIXED STOP, PUSH) MOUNTING

Minimum header length 65" with applied stop by others and 70" with LCN Positive or Breakaway Stop.



MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

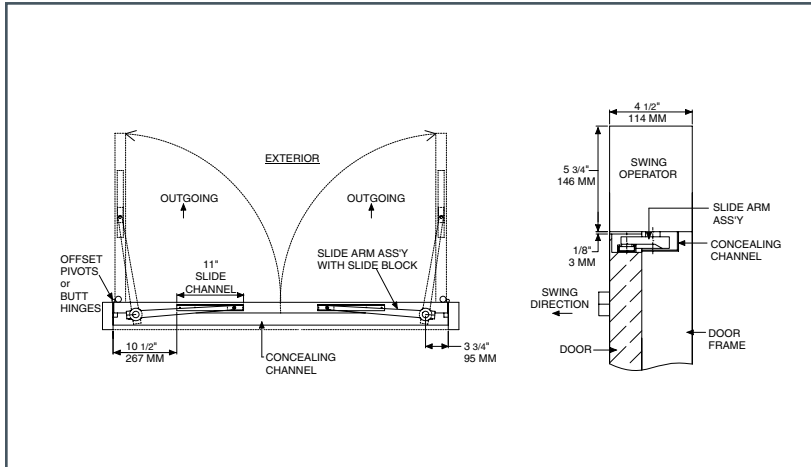
- **Head Frame** minimum 65" (L) x 5 3/4" (H) x 4 1/2" (W) (1651 mm x 146 mm x 114 mm).
- **Top Rail** minimum 2" (51 mm).
- **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- **Door Stop** required for each door panel.
- **System Diagram** see "AUTOMATIC OPERATORS" section pages 53 for typical system wiring and page 56 for electrical data.

Contact LCN Product Support
for installation assistance.

2860 SERIES

CONCEALED INDEPENDENT PAIR (OFFSET PIVOT/BUTT HINGE, PUSH) MOUNTING

Offset pivot installations require a bottom pivot and two intermediate pivots.



- **Head Frame** minimum 65" (L) x 5-3/4" (H) x 4-1/2" (W) (1651 mm x 146 mm x 114 mm).
- **Top Rail** minimum 2" (51 mm).
- **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- **Door Stop** required for each door panel.
- **System Diagram** see "AUTOMATIC OPERATORS" section pages 53 for typical system wiring and page 56 for electrical data.

MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

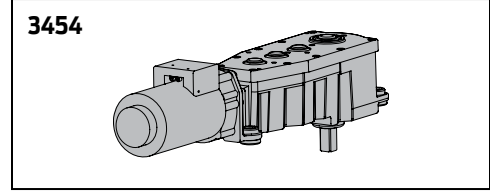
Contact LCN Product Support
for installation assistance.

2860 SERIES

MOTOR GEARBOX

MOTOR GEARBOX – SENIOR SWING, 2860-3454

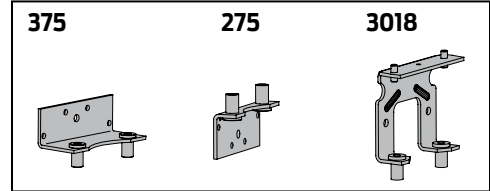
Driving mechanism for operator. Provides maximum of 15 lbs opening force. Handed.



MOUNTING BRACKET

MOUNTING BRACKET – 3-3/4", 2860-375

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

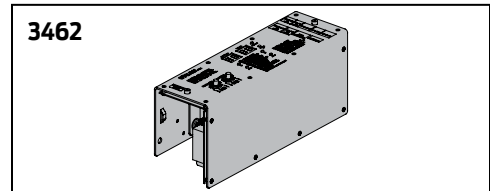


MOUNTING BRACKET – 2-3/4", 2860-275

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

REAR MOUNT BRACKET, 2860-3018

Motor gearbox mounting bracket. Rear bracket.



CONTROL BOXES

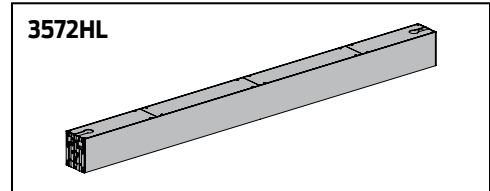
CONTROL BOX – SENIOR SWING, 2860-3462

Electronic controlling device for Senior Swing.

HEADERS

HEADER, 2860-3572HL

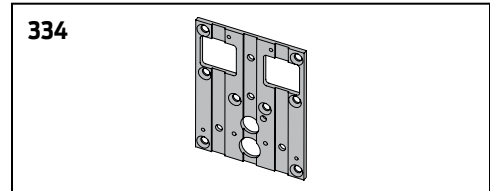
Standard, mounting header. Pair door, two operators. Specify length 65" to 98" maximum.



END CAPS

HEADER END CAPS, 2860-334

End cap with openings for wiring.

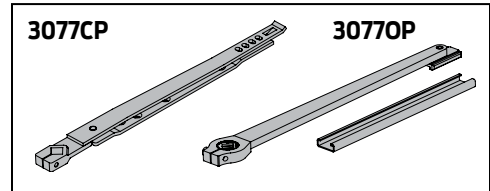


ARMS

CENTER PIVOT ARM, 2860-3077CP

(CENTER PIVOT INSTALLATIONS ONLY)

Used with overhead concealed operators and center pivoted doors.



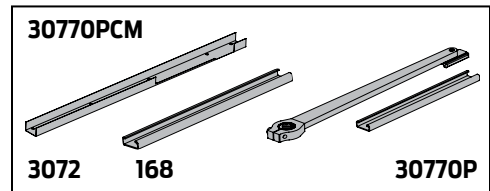
OFFSET PIVOT ARM, 2860-3077OP

(OFFSET PIVOT OR BUTT HUNG INSTALLATIONS ONLY)

Used with overhead concealed operators.

OFFSET PIVOT ARM ASSEMBLY COMPLETE, 2860-3077OPCM

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



2860 SERIES

CHANNELS

CONCEALING CHANNEL, 2860-3072

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

SLIDE CHANNEL, 2860-168

(OFFSET PIVOT or BUTT HINGE INSTALLATIONS ONLY)

Mounts in top rail of door. Allows arm to slide.

INSTALLATION ACCESSORIES

DOOR STOP BREAKAWAY, 2860-384B

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

DOOR STOP FIXED, 2860-384F

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

FILLER PLATE BLANK, 2860-12

Completes length of header box.

SPINDLE PLATE – 2-3/4", 2860-11A

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

SPINDLE PLATE – 3-3/4", 2860-11B

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.

PIVOTS

BOTTOM PIVOT ASSEMBLY, 2860-3107

Includes pivot body, pivot post and bottom pivot plate. For overhead concealed, center pivoted installations. Includes; 2860-107, 2860-110 and 2860-117.

PIVOT BODY, 2860-107

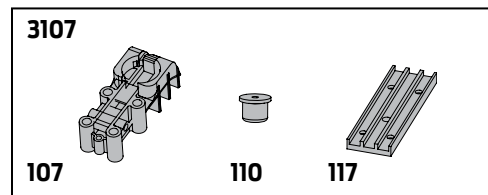
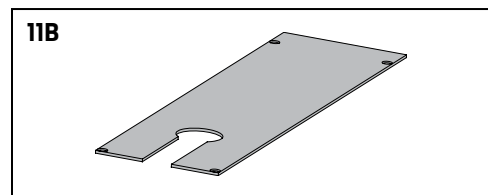
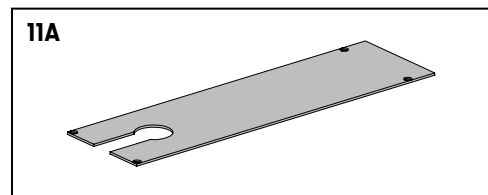
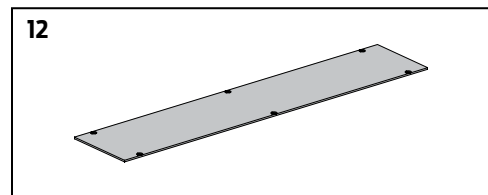
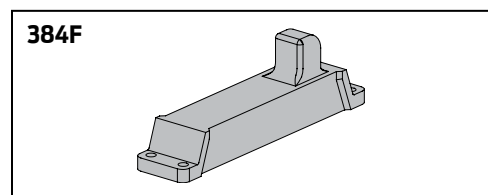
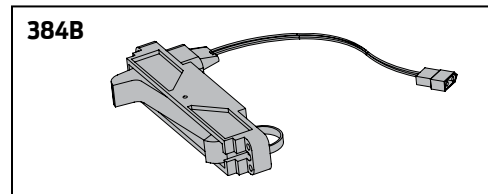
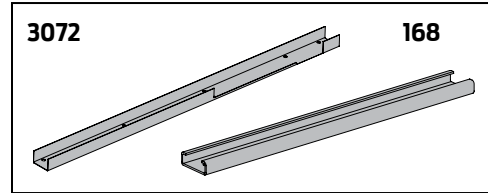
Bottom pivot body for center pivoted installations.

PIVOT POST, 2860-110

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

BOTTOM PIVOT PLATE, 2860-117

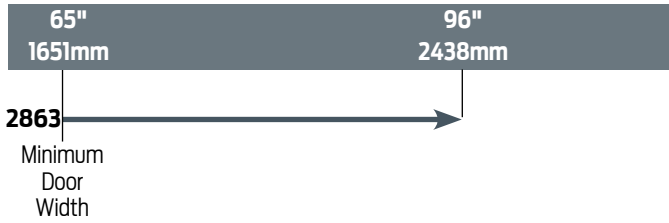
Applied to floor for center pivoted installations.



2860 SERIES

TABLE OF SIZES

DOOR WIDTH



→ 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.

HOW-TO-ORDER 2860 SERIES OPERATORS

1. SELECT INSTALLATION TYPE

2863

2. SPECIFY ARMS

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

3. SPECIFY HAND (only for double egress)

- RH
- LH

4. SPECIFY HEADER/LENGTHS

HL_ (Specify length 65" to 98")

5. 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

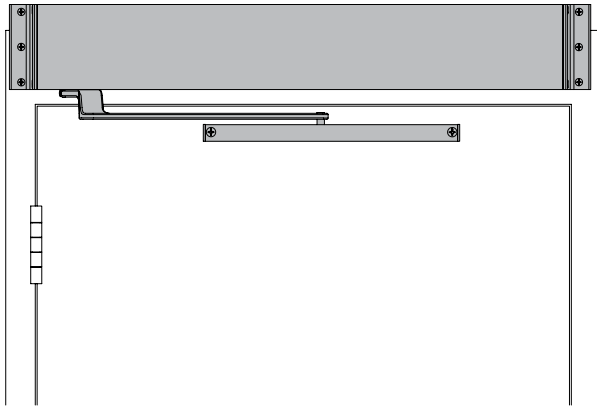
STOPS*

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

9530 SERIES

FEATURES

SINGLE DOOR, SURFACE MOUNT (PULL) OFFSET PIVOT/BUTT HINGE

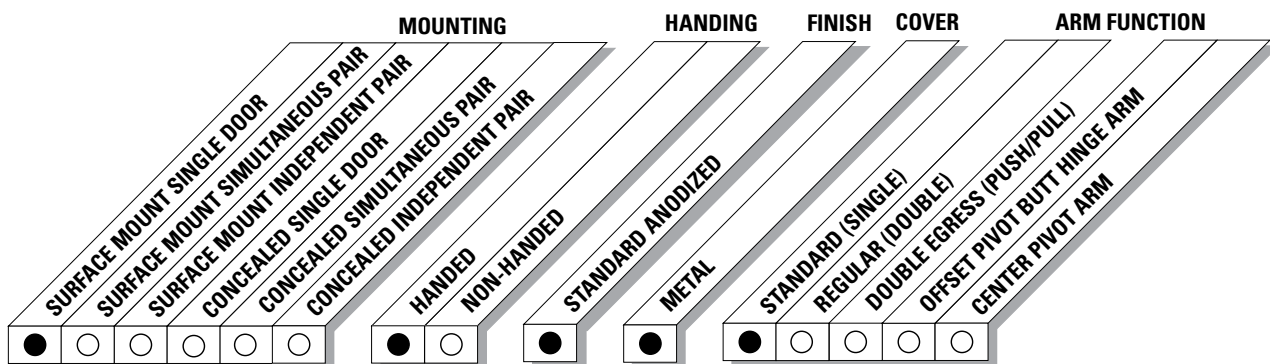


The 9530 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

- Push 'N Go permits non-switch activation.
- Power Boost provides additional latching force.
- Electromechanical unit with microprocessor control.
- Digital keypad for easy setup.
- Meets International Building Code requirements and ANSI A156.19.
- UL approved for fire doors.

- 9530 Series operator is shipped with motor gearbox, control box, standard arm, header, and mounting hardware. Actuators available separately, see pages 122-137.
- Single door, surface mounted.
- Meets ADA requirements (power mode only).
- Handed product.
- 36" header length is standard. Specify length 33" to 48" max.
- Double door header available up to 98", specify other length 49" to 98" max. Consult factory regarding this option.
- Adjustable hold open period of 2 to 32 seconds in automatic or manual mode.

9530 Series is fully compliant with UL 325 & UL 1998 and meets the provisions of ANSI A156.19. The 9530 Series is UL listed for fire-rated applications. The 9530 Series also meets the provisions of the Americans with Disabilities Act.

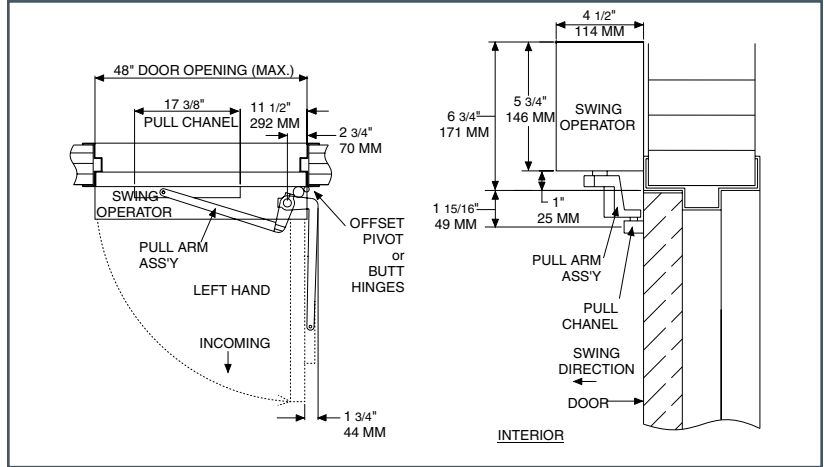


● AVAILABLE
○ NOT AVAILABLE

9530 SERIES

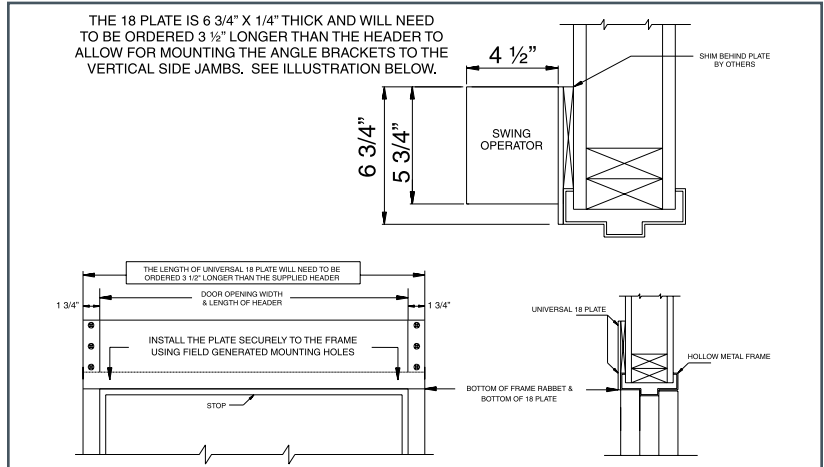
TOP JAMB SINGLE DOOR (OFFSET PIVOT/BUTT HINGE, CENTER PIVOT, PULL) MOUNTING

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



HOLLOW METAL FRAME

Suggested Installation.



MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Reveal** should not exceed 4" (102 mm).
- **Head Frame** minimum 1-3/4" (44 mm). Face frame 6-3/4" (171 mm) total operator clearance.
- **Top Rail** minimum 2-3/4" (70 mm).
- **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- **System Diagram** see "AUTOMATIC OPERATORS" section pages 53 for typical system wiring and page 56 for electrical data.

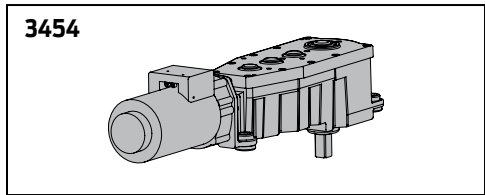
Contact LCN Product Support for installation assistance.

9530 SERIES

MOTOR GEARBOX

MOTOR GEARBOX – SENIOR SWING, 9530-3454

Driving mechanism for operator. Provides maximum of 15 lbs opening force. Handed.



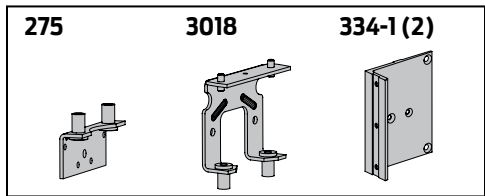
MOUNTING BRACKET

MOUNTING BRACKET – 2-3/4", 9530-275

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

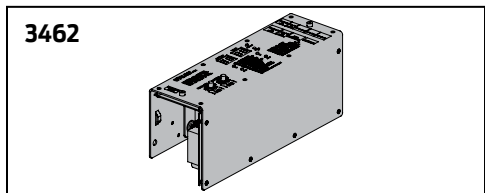
REAR MOUNT BRACKET, 9530-3018

Motor gearbox mounting bracket. Rear bracket.



ANGLED BRACKET, 9530-334-1

Mounting bracket for surface applications. (Includes 2 mounting brackets).



CONTROL BOXES

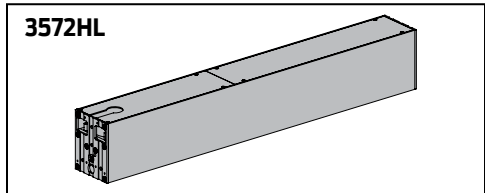
CONTROL BOX – SENIOR SWING, 9530-3462

Electronic controlling device for Senior Swing.

HEADERS

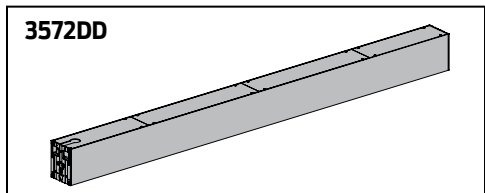
HEADER, 9530-3572HL

Standard, mounting header. Single door, single operator. Specify length 33" to 48" maximum.



HEADER, 9530-3572DD

Standard, mounting header. Double door, single operator. Specify length 49" to 98" maximum.



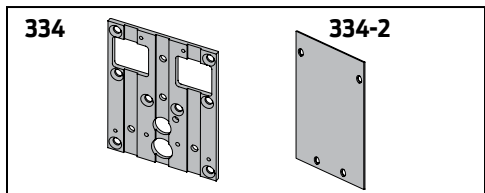
END CAPS

HEADER END CAPS, 9530-334

End cap with openings for wiring.

END DRESS PLATE, 9530-334-2

Metal finish end cap.



9530 SERIES

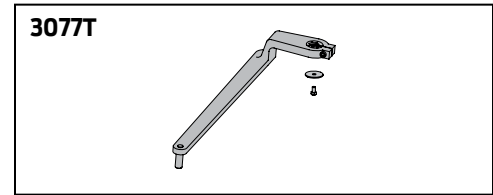
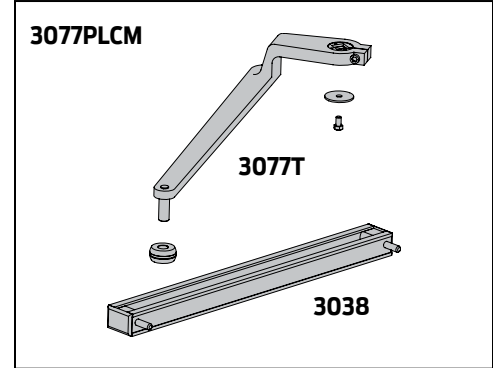
ARMS

STANDARD ARM ASSEMBLY, 9530-3077PLCM

Handed arm. Track roller included. (Includes 3038, 3077T, 3034 & 73).

STANDARD ARM, 9530-3077T

Handed arm. Track roller not included.



TRACKS

TRACK 9530-3038

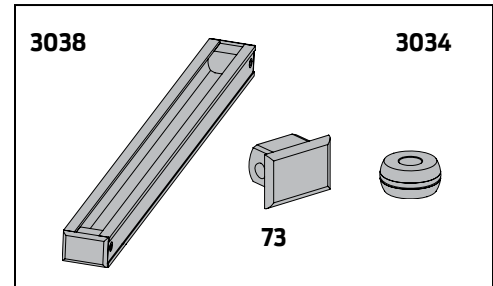
Standard non-handed track. (Includes 3034 & 73).

TRACK END CAP 9530-73

Black plastic end caps.

ROLLER, 9530-3034

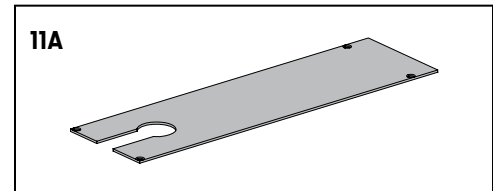
Quiet low friction roller assembly.



INSTALLATION ACCESSORIES

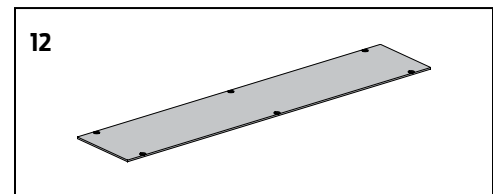
SPINDLE PLATE – 2-3/4", 9530-11A

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



FILLER PLATE BLANK, 9530-12

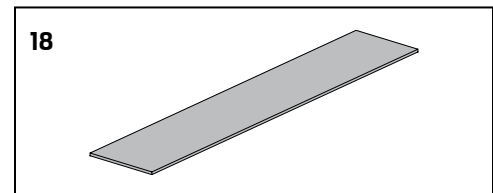
Completes length of header box. (Specify Length).



MOUNTING PLATE, 9530-18

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.

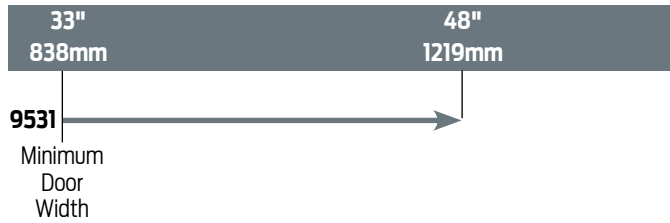
NOTE: The length of a universal 18 plate will need to be ordered 3-1/2" longer than the supplied header when using angle brackets.



9530 SERIES

TABLE OF SIZES

DOOR WIDTH



→ Indicates recommended range of door width for operator.

NOTE: For all Senior Swing Series.

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

HOW-TO-ORDER 9530 SERIES OPERATORS

1. SPECIFY HAND

RH

LH

2. SPECIFY HEADER/LENGTH

HL__ (Specify length 33" to 48")

DD__ (Specify length 49" to 98")

3. 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

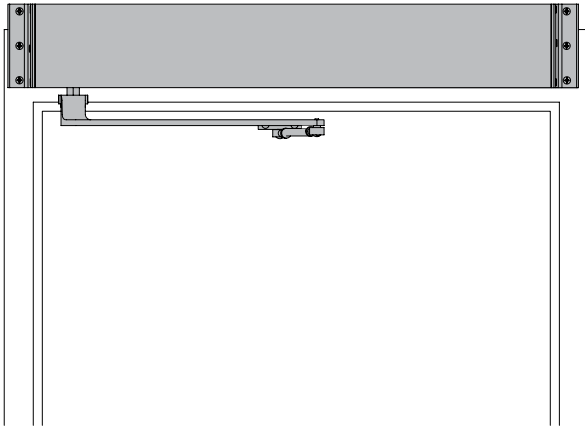
Plate,___ (Specify Length 33" to 101-1/2")

ORDERING INFORMATION

9540 SERIES

FEATURES

SINGLE DOOR, SURFACE MOUNT (PUSH) OFFSET PIVOT/BUTT HINGE

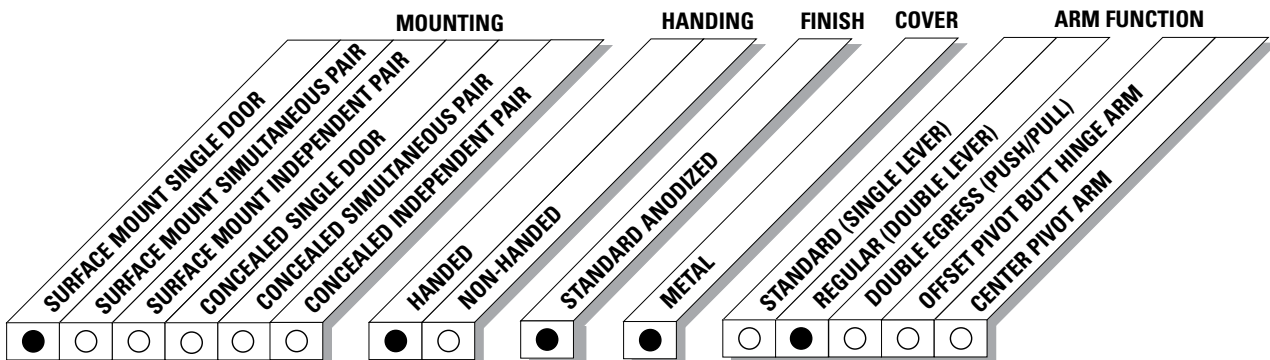


The 9540 SENIOR SWING by LCN is an ADA door operator that is a two-in-one swing door operator. SENIOR SWING operators when activated, opens doors automatically for wheelchair access, yet allows for manual operation for regular pedestrian traffic.

- Push 'N Go permits non-switch activation.
- Power Boost provides additional latching force.
- Electromechanical unit with microprocessor control.
- Digital keypad for easy setup.
- Meets International Building Code requirements and ANSI A156.19.
- UL approved for fire doors.

9540 Series is fully compliant with UL 325 & UL 1998 and meets the provisions of ANSI A156.19. The 9540 Series is UL listed for fire-rated applications. The 9540 Series also meets the provisions of the Americans with Disabilities Act.

- 9540 Series operator is shipped with motor gearbox, control box, regular arm, header, and mounting hardware. Actuators available separately, see pages 122-137.
- Single door, surface mounted.
- Meets ADA requirements (power mode only).
- Handed product.
- 36" header length is standard. Specify length 33" to 48" max.
- Double door header available up to 98", specify other length 49" to 98" max. Consult factory regarding this option.
- Adjustable hold open period of 2 to 32 seconds in automatic or manual mode.



● AVAILABLE
○ NOT AVAILABLE

9540 SERIES

TOP JAMB SINGLE DOOR (OFFSET PIVOT/BUTT HINGE, CENTER PIVOT, PUSH) MOUNTING

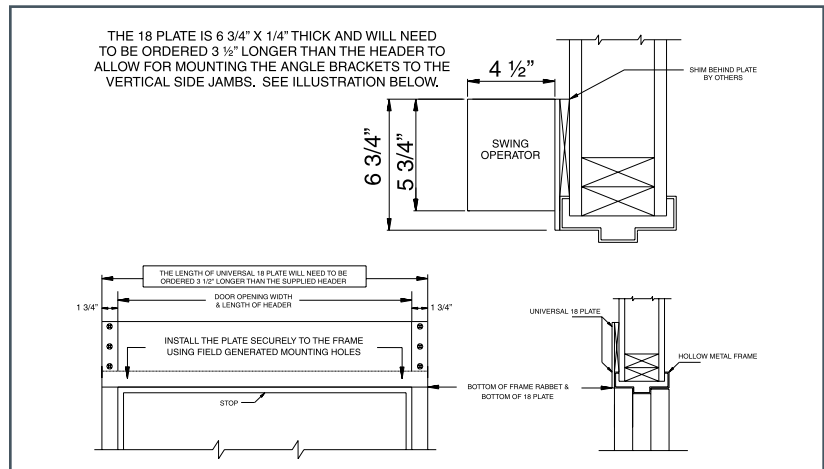
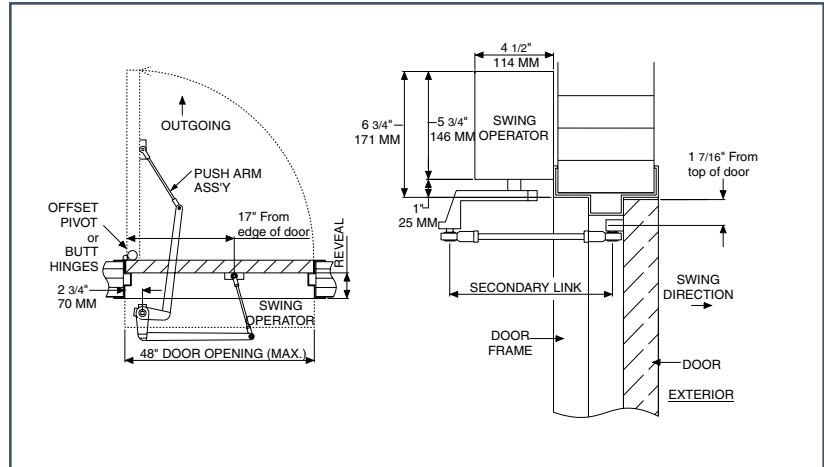
Consult factory for all balance door installations.

HOLLOW METAL FRAME

Suggested Installation.

MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.



- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Reveal** for push installations should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM.
- **Head Frame** minimum 1-3/4" (44 mm). Face frame 6-3/4" (171 mm) total operator clearance.
- **Top Rail** minimum 2-3/4" (70 mm).
- **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- **System Diagram** see "AUTOMATIC OPERATORS" section pages 53 for typical system wiring and page 56 for electrical data.

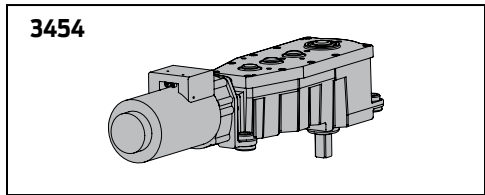
Contact LCN Product Support for installation assistance.

9540 SERIES

MOTOR GEARBOX

MOTOR GEARBOX – SENIOR SWING, 9540-3454

Driving mechanism for operator. Provides 15 lbs opening force. Handed.



MOUNTING BRACKET

MOUNTING BRACKET – 2-3/4", 9540-275

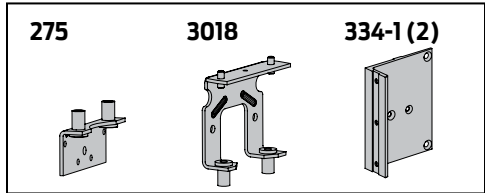
Motor gearbox mounting bracket for 2-3/4" offset pivot or butt hinge installations. Front bracket.

REAR MOUNT BRACKET, 9540-3018

Motor gearbox mounting bracket. Rear bracket.

ANGLED BRACKET, 9540-334-1

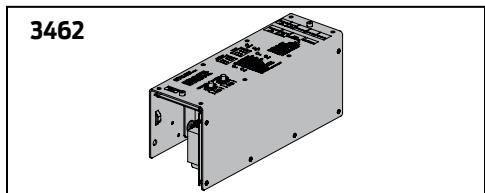
Mounting bracket for surface applications. (Includes 2 mounting brackets).



CONTROL BOXES

CONTROL BOX – SENIOR SWING, 9540-3462

Electronic controlling device for Senior Swing.



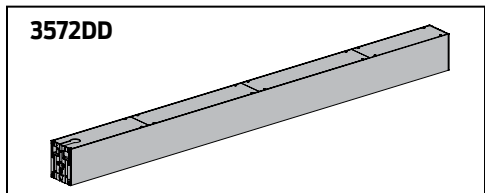
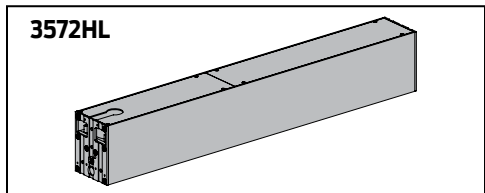
HEADERS

Header, 9540-3572HL

Standard, mounting header. Single door, single operator. Specify length 33" to 48" maximum.

Header, 9540-3572DD

Standard, mounting header. Double door, single operator. Specify length 49" to 98" maximum.



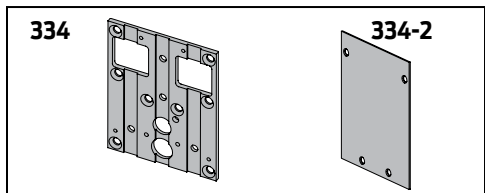
END CAPS

HEADER END CAPS, 9540-334

End cap with openings for wiring.

END DRESS PLATE, 9540-334-2

Metal finish end cap.



9540 SERIES

ARMS

REGULAR ARM ASSEMBLY, 9540-3077

Handed arm.

REGULAR LONG ARM ASSEMBLY, 9540-3077L

Handed arm.

MAIN ARM, 9540-77

Handed arm attaches to motor gearbox.

LINKAGE ASSEMBLY – 15", 9540-79

Threaded rod attaches to door. Extends from main arm.

LINKAGE ASSEMBLY – 32", 9540-79LR

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

INSTALLATION ACCESSORIES

SPINDLE PLATE – 2-3/4", 9540-11A

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

FILLER PLATE BLANK, 9540-12

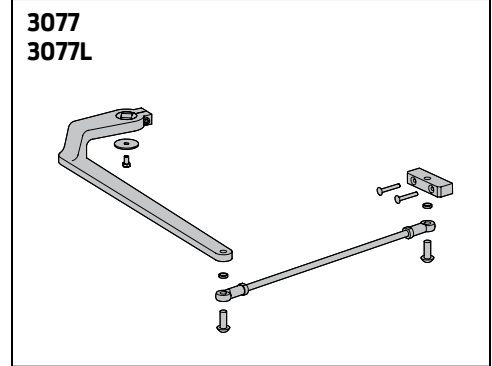
Completes length of header box. (Specify length).

MOUNTING PLATE, 9540-18

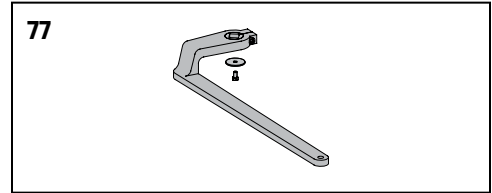
Optional mounting plate for standard hollow metal door frames. Specify length 36-1/2" to 101-1/2" maximum, when angle brackets. Specify length 33" to 98" maximum when using end dress plates.

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.

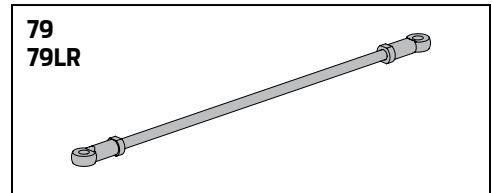
3077
3077L



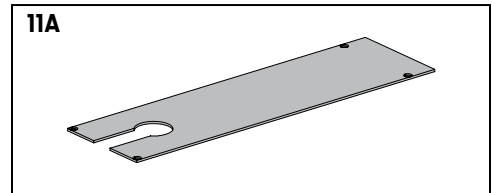
77



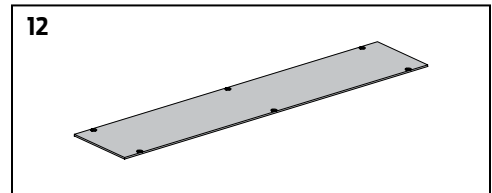
79
79LR



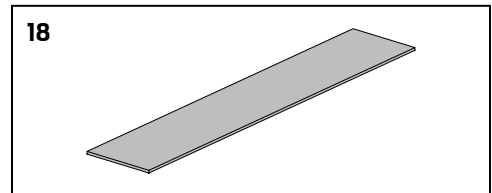
11A



12



18



9540 SERIES

TABLE OF SIZES

DOOR WIDTH



→ Indicates recommended range of door width for operator.

NOTE: For all Senior Swing Series.

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

HOW-TO-ORDER 9540 SERIES OPERATORS

1. SPECIFY HAND

- RH
- LH

2. SPECIFY HEADER/LENGTH

- HL__ (Specify length 33" to 48")
- DD__ (Specify length 49" to 98")

3. 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,
 - WOOD and MACHINE SCREW PACK
- Unless options listed below are selected.*

OPERATOR OPTIONS

MOUNTING PLATE

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

ARM

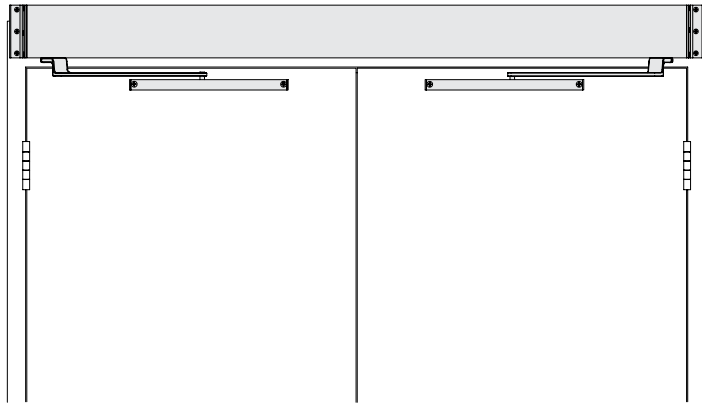
- Long Arm (3077L)

ORDERING INFORMATION

9550 SERIES

FEATURES

OPERATOR MOUNTS SIMULTANEOUS PAIR, SURFACE MOUNT *PULL SIDE PUSH SIDE DOUBLE EGRESS



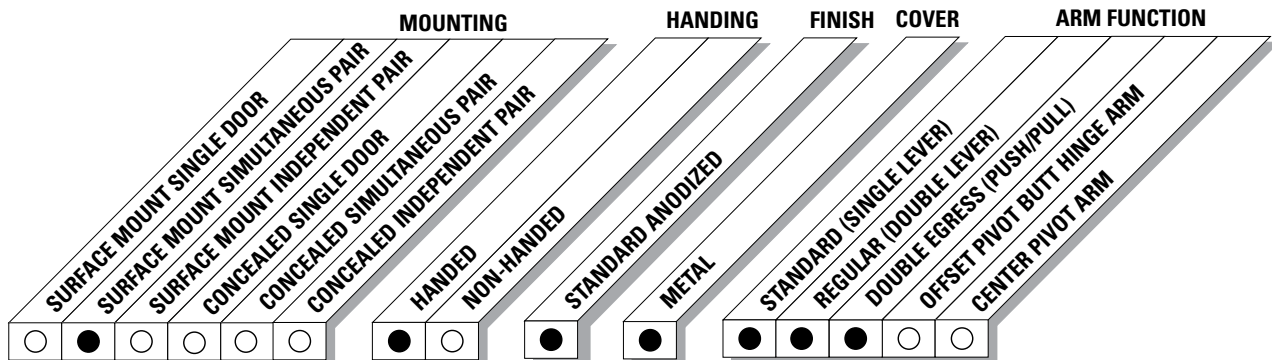
*PULL SIDE mount shown

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.

- Push 'N Go permits non-switch activation.
- Power Boost provides additional latching force.
- Electromechanical unit with microprocessor control.
- Digital keypad for easy setup.
- Meets International Building Code requirements and ANSI A156.19.
- UL approved for fire doors.

9550 Series is fully compliant with UL 325 & UL 1998 and meets the provisions of ANSI A156.19. The 9550 Series is UL listed for fire-rated applications. The 9550 Series also meets the provisions of the Americans with Disabilities Act.

- 9550 Series operator is shipped with motor gearboxes, control box, arms, header, and mounting hardware. Actuators available separately, see pages 122-137.
- Simultaneous pair, surface mounted.
- Meets ADA requirements (power mode only).
- Handed product.
- Pull, Push or Double Egress applications available.
- 72" header length is standard. Specify other length 52" to 98". Consult factory regarding this option.
- Adjustable hold open period of 2 to 32 seconds in automatic or manual mode.

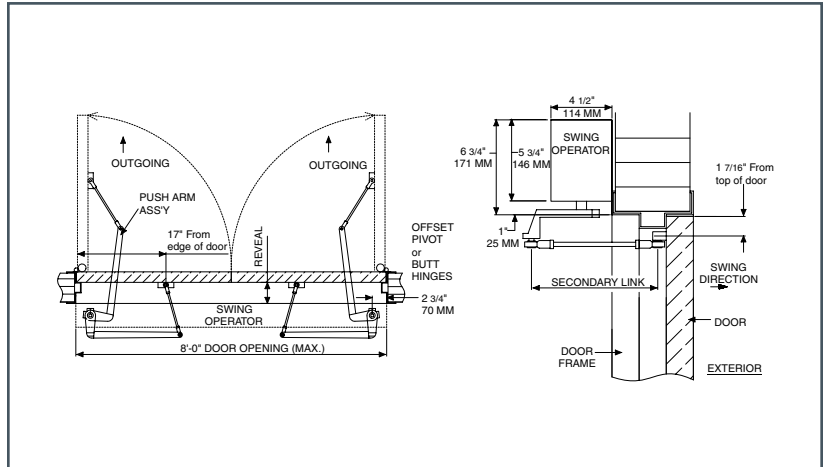


● AVAILABLE
○ NOT AVAILABLE

LCN 9550 SERIES

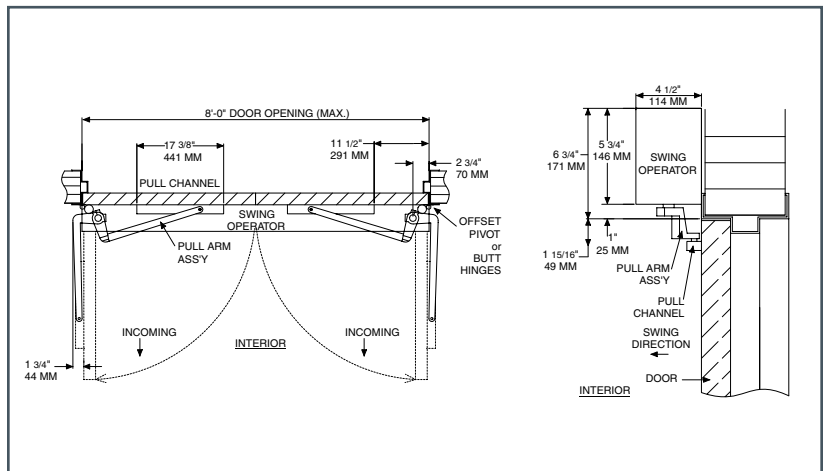
TOP JAMB SIMULTANEOUS PAIR (OFFSET PIVOT/BUTT HINGE, CENTER PIVOT, PUSH) MOUNTING

Consult factory for all balanced door installations.



TOP JAMB SIMULTANEOUS PAIR (OFFSET PIVOT/BUTT HINGE, CENTER PIVOT, PULL) MOUNTING

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



MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Reveal for push** installations should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM.
- **Reveal for pull** installations should not exceed 4" (102 mm).
- **Reveal** for double egress installations should not exceed 4" (102 mm).
- **Head Frame** minimum 1-3/4" (44 mm). Face frame 6-3/4" (171 mm) total operator clearance.
- **Top Rail** minimum 2-3/4" (70 mm).
- **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- **System Diagram** see "AUTOMATIC OPERATORS" section pages 53 for typical system wiring and page 56 for electrical data.

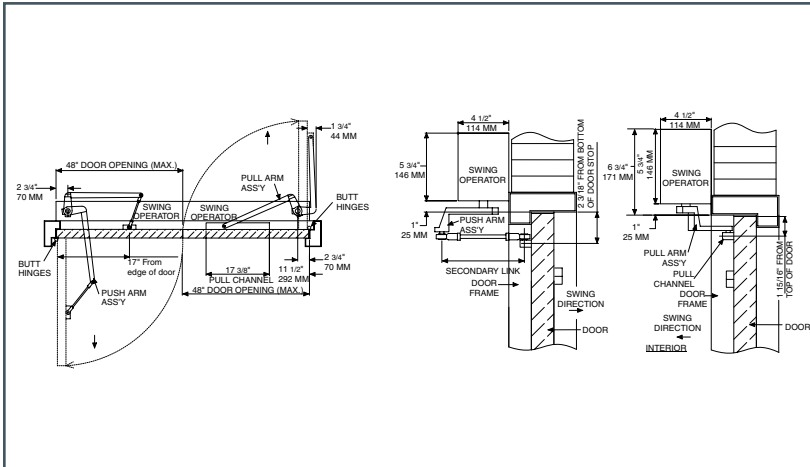
Contact LCN Product Support for installation assistance.

9550 SERIES

MOUNTING DETAILS

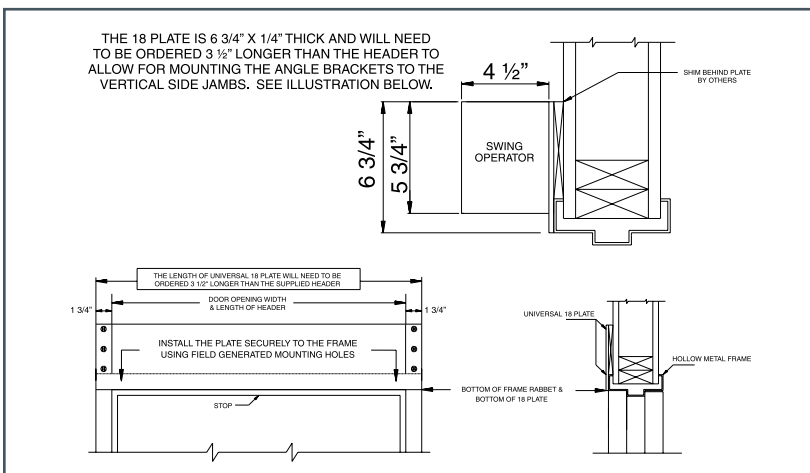
TOP JAMB SIMULTANEOUS PAIR (RH DOUBLE EGRESS) MOUNTING

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



HOLLOW METAL FRAME

Suggested Installation.



MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Reveal for push** installations should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM.
- **Reveal for pull** installations should not exceed 4" (102 mm).
- **Reveal for double egress** installations should not exceed 4" (102 mm).
- **Head Frame** minimum 1-3/4" (44 mm). Face frame 6-3/4" (171 mm) total operator clearance.
- **Top Rail** minimum 2-3/4" (70 mm).
- **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- **System Diagram** see "AUTOMATIC OPERATORS" section pages 53 for typical system wiring and page 56 for electrical data.

Contact LCN Product Support for installation assistance.

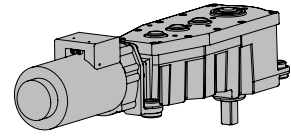
9550 SERIES

MOTOR GEARBOX

MOTOR GEARBOX – SENIOR SWING, 9550-3454

Driving mechanism for operator. Provides 15 lbs opening force. Handed.

3454



MOUNTING BRACKETS

MOUNTING BRACKET – 2-3/4", 9550-275

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

REAR MOUNT BRACKET, 9550-3018

Motor gearbox mounting bracket. Rear bracket.

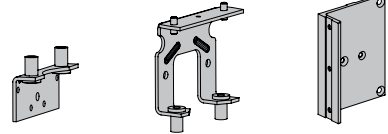
ANGLED BRACKET, 9550-334-1

Mounting bracket for surface applications. (Includes 2 mounting brackets).

275

3018

334-1 (2)



CONTROL BOXES

CONTROL BOX – SENIOR SWING, 9550-3462

Electronic controlling device for Senior Swing.

COMPANION CABLE, 9550-982

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

HEADERS

HEADER, 9550-3572HL

Standard, mounting header. Pair door, two operators. Specify length 52" to 98" maximum.

END CAPS

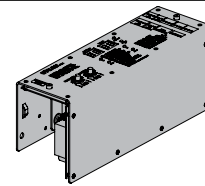
HEADER ENDCAPS, 9550-334

End cap with openings for wiring.

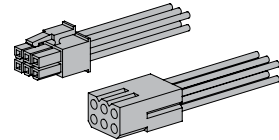
END DRESS PLATE, 9550-334-2

Metal finish end cap.

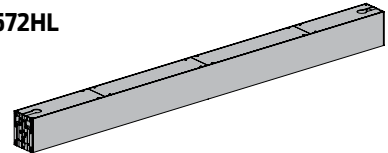
3462



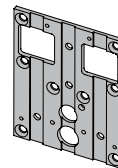
982



3572HL



334



334-2



9550 SERIES

ARMS

STANDARD ARM ASSEMBLY, 9550-3077PLCM

Handed arm. (Includes 3077 regular arm assembly, 3038 track, and 3034 track roller).

REGULAR ARM ASSEMBLY, 9550-3077

Handed arm. (Includes 77 main arm assembly and 79 linkage assembly).

REGULAR LONG ARM ASSEMBLY, 9550-3077L

Handed arm. (Includes 77 main arm assembly and 79LR linkage assembly).

STANDARD ARM, 9550-3077T

Handed arm. Track roller not included.

MAIN ARM, 9550-77

Handed arm attaches to motor gearbox.

LINKAGE ASSEMBLY – 15", 9550-79

Threaded rod attaches to door. Extends from main arm.

LINKAGE ASSEMBLY – 32", 9550-79LR

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

TRACKS

TRACK 9550-3038

Standard non-handed track.

TRACK END CAP 9550-73

Black plastic end caps.

ROLLER, 9550-3034

Quiet low friction roller assembly.

INSTALLATION ACCESSORIES

SPINDLE PLATE – 2-3/4", 9550-11A

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

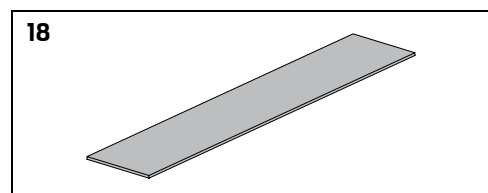
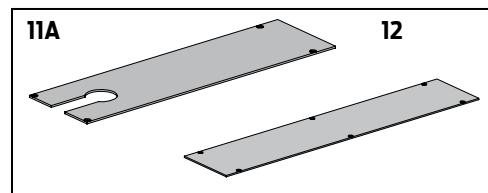
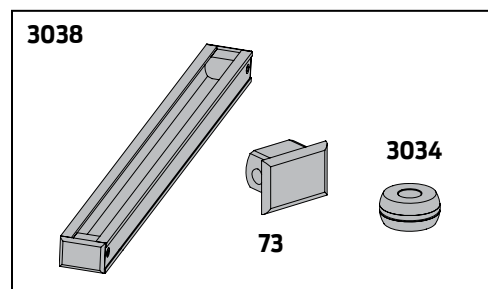
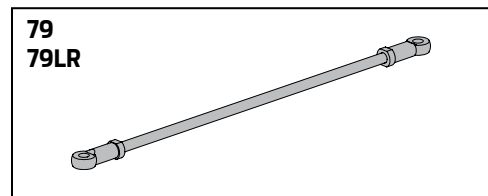
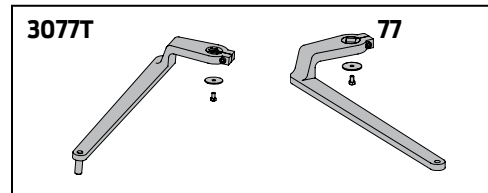
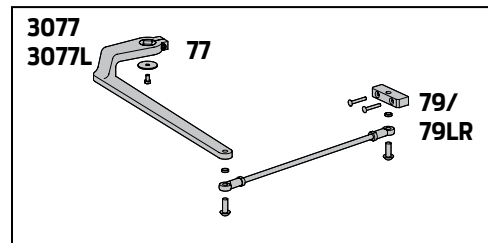
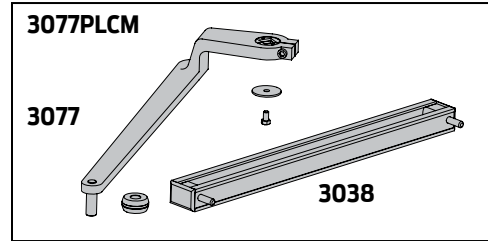
FILLER PLATE BLANK, 9550-12

Completes length of header box. (Specify length).

MOUNTING PLATE, 9550-18

Optional 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.

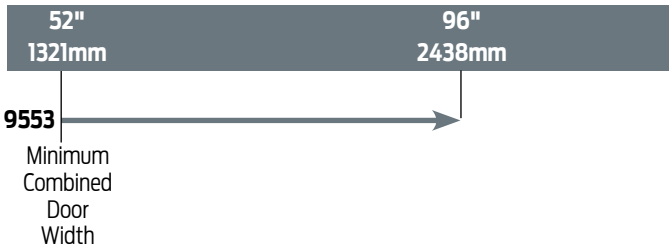
NOTE: The length of a universal 18 plate will need to be ordered 3-1/2" longer than the supplied header when using angle brackets.



9550 SERIES

TABLE OF SIZES

COMBINED DOOR WIDTH



→ Indicates recommended range of door width for operator.

NOTE: For all Senior Swing Series.

Simultaneous Pair – Width per leaf 30" minimum to 48" maximum.

HOW-TO-ORDER 9550 SERIES OPERATORS

1. SPECIFY HAND

- RH
- LH

2. SPECIFY HEADER / LENGTH

- HL__ (Specify length 52" to 98")
regular or long arm
- HL__ (Specify length 60" to 98")
for standard or DE arm

3. 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

OPERATOR OPTIONS

MOUNTING PLATE

- Plate, ____ (Specify Length 52" to 101-1/2")

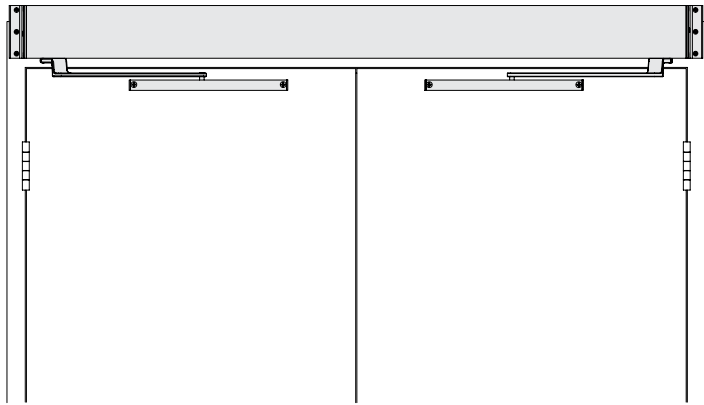
ARM

- 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)

9560 SERIES

FEATURES

OPERATOR MOUNTS INDEPENDENT PAIR, SURFACE MOUNT *PULL SIDE PUSH SIDE DOUBLE EGRESS



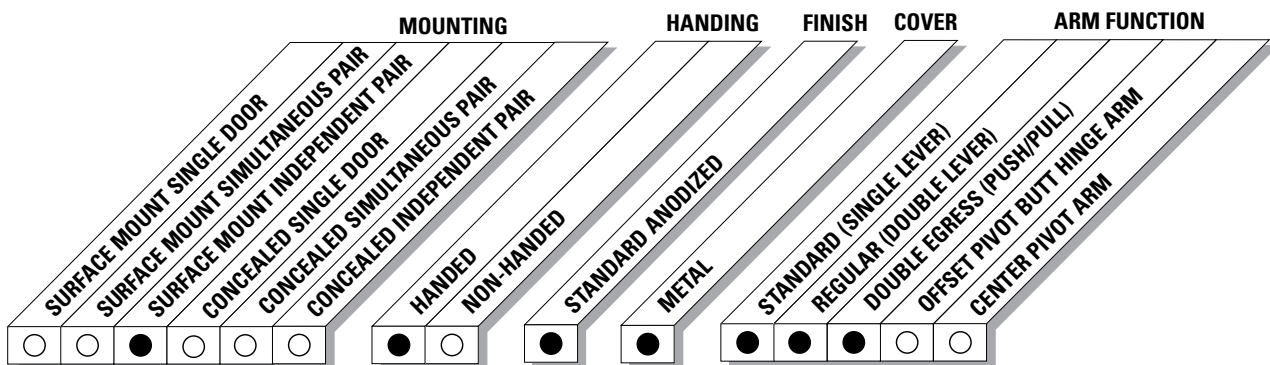
*PULL SIDE mount shown

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.

- Push 'N Go permits non-switch activation.
- Power Boost provides additional latching force.
- Electromechanical unit with microprocessor control.
- Digital keypad for easy setup.
- Meets International Building Code requirements and ANSI A156.19.
- UL approved for fire doors.

- 9560 Series operator is shipped with motor gearboxes, control boxes, arms, header, and mounting hardware. Actuators available separately, see pages 122-137.
- Independent pair, surface mounted.
- Meets ADA requirements (power mode only).
- Handed product.
- Pull, Push or Double Egress applications available.
- 72" header length is standard. Specify other length 65" to 98". Consult factory regarding this option.
- Adjustable hold open period of 2 to 32 seconds in automatic or manual mode.

9560 Series is fully compliant with UL 325 & UL 1998 and meets the provisions of ANSI A156.19. The 9560 Series is UL listed for fire-rated applications. The 9560 Series also meets the provisions of the Americans with Disabilities Act.

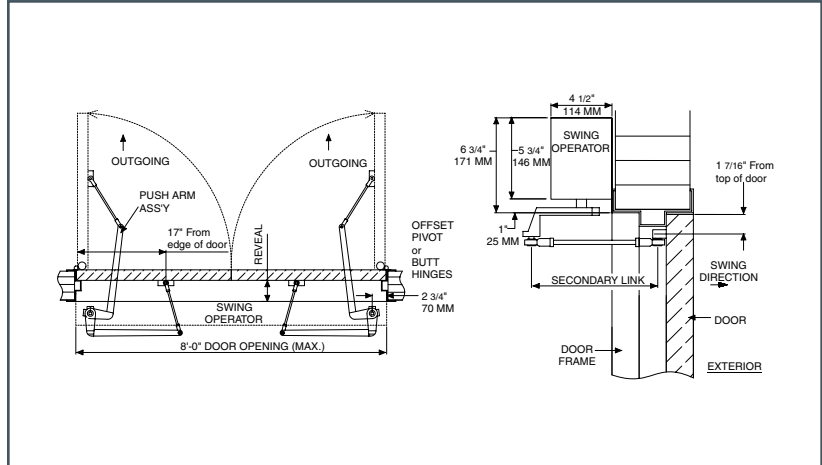


- AVAILABLE
- NOT AVAILABLE

9560 SERIES

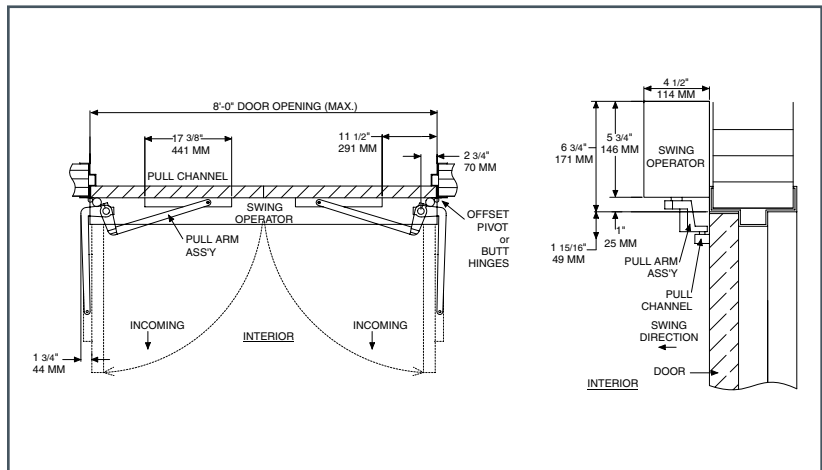
TOP JAMB INDEPENDENT PAIR (OFFSET PIVOT/BUTT HINGE, CENTER PIVOT, PUSH) MOUNTING

Consult factory for all balanced door installations.



TOP JAMB INDEPENDENT PAIR (OFFSET PIVOT/BUTT HINGE, CENTER PIVOT, PULL) MOUNTING

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



MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Reveal for push** installations should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM.
- **Reveal for pull** installations should not exceed 4" (102 mm).
- **Reveal** for double egress installations should not exceed 4" (102 mm).
- **Head Frame** minimum 1-3/4" (44 mm). Face frame 6-3/4" (171 mm) total operator clearance.
- **Top Rail** minimum 2-3/4" (70 mm).
- **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- **System Diagram** see "AUTOMATIC OPERATORS" section pages 53 for typical system wiring and page 56 for electrical data.

Contact LCN Product Support for assistance.

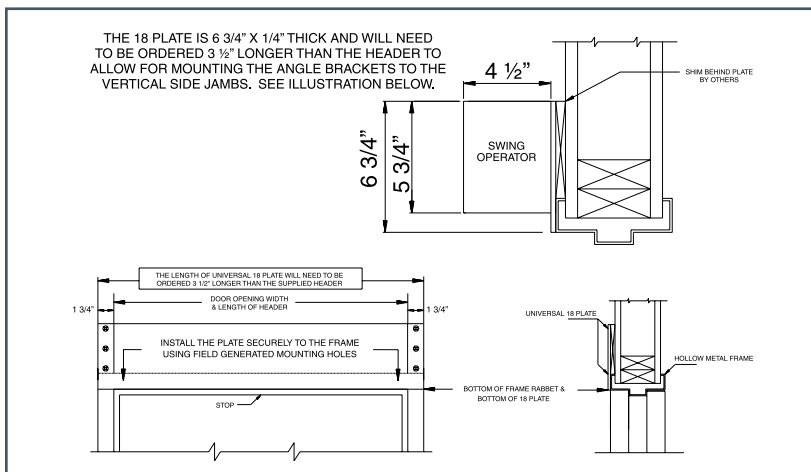
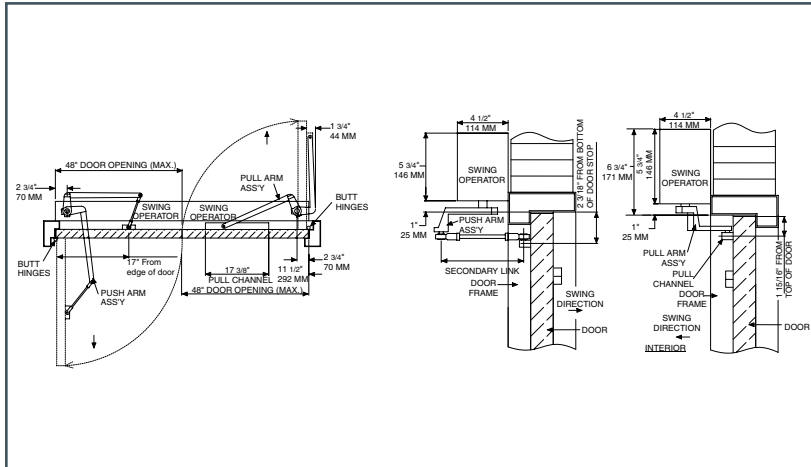
9560 SERIES

MOUNTING DETAILS

TOP JAMB INDEPENDENT PAIR (RH DOUBLE EGRESS) MOUNTING

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

HOLLOW METAL FRAME Suggested Installation.



MAXIMUM OPENING

Template allows 90 degree power opening and 90 degree manual opening.

- **Butt Hinges** should not exceed 5" (127 mm) in width.
- **Reveal for push** installations should not exceed 10" (254 mm) for REGULAR ARM and 20" (508 mm) for LONG ARM.
- **Reveal for pull** installations should not exceed 4" (102 mm).
- **Reveal** for double egress installations should not exceed 4" (102 mm).
- **Head Frame** minimum 1-3/4" (44 mm). Face frame 6-3/4" (171 mm) total operator clearance.
- **Top Rail** minimum 2-3/4" (70 mm).
- **Opening & Closing Time** are variable by adjustments to the electronic control box. Maximum hold open time adjustable up to approximately 32 seconds.
- **System Diagram** see "AUTOMATIC OPERATORS" section pages 53 for typical system wiring and page 56 for electrical data.

Contact LCN Product Support for assistance.

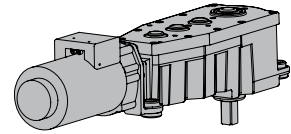
9560 SERIES

MOTOR GEARBOX

MOTOR GEARBOX – SENIOR SWING, 9560-3454

Driving mechanism for operator. Provides 15 lbs opening force. Handed.

3454



MOUNTING BRACKETS

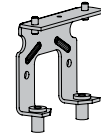
MOUNTING BRACKET – 2-3/4", 9560-275

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

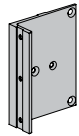
275



3018



334-1



REAR MOUNT BRACKET, 9560-3018

Motor gearbox mounting bracket. Rear bracket.

ANGLED BRACKET, 9560-334-1

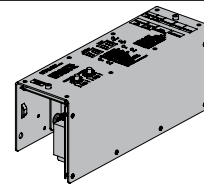
Mounting bracket for surface applications. (Includes 2 mounting brackets).

CONTROL BOXES

CONTROL BOX – SENIOR SWING, 9560-3462

Electronic controlling device for Senior Swing.

3462

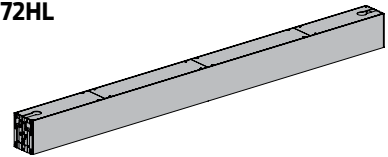


HEADERS

HEADER, 9560-3572HL

Standard, mounting header. Pair door, two operators. Specify length 65" to 98" maximum.

3572HL

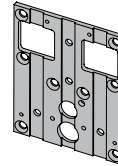


END CAPS

HEADER END CAPS, 9560-334

End cap with openings for wiring.

334



334-2



END DRESS PLATE, 9560-334-2

Metal finish end cap.

9560 SERIES

ARMS

STANDARD ARM ASSEMBLY, 9560-3077PLCM

Handed arm. (Includes 3077 regular arm assembly, 3038 track, and 3034 track roller).

REGULAR ARM ASSEMBLY, 9560-3077

Handed arm. (Includes 77 main arm and 79 linkage assembly).

REGULAR LONG ARM ASSEMBLY, 9560-3077L

Handed arm. (Includes 77 main arm assembly and 79LR linkage assembly).

STANDARD ARM, 9560-3077T

Handed arm. Track roller not included.

MAIN ARM, 9560-77

Handed arm attaches to motor gearbox.

LINKAGE ASSEMBLY – 15", 9560-79

Threaded rod attaches to door. Extends from main arm.

LINKAGE ASSEMBLY – 32", 9560-79LR

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

TRACKS

TRACK 9560-3038

Standard non-handed track.

TRACK END CAP 9560-73

Black plastic end caps.

ROLLER, 9560-3034

Quiet low friction roller assembly.

INSTALLATION ACCESSORIES

SPINDLE PLATE – 2-3/4", 9560-11A

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

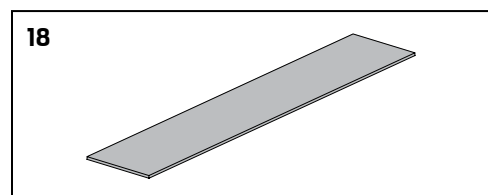
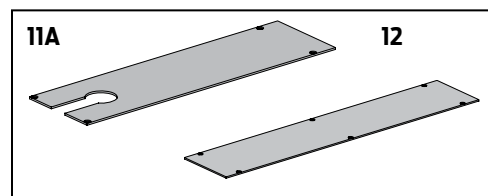
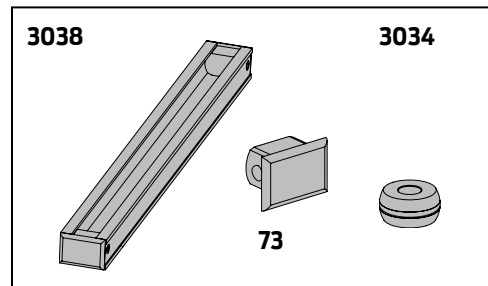
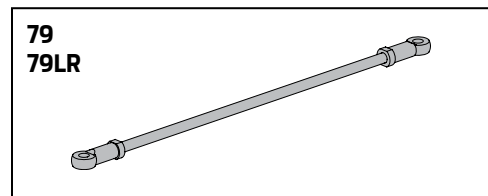
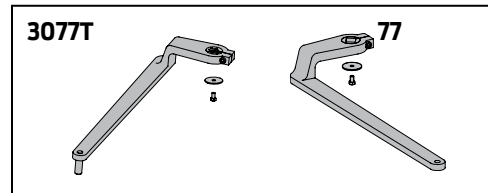
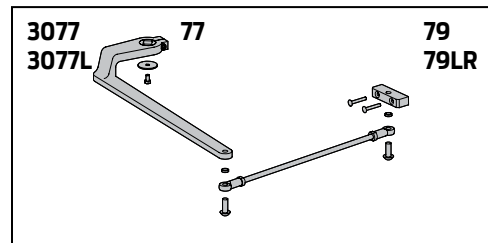
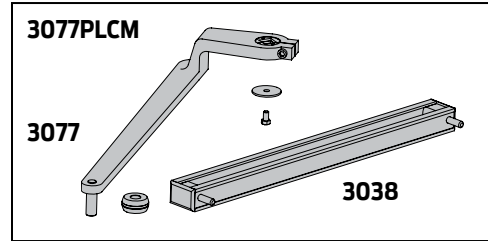
FILLER PLATE BLANK, 9560-12

Completes length of header box. (Specify length).

MOUNTING PLATE, 9560-18

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.

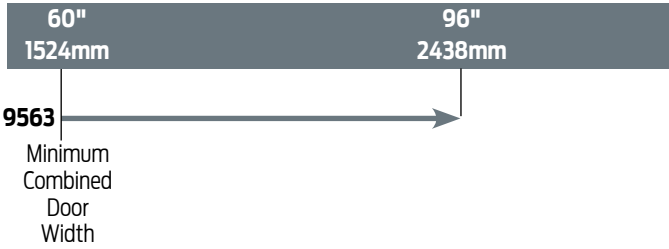
NOTE: The length of a universal 18 plate will need to be ordered 3-1/2" longer than the supplied header.



9560 SERIES

TABLE OF SIZES

COMBINED DOOR WIDTH



→ Indicates recommended range of door width for operator.

NOTE: For all Senior Swing Series.

Independent Pair – Width per leaf 30" minimum to 48" maximum.

HOW-TO-ORDER 9560 SERIES OPERATORS

1. SPECIFY HAND

- RH
- LH

2. SPECIFY HEADER / LENGTH

- HL_ (Specify length 65" to 98")
regular or long arm

3. 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

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)

AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 4-1/2" Surface and Flush mounts

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 two-way 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.

WALL MOUNTED ACTUATOR, 8310-856

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.

WALL MOUNTED ACTUATOR, 8310-856T

Same as the 8310-856, with the added engraving of "Push to Open".

FLUSH MOUNT BOX, 8310-868F

Rugged Plastic Box, 4-1/2" Round. Optional accessory - Can be used w/any 4-1/2" round actuator.

SURFACE MOUNT BOX, 8310-868S

Rugged Plastic Box, 4-1/2" Round. Optional accessory - Can be used w/any 4-1/2" round actuator.

WEATHER/TRIM RING, 8310-800

Weather/Trim Ring, 4-1/2" Round. Optional accessory - Must be used w/any 4-1/2" round plastic mounting box.

TRANSMITTER, 8310-844

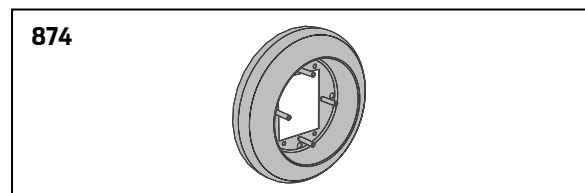
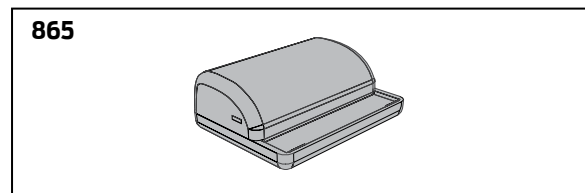
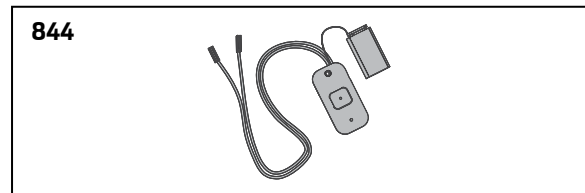
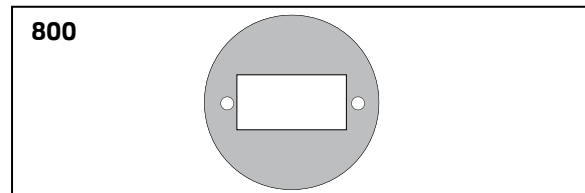
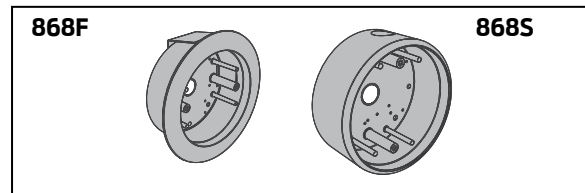
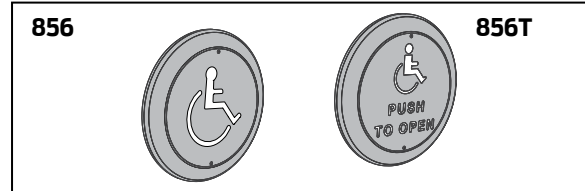
Transmitter, Wireless, 1 Channel, 9v battery included. Use to convert standard wall mount actuator to wireless. Requires 8310-865 Receiver.

RECEIVER, 8310-865

Receiver, Wireless, 1 Channel, w/Sequencing Feature. Used in conjunction w/ Wireless Actuators & Transmitter(s).

ESCUTCHEON, 8310-874

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.

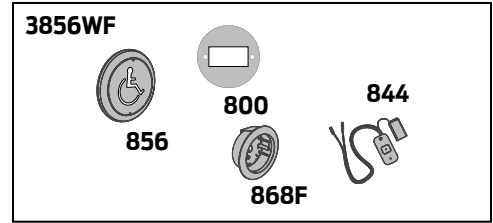


AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 4-1/2" Surface and Flush mounts

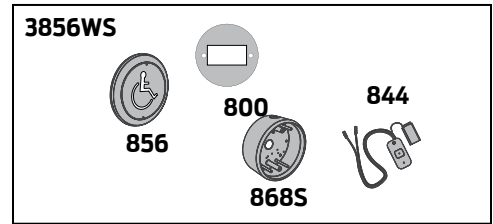
FLUSH MOUNT KIT, 8310-3856WF

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).



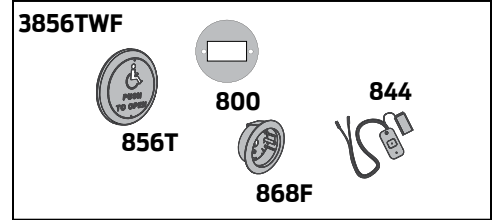
SURFACE MOUNT KIT, 8310-3856WS

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).



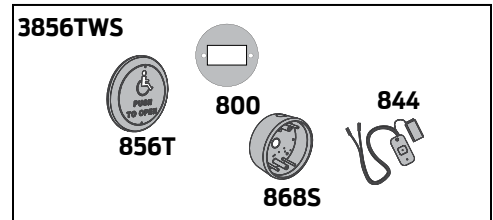
FLUSH MOUNT KIT, 8310-3856TWF

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).



SURFACE MOUNT KIT, 8310-3856TWS

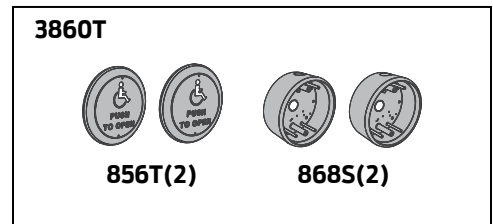
Actuator, 4-1/2" Round, Logo, Text, Wireless,
Includes 8310-856T Actuator, 8310-844 Transmitter,
8310-868S Surface Box, 8310-800 Weather/Trim Ring.
Requires 8310-865 Receiver (not part of kit).



SURFACE MOUNT KIT, 8310-3860T

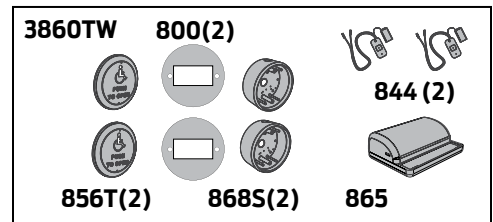
Actuator Package, 4-1/2" Round,
Includes 8310-856T (2) Wall Mount Actuator,
8310-868S Surface Mount Box.

NOTE: Weather/Trim Rings are sold separately.



SURFACE MOUNT KIT, 8310-3860TW

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.

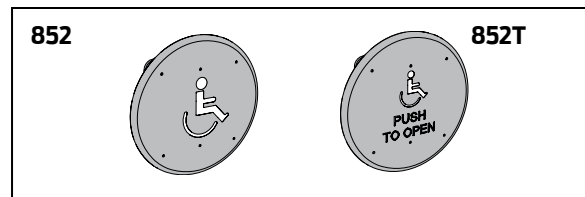


AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 6" Surface and Flush mounts

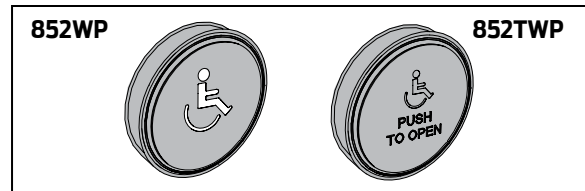
WALL MOUNTED ACTUATOR, 8310-852

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.



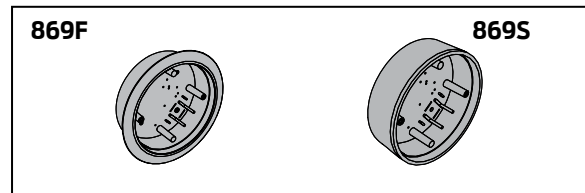
WALL MOUNTED ACTUATOR, 8310-852T

Same as the 8310-852, with the added engraving of "Push to Open".



WALL MOUNTED ACTUATOR, 8310-852WP

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.

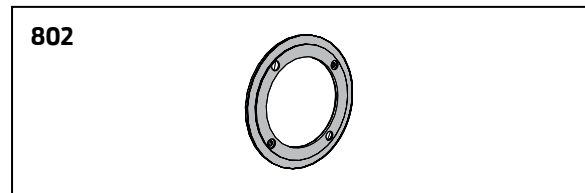


WALL MOUNTED ACTUATOR, 8310-852TWP

Same as the 8310-852WP, with the added engraving of "Push to Open".

FLUSH MOUNT BOX, 8310-869F

Rugged Plastic Box, 6" Round. Optional accessory - Can be used w/ any 6" round actuator.

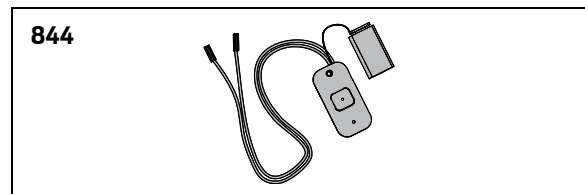


SURFACE MOUNT BOX, 8310-869S

Rugged Plastic Box, 6" Round. Optional accessory - Can be used w/ any 6" round actuator.

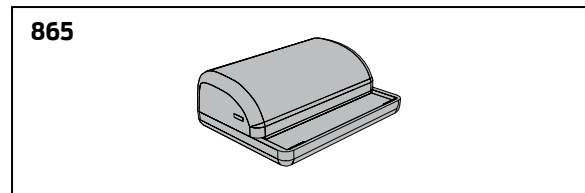
WEATHER/TRIM RING, 8310-802

Plastic Weather/Trim Ring, 6" Round. Optional accessory - Can be used w/ any 6" round plastic mounting box.



TRANSMITTER, 8310-844

Transmitter, Wireless, 1 Channel, 9v battery included. Use to convert standard wall mount actuator to wireless. Requires 8310-865 Receiver.

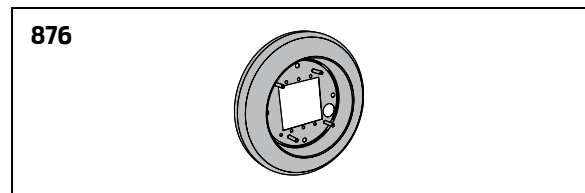


RECEIVER, 8310-865

Receiver, Wireless, 1 Channel, w/ Sequencing Feature Used in conjunction w/ Wireless Actuators & Transmitter(s).

ESCUTCHEON, 8310-876

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.

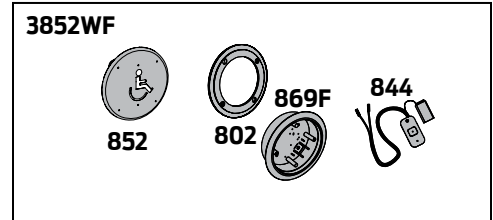


AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 6" Surface and Flush mounts

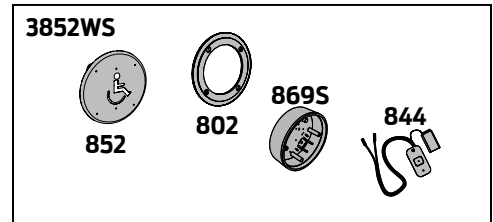
FLUSH MOUNT KIT, 8310-3852WF

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).



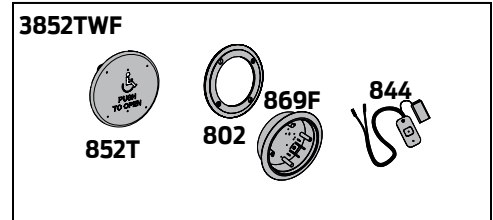
SURFACE MOUNT KIT, 8310-3852WS

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).



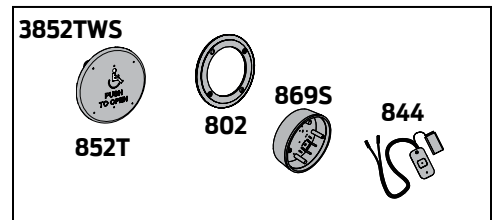
FLUSH MOUNT KIT, 8310-3852TWF

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).



SURFACE MOUNT KIT, 8310-3852TWS

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).



AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 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.

JAMB MOUNTED ACTUATOR, 8310-818

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.

JAMB MOUNTED ACTUATOR, 8310-818T

Same as the 8310-818, with the added engraving of "Push to Open".

FLUSH MOUNT BOX, 8310-819F

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.

SURFACE MOUNT BOX, 8310-819S

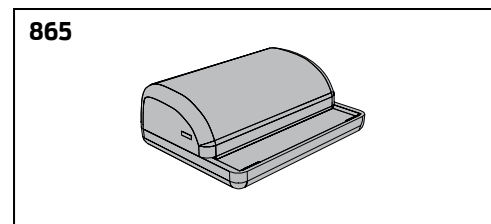
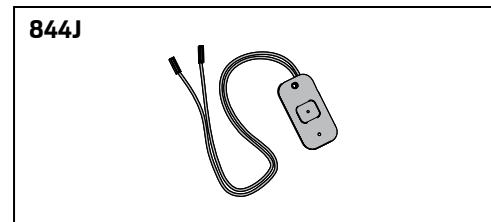
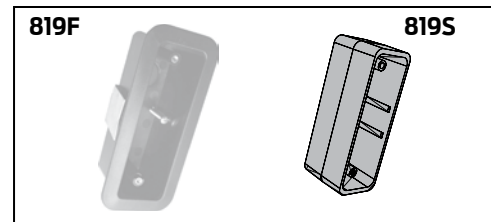
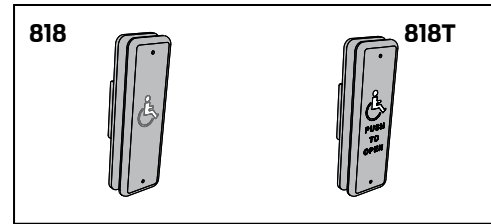
Rugged Plastic Jamb Box, 1-1/2" x 4-3/4", Rectangle. Optional accessory - Can be used w/ any 1-1/2" x 4-3/4" jamb mount plastic mounting box.

TRANSMITTER, 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).

RECEIVER, 8310-865

Receiver, Wireless, 1 Channel, w/ Sequencing Feature. Used in conjunction w/ Wireless Actuators & Transmitter(s).



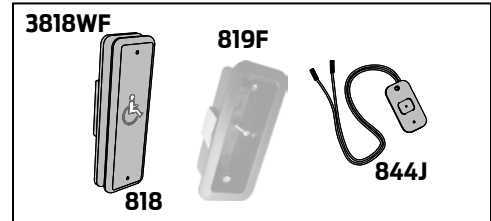
AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 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.

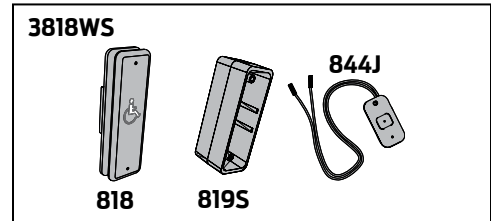
FLUSH MOUNT KIT, 8310-3818WF

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).



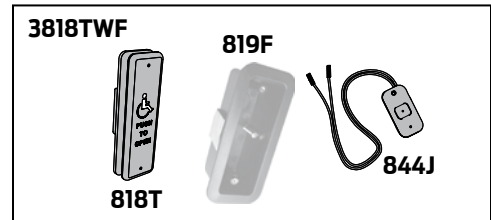
SURFACE MOUNT KIT, 8310-3818WS

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).



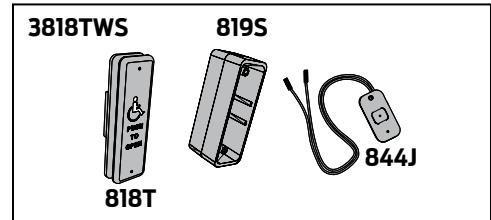
FLUSH MOUNT KIT, 8310-3818TWF

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).



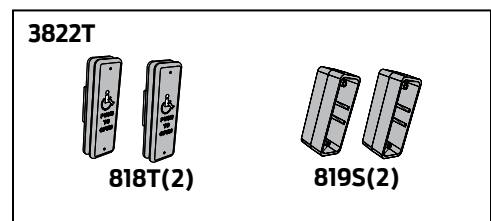
SURFACE MOUNT KIT, 8310-3818TWS

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).



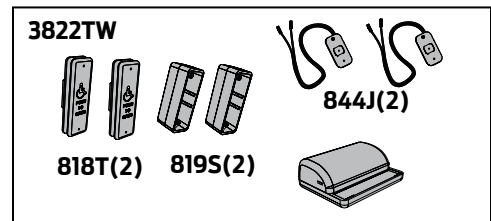
SURFACE MOUNT KIT, 8310-3822T

Actuator Package, 1-1/2" x 4-3/4", Jamb Mount Includes 8310-818T (2) Jamb Mount Actuator, 8310-819S (2) Surface Mount Box.



SURFACE MOUNT KIT, 8310-3822TW

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 Series 4-3/4" Square Surface and Flush mounts

WALL MOUNTED ACTUATOR, 8310-853

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.

WALL MOUNTED ACTUATOR, 8310-853T

Same as the 8310-853, with the added engraving of "Push to Open".

SURFACE MOUNTED ACTUATOR, 8310-853WP

Wireless, low profile, low voltage actuator with round, stainless steel touch plate in 4-3/4" (121mm) square. Engraved blue filled handicap symbol conforms to most accessibility codes. Surface mount box includes integral transmitter w/ battery and actuator switch. Heavy industrial grade components provide vandal resistant mounting and weather resistant switch standard. Requires 8310-865 Receiver.

SURFACE MOUNTED ACTUATOR, 8310-853TWP

Same as the 8310-853WP, with the added engraving of "Push to Open".

FLUSH MOUNT BOX, 8310-867F

Rugged Plastic Box, 4-3/4" Square. Optional accessory - Can be used w/ any 4-3/4" square actuator.

SURFACE MOUNT BOX, 8310-867S

Rugged Plastic Box, 4-3/4" Square. Optional accessory - Can be used w/ any 4-3/4" square actuator.

WEATHER/TRIM RING, 8310-801

Plastic Weather Ring, 4-3/4" Square. Optional accessory - Can be used w/ any 4-3/4" square plastic mounting box.

TRANSMITTER, 8310-844

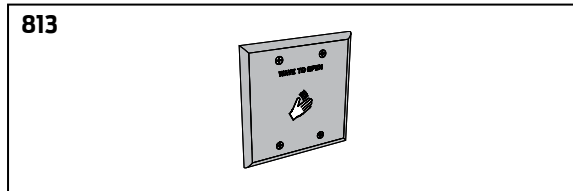
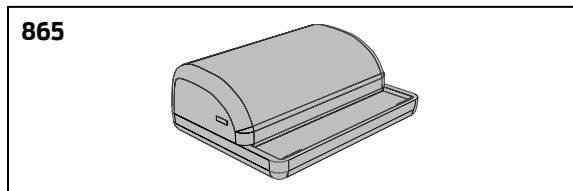
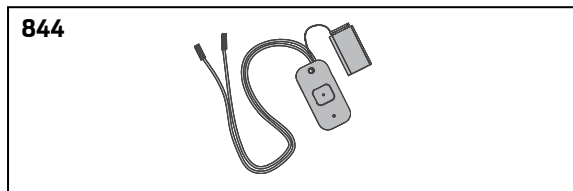
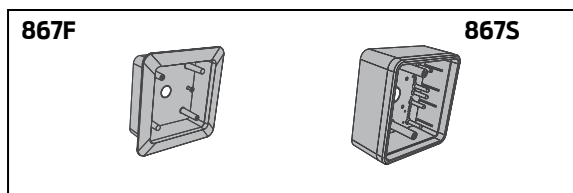
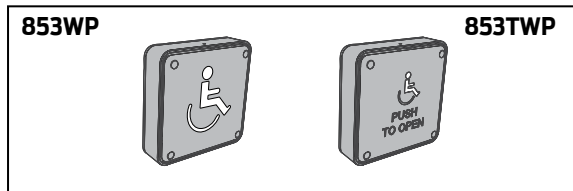
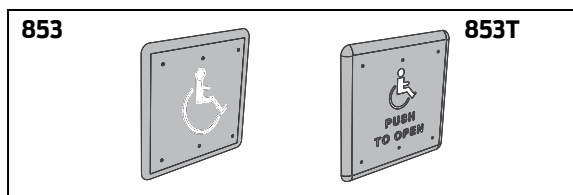
Transmitter, Wireless, 1 Channel, 9v battery included. Use to convert standard wall mount actuator to wireless. Requires 8310-865 Receiver.

RECEIVER, 8310-865

Receiver, Wireless, 1 Channel, w/ Sequencing Feature Used in conjunction w/ Wireless Actuators & Transmitter(s).

TOUCHLESS WALL MOUNTED ACTUATOR, 8310-813

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).



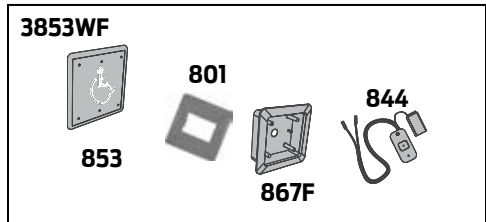
ACTUATORS & ACCESSORIES

AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 4-3/4" Square Surface and Flush mounts

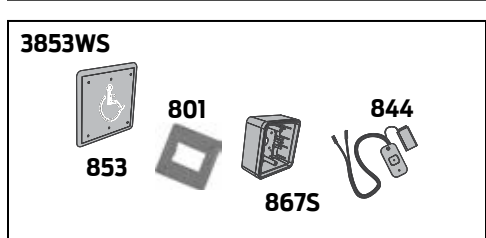
FLUSH MOUNT KIT, 8310-3853WF

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).



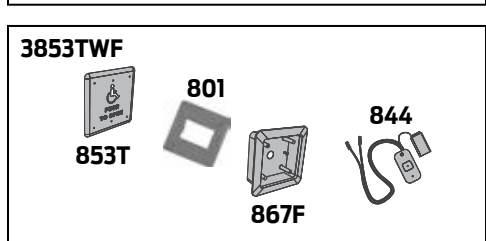
SURFACE MOUNT KIT, 8310-3853WS

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).



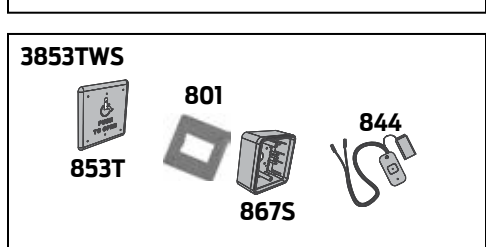
FLUSH MOUNT KIT, 8310-3853TWF

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).



SURFACE MOUNT KIT, 8310-3853TWS

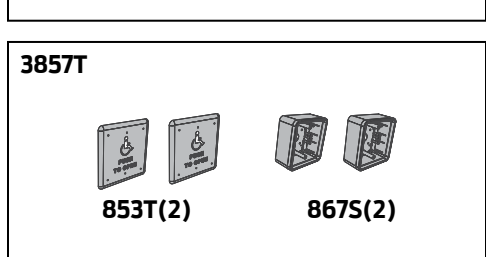
Actuator, 4-3/4" Square, Logo, Text, Wireless
Includes 8310-853T, 8310-844 Transmitter,
8310-867S Surface Box, 8310-801 Weather/Trim Ring.
Requires 8310-865 Receiver (not part of kit).



SURFACE MOUNT KIT, 8310-3857T

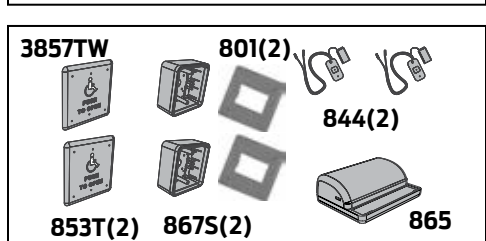
Actuator Package, 4-3/4" Square
Includes 8310-853T (2) Wall Mount Actuator, 8310-867S (2)
Surface Mount Box.

NOTE: Weather/Trim Ring sold separately.



SURFACE MOUNT KIT, 8310-3857TW

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 Series 4-3/4" Dual Square Surface and Flush mounts

DUAL WALL MOUNTED ACTUATOR, 8310-855

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.

FLUSH MOUNT BOX, 8310-867F

Rugged Plastic Box, 4-3/4" Square. Optional accessory - Can be used w/ any 4-3/4" square actuator.

SURFACE MOUNT BOX, 8310-867S

Rugged Plastic Box, 4-3/4" Square. Optional accessory - Can be used w/ any 4-3/4" square actuator.

WEATHER/TRIM RING, 8310-801

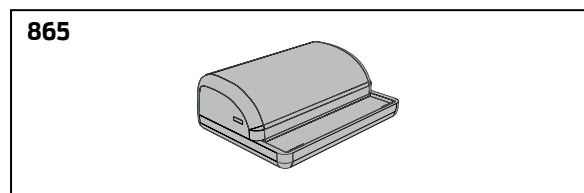
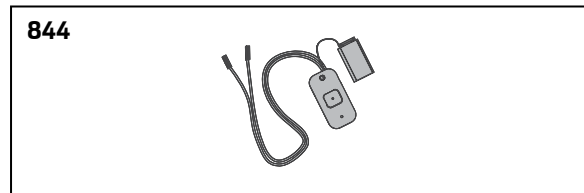
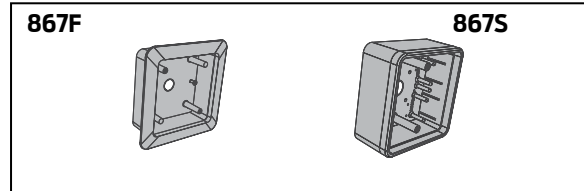
Plastic Weather Ring, 4-3/4" Square. Optional accessory - Can be used w/ any 4-3/4" square plastic mounting box.

TRANSMITTER, 8310-844

Transmitter, Wireless, 1 Channel, 9v battery included. Use to convert standard wall mount actuator to wireless. Requires 8310-865 Receiver.

RECEIVER, 8310-865

Receiver, Wireless, 1 Channel, w/ Sequencing Feature Used in conjunction w/ Wireless Actuators & Transmitter(s).



AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 36" x 6" Full Length Actuators

FULL LENGTH ACTUATOR (FLA), 8310-836T

Hardwired low voltage actuator with stainless steel touch plate with 36" x 6" area on 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.

FULL LENGTH ACTUATOR (FLA), 8310-836TW

Same as the 8310-836T with a built in wireless transmitter and 3v battery. Use in conjunction with 8310-865 Receiver (not included).

RECEIVER, 8310-865

Receiver, Wireless, 1 Channel, w/Sequencing Feature. Used in conjunction w/ Wireless Actuators & Transmitter(s).

TRANSMITTER, 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.

FLA BOLLARD POST 8310-866FLA

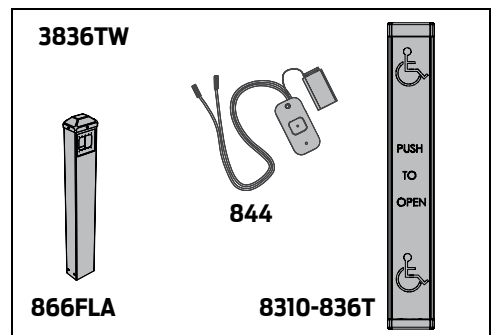
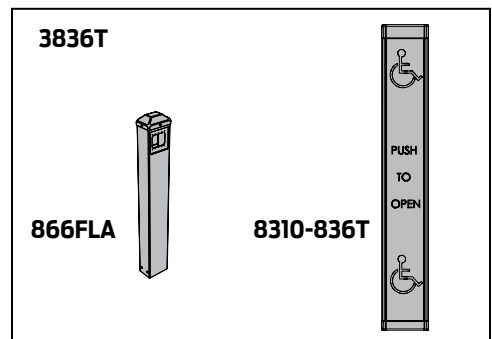
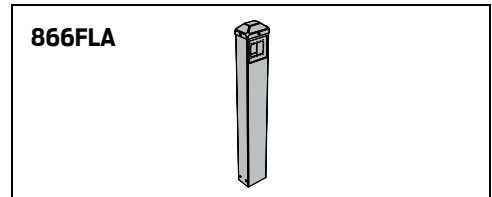
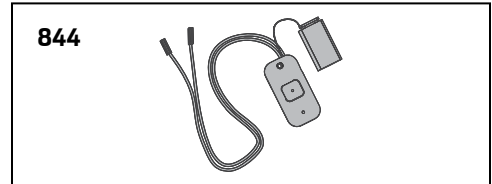
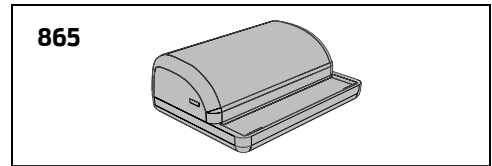
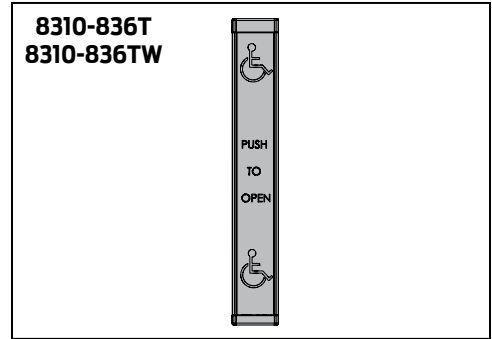
A powder coated steel 42" x 4" x 6": Bollard Post, mounting base pre prepped for the 8310-836T. Includes 8310-866 CAP, 2 mounting screws & spacer for installation.

FLA BOLLARD MOUNT KIT 8310-3836T

36" x 6" Actuator with 8310-866FLA Bollard for wired applications.

FLA BOLLARD MOUNT 8310-3836TW

36" x 6" Actuator with 8310-866FLA Bollard and 8310-844 wireless Transmitter. Transmitter requires 8310-865 Receiver (not included).

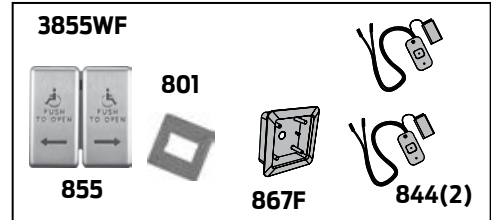


AUTOMATIC OPERATOR ACTUATORS & ACCESSORIES

8310 Series 4-3/4" Dual Square Surface and Flush mounts

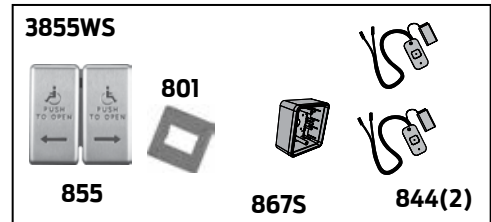
FLUSH MOUNT KIT, 8310-3855WF

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).



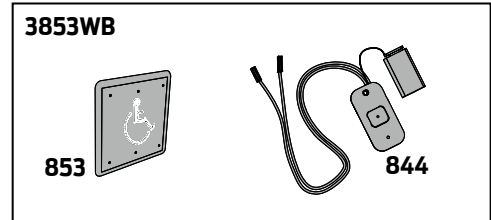
SURFACE MOUNT KIT, 8310-3855WS

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).



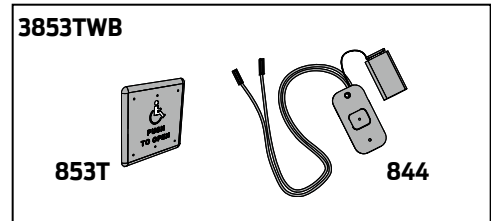
ACTUATOR, BOLLARD MOUNT, 8310-3853WB

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).



ACTUATOR, BOLLARD MOUNT, 8310-3853TWB

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 SENSORS & ACCESSORIES

8310 Series

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.

DOOR MOUNT SAFETY SENSOR, 8310-804-1

Contains one active sensor module to detect obstruction(s) on leading edge of door.

DOOR MOUNT SAFETY SENSOR, 8310-804-2

Contains two active sensor modules to detect obstruction(s) on full face of door.

HEADER MOUNT ACTIVATION SENSOR, 8310-854

Header Mount 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.

HEADER MOUNT SAFETY SENSOR, 8310-877

Header Mount 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.

HEADER MOUNT SAFETY SENSOR SPACER, 8310-877S

Required when 8310-804-1 or 8310-804-2 Door Mount Safety Sensors are used w/ 8310-877 Header Mount Safety Sensor.

REMOTE CONTROL, HANDHELD, 8310-859

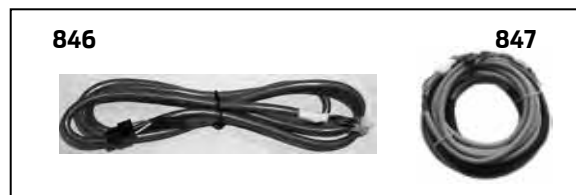
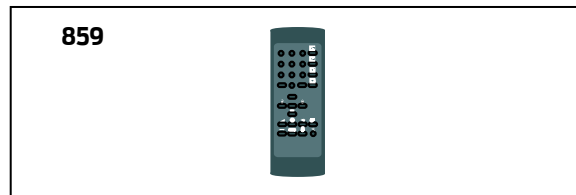
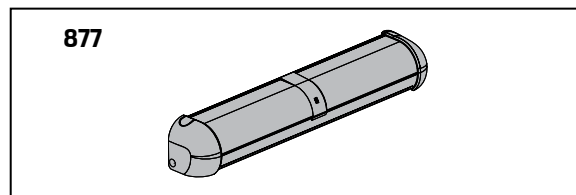
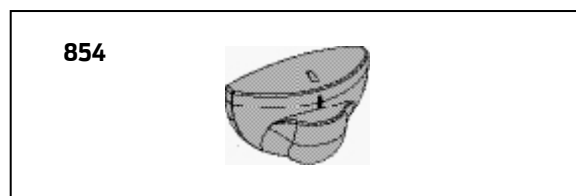
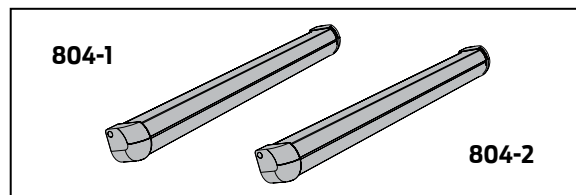
Used to program 8310-877 Header Mount Safety Sensor or 8310-854 Header Mount Motion Sensor.

HARNESS, HEADER MOUNT, 8310-846

Used w/ 8310-877 Header Mount Safety Sensor.

HARNESS, DOOR MOUNT, 8310-847

Used w/ 8310-804-1 or 8310-804-2 Door Mount Safety Sensor (Used with Senior Swing only).

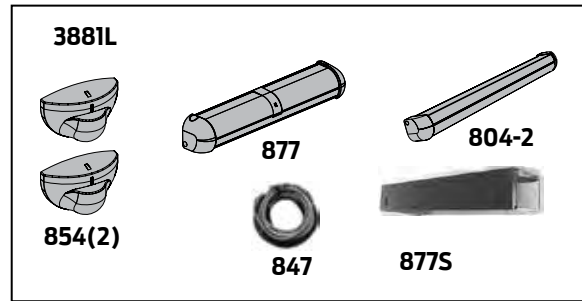


AUTOMATIC OPERATOR SENSORS & ACCESSORIES

8310 Series

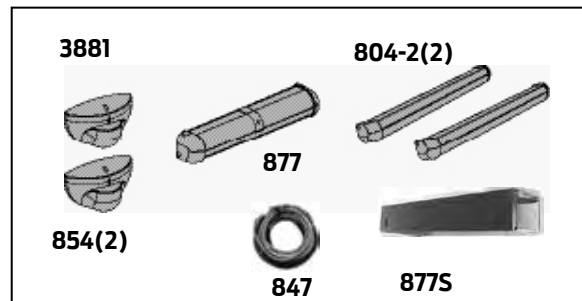
SAFETY SENSOR PACKAGE, 8310-3881L

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).



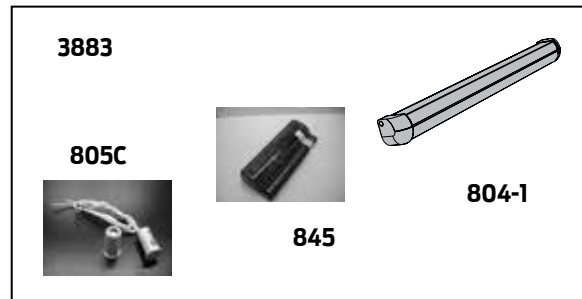
SAFETY SENSOR PACKAGE, 8310-3881

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).



SAFETY SENSOR PACKAGE, 8310-3883

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).



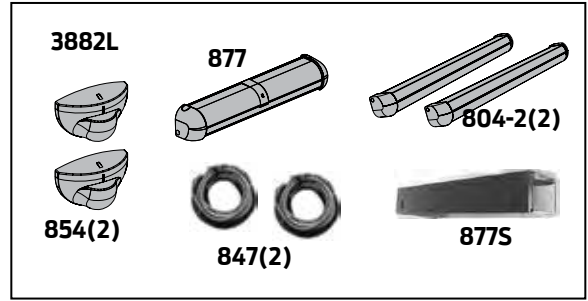
SENSORS & ACCESSORIES KITS

AUTOMATIC OPERATOR SENSORS & ACCESSORIES

8310 Series

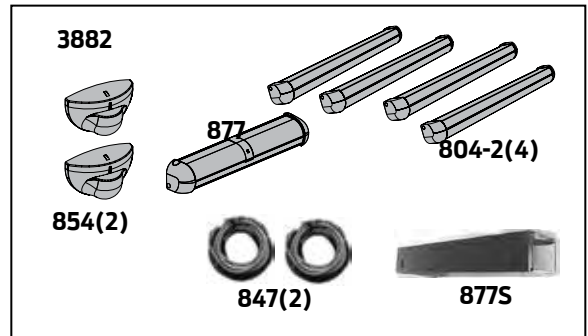
SAFETY SENSOR PACKAGE, 8310-3882L

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.*



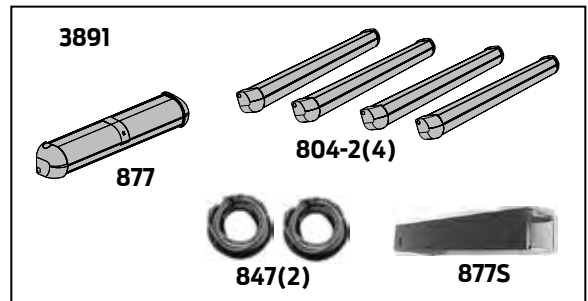
SAFETY SENSOR PACKAGE, 8310-3882

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.*



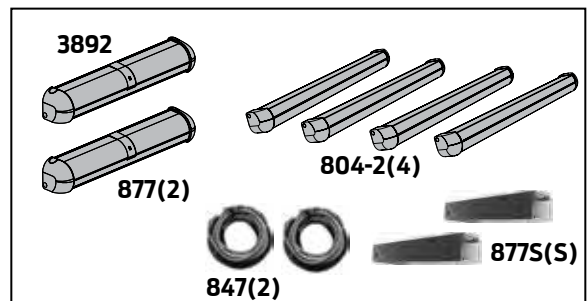
SAFETY SENSOR PACKAGE, 8310-3891

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.*



SAFETY SENSOR PACKAGE, 8310-3892

Activation/Safety Sensor Package, Health Care II, Independent Pair, Includes 8310-877 (2) Header Mount Sensor, 8310-877S (2) Header Mount Spacer, 8310-804-2 (4) Door Mount Sensor (approach/safety side), 8310-847 (2) Harness (Used with Senior Swing only). *NOTE: Not for use with Double Egress.*



AUTOMATIC OPERATOR SENSORS & ACCESSORIES

8310 Series

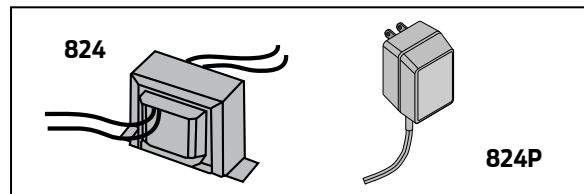
SWITCH, DOOR POSITION, SURFACE MOUNT, 8310-805

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.



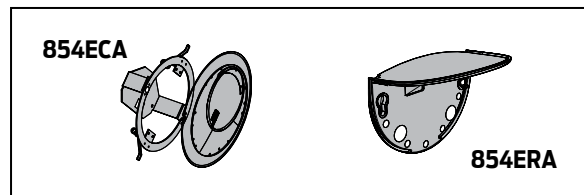
SWITCH, DOOR POSITION, CONCEALED, 8310-805C

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.



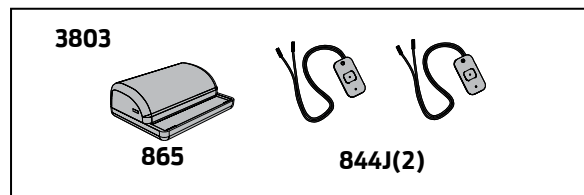
TRANSFORMER, 24V, HARDWIRED, 8310-824

Optional accessory - Used to remotely power any 24v sensor/ receiver.



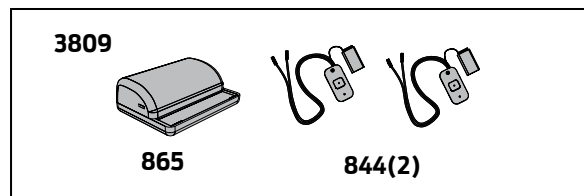
TRANSFORMER, 24V, PLUG IN, 8310-824P

Optional accessory - Used to remotely power any 24v sensor/ receiver.



BRACKET, DROP CEILING, 8310-854ECA

Optional bracket used w/ 8310-854 Header Mount Activation Sensor.



COVER, PROTECTIVE, 8310-854ERA

Optional cover used w/ 8310-854 Header Mount Activation Sensor.



WIRELESS CONVERSION KIT, JAMB MOUNT, 3V, 8310-3803

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.



WIRELESS CONVERSION KIT, WALL MOUNT, 9V, 8310-3809

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.



SAFETY MODULE KIT, 8310-3889

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).

HARNESS, SAFETY MODULE, SERVICE PART, 8310-3888

Safety Module Harness for pneumatic control box.

AUTOMATIC OPERATOR SENSORS & ACCESSORIES

8310 Series

TRANSMITTER, WIRELESS, 8310-861

1 Channel, Handheld, 3v. Requires 8310-865 Receiver.

TRANSMITTER, WIRELESS, 8310-862

2 Channel, Handheld, 3v. Requires 8310-865 Receiver.

TRANSMITTER, WIRELESS, 8310-863

3 Channel, Handheld, 3v. Requires 8310-865 Receiver.

TRANSMITTER, WIRELESS, 8310-864

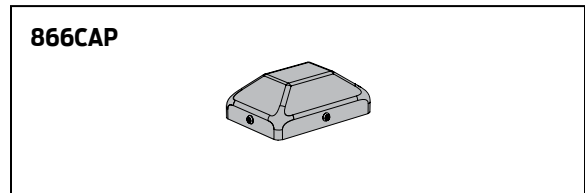
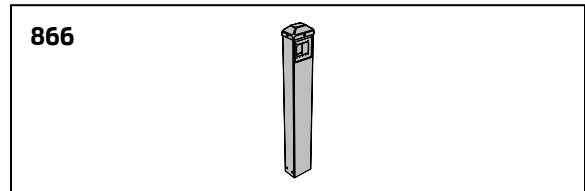
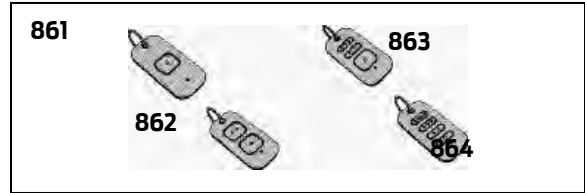
4 Channel, Handheld, 3v. Requires 8310-865 Receiver.

BOLLARD POST, 8310-866

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.

BOLLARD POST, 8310-866CAP

Plastic Cap, Protective Cover, Service Part for 8310-866 Bollard Post.



AUTOMATIC OPERATOR SENSORS & ACCESSORIES

8310 Series

SWITCH, KEY, 8310-806K

Type, 3 Position (On/Off/Hold-Open)
Optional switch used w/ Senior Swing, Benchmark,
or 4630/4640 Operators with (CS) option.



SWITCH, ROCKER, 8310-806R

Type, 3 Position (On/Off/Hold-Open)
Optional switch w/ Senior Swing, Benchmark, or 4630/4640
Operators with (CS) option.

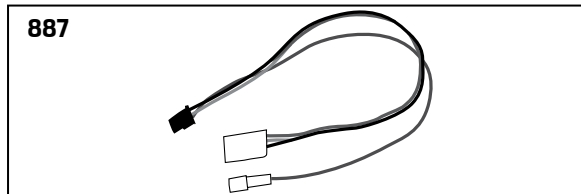


LINE FILTER, 8310-807

AC, 120v, Optional filter used w/ Senior Operators to reduce
'line noise'.

PROGRAMMABLE RELAY MODULE, 8310-845

Used to sequence door operation in Senior Swing and
Benchmark for hard wired applications.



RETROFIT CABLE – 8310-887

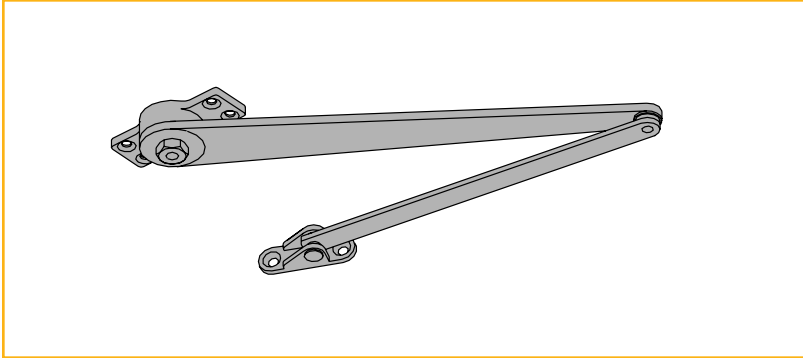
Allows newer style Senior Swing digital control to be activated by
existing switches when replacing older control purchased prior to
September, 2006.



RETROFIT CABLE KIT – 8310-3134

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.

PAH 60

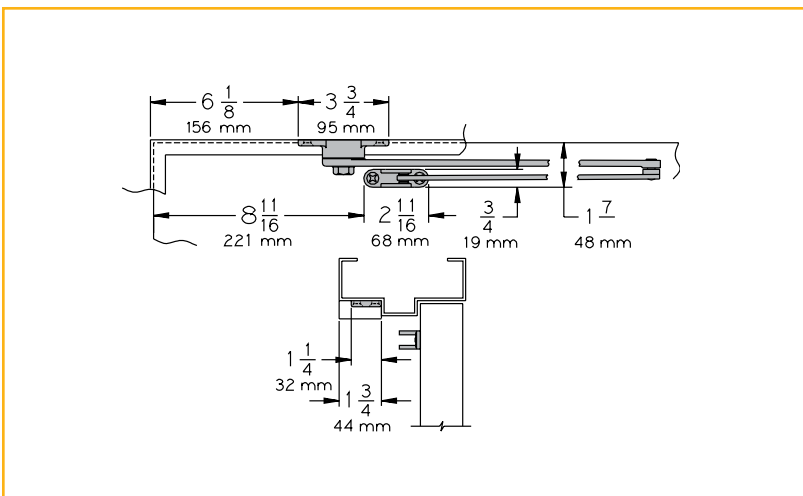


The PAH 60 is recommended for use on the inactive leaf of a pair of doors where the active leaf has a door closer installed.

MAXIMUM OPENING

Hold-open points up to 180°.

- Standard holder shipped with wood and machine screw pack.
- Handed for right or left swinging doors.
- Standard or optional custom powder coat finish.
- Hold-open point adjustable at the soffit shoe.
- Optional plated finish on holder and fasteners.
- Optional SRI primer for installations in corrosive conditions.



HOW-TO-ORDER PAH 60 HOLDER

1. SPECIFY HAND

- RH
- LH

2. SPECIFY FINISH

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

OPTIONAL ARM FINISH

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

- Butt Hinges should not exceed 5" (127 mm) in width.
- Auxiliary Stop recommended at hold-open point.
- Top Rail minimum 2" (51 mm).
- Rabbet Depth minimum 1-1/4" (32 mm).

About Allegion

Allegion (NYSE: ALLE) creates peace of mind by pioneering safety and security. As a \$2 billion provider of security solutions for homes and businesses, Allegion employs more than 7,800 people and sells products in more than 120 countries across the world. Allegion comprises 23 global brands, including strategic brands CISA®, Interflex®, LCN®, Schlage® and Von Duprin®.

For more, visit www.allegion.com

aptiQ ■ LCN ■ **SCHLAGE** ■ STEELCRAFT ■ VON DUPRIN