

## Exit Devices

### Requirements

- All Devices To Be Touchbar Type
- Touchbars Must Have Stainless Steel Touchpads
- All Lever Trim To Be Breakaway Type
- All Strikes Are To Be Roller Type
- All Panic Devices Installed On Wood Doors Must Be Installed With Sex Bolts
- All Panic Devices To Be Dull Chrome (626)
- All Devices Must Have Deadlatching
- All Mullions To Be Key Removable Type
- Verify Cylinder Dogging with owner

### Approved Manufacturers

ANSI A156.3,1994, Grade 1

Von Duprin	99 Series	994L x 06	No Substitution
Von Duprin	Chexit		No Substitution

# VON DUPRIN®

## Series 98/99 Touchbar Exit Devices

Series 98 exit device shown. Series 99 exit devices feature grooved extruded surfaces.



**Series 98/99 exit devices** incorporate modern touchbar styling for heavy traffic applications. Available in rim, mortise lock, surface and concealed vertical rod mountings.

Designed for use on flush and wide stile doors as narrow as 4-1/2". Also 161 stock hollow metal cutouts.

Finishes include US3, US4, US10, US26, US26D, US28 and 313. US32D finish available on Series 98.

Devices are UL/cUL listed Panic Hardware (FVSR) SA163. Fire devices (F) are UL/cUL listed Fire Exit Hardware (GXHX) R4504, A label. Tested in accordance to ANSI A156.3, Grade 1.

### THE QUIET ONE®

The Quiet One® is furnished standard on series 98/99 exit devices. A fluid damper that decelerates the push pad on its return stroke and eliminates most noise associated with exit device operation.

### OPTIONS AND ACCESSORIES

#### Electric Latch Retraction

The EL (Electric Latch Retraction) device provides remote access locking control, useful where free-swinging doors are normally utilized. May be applied to fire devices when under the control of an automatic fire alarm system.

#### Electric Mortise Lock

The E7500 (Electric Mortise Lock) option provides for remote locking or unlocking of the outside trim without retracting the latchbolt. Particularly useful as a fail-safe component of an automatic fire alarm system.

#### Glass Bead Kit

Glass bead conversion kits are available for use on doors with raised glass beads.

#### Pneumatic Latch Retraction

The PN (Pneumatic Latch Retraction) device provides remote access unlocking control in hazardous areas. The air cylinder used in the device has a special actuating linkage that allows a mechanical override.

#### Cylinder Dogging—CD

Cylinder dogging is available on all 98/99 devices to replace the standard hex key dogging. Unit requires a standard 1-1/4" (32mm) mortise cylinder.

#### Request to Exit

The RX (Request to Exit) option is used to signal egress of an opening. These devices are equipped with one internal SPDT switch which monitors the touchbar.



**Redesigned End Cap** The new, redesigned end cap offers a unique combination of aesthetic styling and robust reliability, with a sloped, contoured design that protects the device. The device also features these improvements: a sturdier plastic template and easier-to-read installation instructions to assure accurate installation.



#### Latchbolt Monitor

The LX (Latchbolt Monitor Switch) option is used to signal both egress and access of an opening. These devices are equipped with one internal SPDT switch which monitors the latchbolt.

#### Electric Device

The E99 electric rim device provides remote unlocking and locking capabilities of the outside trim.

#### Signal Switch

The SS (Signal Switch) feature signals unauthorized use of an opening. One internal switch monitors the touchbar and the latchbolt for positive security. A second internal switch is controlled by the key cylinder for alarm shunt and reset. The SS device is designed to work with additional alarm components.

#### ALK Alarm Kit

Exit Alarm Kits are simple yet effective ways to monitor the use of an exit. The unit contains an internal horn which operates on one 9V battery.

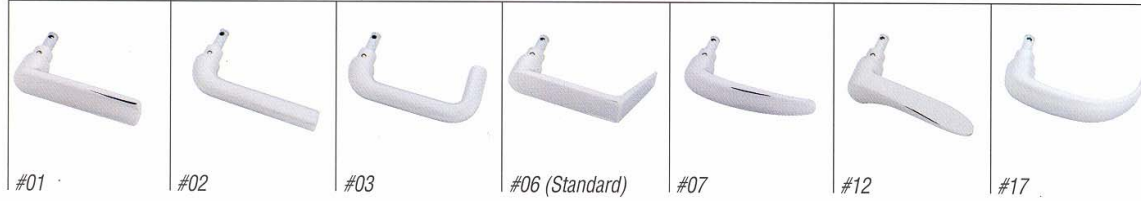
#### 993 Exit Trim

Trim is a stand-alone, battery-powered exit trim for use on doors where an exit device is required for egress.

**Computer-Managed CM993** – Can manage up to 1,000 users and provides audit trail for last 1,000 events.

**Programmable PRO993** – Manually program up to 120 keycodes right at the trim.

## LEVER DESIGN OPTIONS



## BREAKAWAY™ LEVER TRIM



The Breakaway Lever Trim Series 994L significantly reduces damage from vandalism while maintaining ADA standards. Fits Von Duprin Series 98/99 exit devices, and can be retrofit for 992L lever trim. When excess force is applied, the lever trim appears to break. Later it can be easily reset, saving the cost of replacement.

## TRIM



992L

990-TP

To inquire about additional trim options, call 800-999-0408 (USA) or 905-278-6128 (Canada).

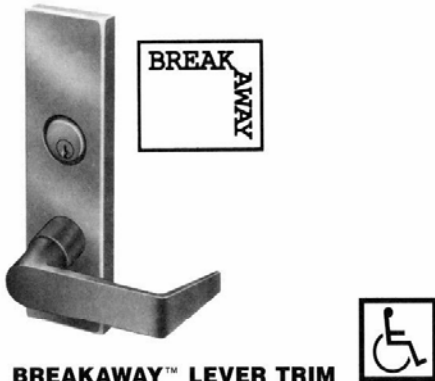
## TRIM FUNCTIONS

98 Series 99 Series	Rim/Rim Fire	Surface Vert. Rod/Fire	Three-Point Latch/Fire	Concealed Vert. Rod/Fire	Concealed Vert. Rod Wood Door/Fire	Mortise Lock/Fire
Exit Only	98EO / F 99EO / F	9827EO / F 9927EO / F	9857EO / F 9957EO / F	9847EO / F 9947EO / F	9847EOWDC / F 9947EOWDC / F	9875EO / F 9975EO / F
Dummy Trim	98DT / — 99DT / —	9827DT / — 9927DT / —	9857DT / — 9957DT / —	9847DT / — 9945DT / —	—	9875DT / — 9975DT / —
Night Latch	98NL / F 99NL / F	9827NL / F 9927NL / F	—	9847NL / F 9947NL / F	9847NLWDC / F 9947NLWDC / F	9875NL / F 9975NL / F
Thumbpiece	98TP / F 99TP / F	9827TP / F 9927TP / F	9857TP / F 9957TP / F	9847TP / F 9947TP / F	9847TPWDC / F 9947TPWDC / F	9875TP / F 9975TP / F
Knob	98K / F 99K / F	9827K / F 9927K / F	9857K / F 9957K / F	9847K / F 9947K / F	9847KWDC / F 9947KWDC / F	9875K / F 9975K / F
Lever	98L / F 99L / F	9827L / F 9927L / F	9857L / F 9957L / F	9847L / F 9947L / F	9847LWDC / F 9947LWDC / F	9875L / F 9975L / F
Turn Lever	—	9827TL / F 9927TL / F 9827LBR-F 9927LBR-F	—	9847TL / F 9947TL / F 9847LBR-F 9947LBR-F	—	—

9848/9948, 9848-F/9948-F are available with extended bottom latch.

## VON DUPRIN® 98/99 Trim Selection

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### **BREAKAWAY™ LEVER TRIM**

Breakaway Lever Trim Series 994L will significantly reduce damage from vandalism and abuse, while helping meet ADA-mandated accessibility standards. The patented Breakaway trim is available for Von Duprin Series 98 and 99 exit devices and can be installed on existing 992L lever trim prep for retrofit applications.

Lever trim, mandated on public buildings since January 26, 1992, is vulnerable to vandalism and abuse that can cause the lever or internal trim parts to break, rendering the door inoperable and necessitating costly, recurring repairs. The Breakaway design allows the lever to break away and drop into a “down” position when abused, discouraging further abuse and protecting its internal parts. Further, it can be easily reset to its operating position by a simple uplift motion.

When unlocked, the unit operates as a normal lever trim. When locked, the lever feels locked but when more than 35 pounds of torque are applied, the lever breaks away and travels to a 90-degree down position. To prevent further damage to internal trim parts or to the exit device, an easily replaced shear pin breaks at 65 to 75 pounds of torque.

Series 994L trim features a smooth precise operation and a flip cam design to allow easy handing in the field. Installation or repairs are simple. An embossed cylinder improves aesthetics and security.

The Breakaway design was lab tested to 500,000 cycles in the unlocked position and to 10,000 “break” cycles, after which it still maintained the required 35 pounds torque to break away.

All standard lever designs and function options are available.

#### **To order specify:**

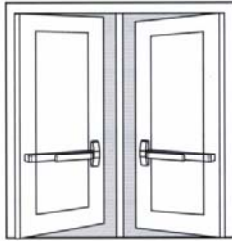
1. 994L Trim.
2. Function option, NL, BE, or DT
3. Lever style, other than #06

Note: Night latch and dummy trims have rigid levers and do not break away.

# VON DUPRIN®

## Auxiliary Hardware and General Information

### REMOVABLE MULLIONS



Mullions provide single door performance in double door openings with rim devices. Mullions are easily removed by loosening bottom set screw and removing top fitting cover.

The top mullion fitting is attached to the frame and is concealed by the fitting cover.

Mullions are shipped presized, with mounting screws and prepared for strikes.

Strikes are not included except where indicated.

#### To order, specify:

1. Model number.
2. Height of opening.
3. Finish.
4. Handing as required.
5. Center line deviation (refer to device template for standard centerline).
6. Strikes, when required, should be ordered with device.

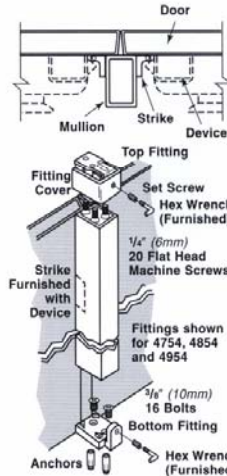
### Stock Hollow Metal Applications

Devices mounted to cover ANSI 161 cutouts are higher than the standard mullion strike location. Consult the factory for special strike preparation or order a blank mullion.

### Blank Mullions

Furnished without strike preparation and without fittings or stabilizers. Used to mount devices at a strike height different from the standard mullion preparation. Note: 9954 blank mullion is furnished less UL label.

### SIX STEEL MULLIONS



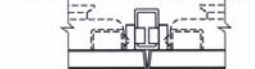
### Electric and Monitor Strikes

Includes an electric cable for transferring power from frame to strikes. The cable has five wires to a twist-apart plug that is connected to a mating socket through a hole in the top fitting.

For use with all Von Duprin panic exit rim devices.

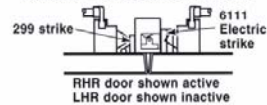
**4754** — Prepared for two 4263 monitor strikes.

**4854/9854** — Using one electric strike



**4854** — Prepared for one 299 and one 6111 electric strike. Indicate handing for electric strike.

**4854/9854** — Using one electric strike



### Standard Doors

**4954** — Prepared for two 264 or 299 strikes. For use with all Von Duprin panic rim devices. Note: specify strike choice with device.

**9854** — Prepared for one 499-F and one 6111 electric strike. Indicate handing for electric strike UL fire label mullion for 90 minute openings up to 8' x 8' (2438mm x 2438mm). This mullion is not easily removed due to special fittings.

**1654** — Prepared for two 1606 strikes.

### Fire Doors

**9954** — UL fire label mullion for up to 3 hour openings up to 8' x 8' (2438mm x 2438mm) using Von Duprin fire exit rim devices. Must be used with two 268 (for 88-F) or two 499F (for 22-F, 98-F, 99-F) strikes. This mullion is not easily removed due to special fittings.

**Sizes** — 4754, 4854, 4954, 1654 — 7'2" (2184mm), 8'2" (2489mm), 10'2" (3099mm). 9854/9954 — 7'3" (2209mm), 8' (2438mm), 10'3" (3124mm) (no UL label on 10' (3048mm)).

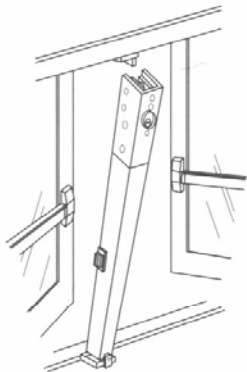
### Finishes

SP28 (sprayed aluminum), SP313 (sprayed dark bronze) or sprayed black.

# VON DUPRIN®

## Auxiliary Hardware and General Information

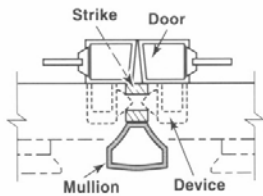
### KEYED REMOVABLE MULLION



**Keyed Removable Mullion** makes removal faster and easier by a single operation of the mortise cylinder. Mullions provide single door performance and security on double door applications. Once the mullion is removed, large equipment or furniture can freely pass through the opening. The unit will self lock when re-installed,

without use of the cylinder key.

### TWO ALUMINUM MULLIONS



**5654** — Prepared for two 264 or 299 strikes with weatherstripping.

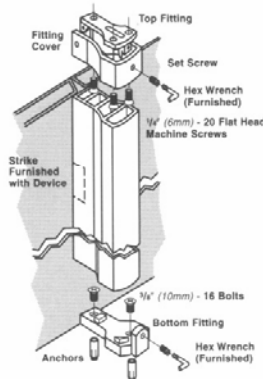
**5754** — Prepared and furnished with one 1408 double door strike.

*Note: Specify device "less strike".*

**Sizes** — 7'2" (2184mm), 8'2" (2489mm), 10'2" (3099mm).

#### Finishes

US4 (brass anodized), US10 (bronze anodized), US28 (aluminum anodized) or 313AN (dark bronze anodized).



### 154 Stabilizer Set

A two-piece interlocking unit. One piece mounts on the mullion with the top mounting hole 5<sup>13</sup>/<sub>16</sub>" (148mm) below the centerline of the strike; the other piece mounts on the door. Shims are provided to adjust for misalignment between the door and mullion.

The set maintains integrity between the door and mullion to prevent vandalism and to ensure contact between the device and strike as the doors expand and contract with temperature changes.

This new lock assembly is available on Von Duprin's standard and fire labeled steel mullions, and can be purchased separately for retrofit on existing steel mullion applications. Sizes include 7'2" (2184mm), 8'2" (2489mm) and 10'2" (3099mm).

#### To order, specify:

1. Model number KR165\4, KR4954, KR9854, K9954 or Retrofit Kit KR54, KR54-F.

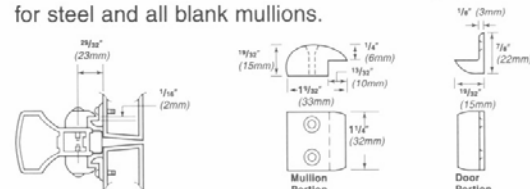
### MT54 Storage Mount

MT54 is a set of floor and wall brackets that provide convenient storage of the keyed removable mullion when removed from the opening.

#### To order, specify:

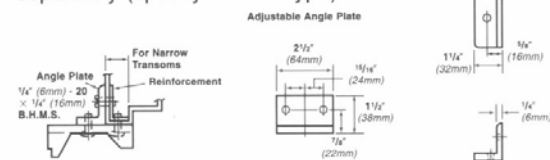
1. MT54

Furnished standard on aluminum mullions; optional for steel and all blank mullions.

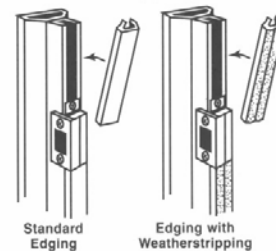


### Angle Plate

Used with narrow transom frames. The plate attaches to the transom to extend the surface area needed to mount the mullion. Must be ordered separately (specify mullion type).



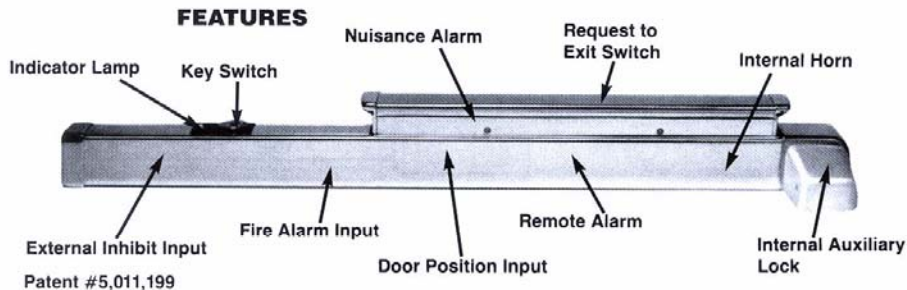
### Weatherstripping



Weatherstripping retards cold air from blowing between doors and mullion. It also serves as a silencer when the door is closed against the mullion. The silicone treated weatherstrip pile is bonded to a polypropylene backing. A slide-in molding houses the weatherstripping, covers mounting screws of the strike and extends to both the top and bottom of the mullion.

The set maintains integrity between the door and mullion to prevent vandalism and to ensure contact between the device and strike as the doors expand and contract with temperature changes.

# VON DUPRIN® Chexit™ Controlled Exit Device



**Request to Exit Switch** is built into the device to detect when someone attempts to exit. Applying less than 15 pounds to the push pad when the device is armed will cause this switch to start an irreversible alarm cycle.

**Nuisance Alarm** — When a Chexit is located in a public area, it can be desirable to limit false alarms. If the Nuisance Audible and Nuisance Delay options are set to off, the device will go into alarm as soon as the push pad is touched (when armed). Turning the Nuisance Delay on will require the push pad to be pressed for 2 seconds before the Chexit goes into alarm. If the Nuisance Audible and Nuisance Delay are both on, the alarm will sound as soon as the push pad is pressed, but the alarm sequence will stop unless the push pad is held for 2 seconds or more.

**Remote Alarm** — A set of relay contacts (rated 1 ampere, 24 VDC) are provided to give external alarm indication. These contacts close when the device is in an irreversible alarm condition (If Nuisance Audible is enabled, they will not close until the push pad has been held for more than 2 seconds). These contacts can be used to drive a horn, lamp, or other indicative device.

**Key Switch** — The Key Switch provides the means to arm, disarm, or reset the Chexit. The key can be removed in either the Arm or Disarm position. In cases where the key switch is not used for controlling the device, a blank cylinder can be used.

**Indicator Lamp** — The status of the Chexit can be determined by the Indicator Lamp. A masked bezel design provides wide angle viewing in any lighting condition. When the lamp is off, this indicates the device is disarmed and is functioning as a normal exit device (no delay). A continuously on lamp indicates the device has just been armed and as soon as the selectable rearm timer expires, the device will arm. A slow flashing lamp indicates the device is armed. A fast flashing indicator lamp indicates the device is in alarm.

**Internal Horn** — Whenever the device is in alarm or the push pad is pressed the internal horn will sound. The volume level of this horn exceeds 85 db at 6 feet. The user can select whether or not this horn sounds during a fire alarm condition.

**Door Position Input** — An external door position switch can be connected to the Chexit. Doing this gives added security to the opening and is recommended. If a door position switch is used, it will cause the alarm to sound if the door is not closed when the device is armed; it will sound the alarm if the door is forced open while the device is armed; it will provide anti-pass-back by cutting short the rearm time.

**External Inhibit Input** — This optional input is provided to allow remote override of the Chexit in the armed condition. It also allows remote reset of the Chexit in an alarmed condition. Typical device connections include card readers, wall mounted key switches, or a remote security console. This input is controlled with a Normally closed switch (open = disarmed).

**Fire Alarm Input** — This input disables the Chexit immediately upon a fire alarm. The building's fire alarm system should provide normally closed contacts which open on alarm.

**Internal Auxiliary Lock** — The Auxiliary Lock is engaged when the Chexit is armed. The locking mechanism is specifically designed to hold securely even when the exit device is struck with forceful blows. The mechanism will also release upon command irregardless of the force applied to the push pad. An override spring prevents damage to internal components when more than 75 pounds of force are exerted on the push pad.

**User Definable Rearm Time** — The Rearm Time is the amount of time after the device is activated (via key switch or external inhibit) before it arms. It is designed to give someone time to pass through the door before arming occurs. Timing can be changed by the user for any time between 2 and 28 seconds in two second increments.

There is also an infinite rearm setting that requires the use of an external door position switch. In this setting the door remains in the rearm mode until the door is closed. This can be useful on jet way doors in an airport.

**Factory Definable Delay Time** — Most jurisdictions allow 15 seconds of delay before allowing egress. In those cases where 15 seconds is not appropriate, Von Duprin can set the Chexit for any delay time between 0 and 60 seconds on 2 second increments. For delays greater than 15 seconds a letter from the local authority is required.

# VON DUPRIN® Chexit™ Controlled Exit Device

**Two styles** — mechanically and dimensionally identical, for a wider selection of appearance options.



**CX98 Series** features a smooth mechanism case.



**CX99 Series** features a grooved mechanism case.

## INTRODUCTION

Proper selection and application, in addition to safety, are major concerns to all responsible manufacturers. Chexit Controlled Exit Device is a critical part of an access system, and will provide safe and reliable service when properly applied and maintained. It is the policy of Von Duprin, Inc., to design and manufacture to a high standard of quality and reliability in accordance with accepted U.S. domestic and international standards. UL listed "Controlled Exit Panic Device," for use on Accident Hazard or Fire Exit Hardware applications and tested in accordance to ANSI A156.3, 1984, Grade I. Chexit meets all requirements for NFPA101, Special Locking Arrangement.

It is intended that the information included in this publication, when properly used, will provide clear and reliable guidelines to the proper general selection and application. However, the scope of the information is necessarily limited.

Unusual operating conditions and environments, and other external influence can affect the proper application of the products represented. Modifications of these products will also affect UL listings. It is recommended whenever an unusual application condition exists, or when any modification of a product is considered, that our engineers review the application.

Von Duprin, Inc. application engineering services are available to help ensure proper selection or to review any areas where users of Von Duprin products may have questions.

# VON DUPRIN®

## Additional Information

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### TYPICAL SPECIFICATION

#### Basic System Design

Each Chexit controlled exit device is an emergency exit system consisting of a door or pair of doors equipped with Von Duprin CX99 exit device(s). The system has three modes of operation command:

- Emergency Save Exit Mode
- Secure Mode with Alarm and Conditional Release
- Authorized Exit Mode

#### Emergency Safe Exit Mode

Whenever the safety detector (smoke, fire, water flow, etc.) signals that an emergency condition is present to the Chexit, the device will unlock instantaneously, sound the horn and flash the lamp rapidly. The door(s) may be opened immediately in the usual manner by depressing the push pad. After authorized personnel reset the life safety detector system, the Chexit may be reset by actuation of the key cylinder located on the device. This will clear the alarm state and rearm the Chexit.

In the event of a power loss, the electronics become completely inactive, allowing the Chexit to operate as a normal exit device providing a means of egress from the building.

#### Secure Mode with Alarm & Conditional Release

The secure mode will operate whenever the doors are latched and the Chexit is activated to the armed state. This is identifiable by the slow flashing of the indicator lamp and the device push pad will appear to be locked. When the exit device on the door(s) is depressed the horn will sound along with a rapid flashing indicator lamp at the device. The push pad will remain in a locked state for the predetermined period of delay of 15 (or 30) seconds. This will allow time to intercept an unauthorized person who may be trying to exit. After the delay period, the push pad will retract the latchbolt permitting egress from the area. The horn sounding and rapid flashing light will continue until the Chexit is reset by authorized personnel at the key cylinder on the device.

#### Authorized Exit Mode

For authorized exit while the Chexit is armed, the door(s) may be released for a period of time, from 2 to 28 seconds without activating the alarm by turning key cylinder in counter clockwise or off position and resetting in clockwise position; system can remain disarmed in counter clockwise position. This mode is actuated by the key cylinder or an external access control input which allows the Chexit to operate as a normal exit device.

# Closers

## Requirements

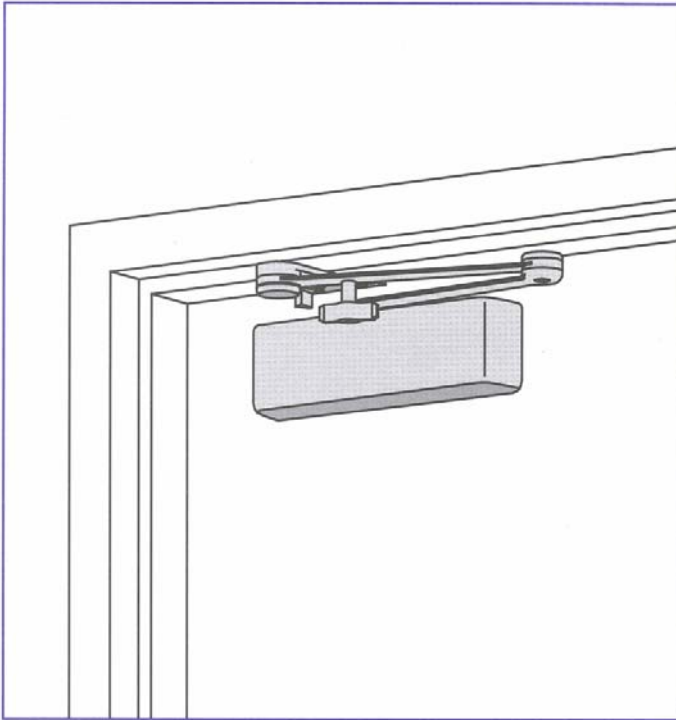
- All Doors To Be Cast Iron – No Aluminum Body Closers Will Be Accepted
- All Closers Must Have Forged Steel Extra Duty Arms
- Use Parallel Arm Type Closers Wherever Possible
- Mount Closers On Room Side Of Opening  
Closers not to show on Corridor Or Hall Sides If Possible
- Door Closers Must Have All Weather Fire Safe Fluid That Meets UBC 7.2 And UL 10C
- No Pressure Relief Valve Allowed
- Closers To Be Aluminum (BHMA 689) Finish
- Provide AVB (Advanced Variable Backcheck) At All Exterior Openings And High Traffic-High Abuse Interior Openings

## Approved Manufacturers

LCN 4010/4110      No Substitution

# LCN 4110 SERIES

## FEATURES



*The 4110 SMOOTHIE® is a heavy duty, parallel arm closer designed for institutional and other high traffic applications. This handed closer is specifically designed for parallel arm mounting and has passed 10,000,000 cycles in independent testing. The wide choice of options, installation accessories and ease of installation offer maximum versatility.*

*The 4110 Series is UL and ULC listed for self-closing doors without hold-open. Tested and certified under ANSI Standard A156.4, grade one.*

- ▶ Standard 4110 series closer shipped with non-hold-open Extra Duty (EDA) arm, standard non-metallic cover, 4110-201 FIFTH SCREW SPACER and wood and machine screw pack. See 4110-3 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 4110-5.
- ▶ Standard or custom powder coat finish.
- ▶ Optional plated finish on cover, arm and fasteners.
- ▶ SRI primer for installations in corrosive conditions.

MOUNTING			FINISH		COVER		CYLINDER			ARM FUNCTION*									
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HINGE SIDE	TOP JAMB	PARALLEL ARM	POWDER COAT	PLATED	NON-METALLIC	METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY	DELAY ACTION	AVB	REGULAR	HOLD-OPEN	FUSIBLE LINK	EXTRA DUTY	CUSH-N-STOP	WARRANTY	MAINTENANCE	
												<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
												180°	180°	180°	110°	10yr	NR		

- Available
- Not available

♿ Closer available with less than 5.0 lbs. opening force on 36" door.  
 \* Maximum opening/hold-open point with standard template.  
 NR = No periodic maintenance required.

# LCN 4110 SERIES

## MOUNTING DETAILS

### PARALLEL ARM (PUSH SIDE) MOUNTING

#### MAXIMUM OPENING

EDA or Fusible Link arm can be templated for

100°,

(A) = 6" (152 mm)

(B) = 7 1/4" (184 mm)

140°,

(A) = 4 1/2" (114 mm)

(B) = 5 3/4" (146 mm)

or 180°.

(A) = 3" (76 mm)

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

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

CUSH arm can be templated for maximum opening at

85°.

(A) = 8 5/16" (211 mm)

(B) = 9 5/8" (244 mm)

90°.

(A) = 7 11/16" (195 mm)

(B) = 9" (229 mm)

100°.

(A) = 6 7/16" (164 mm)

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

or 110°.

(A) = 5 9/16" (141 mm)

(B) = 6 7/8" (175 mm)

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

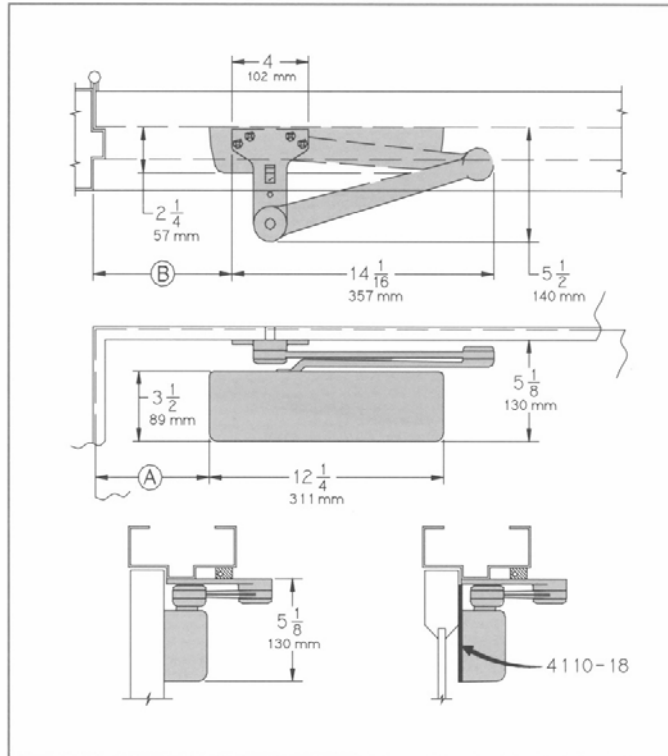
Spring Cush hold-open points are approximately 5° less than templated stop point.

#### Options

- ▶ Sized or non-sized cylinder.
- ▶ Delayed action or Advanced Backcheck cylinder.
- ▶ H-EDA, CUSH, H-CUSH, SPRING CUSH, SPRING H-CUSH or Fusible Link arm.
- ▶ Metal or lead lined cover.

#### Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN 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, FL, or CUSH shoe is 5 1/2" (140 mm) from door.
- ▶ **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 4110-145 arm or PA SHOE ADAPTER, 4110-418, Use CUSH FLUSH PANEL ADAPTER, 4110-419 with CUSH arms.
- ▶ **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. Add CUSH SHOE SUPPORT, 4110-30 for fifth screw anchorage with CUSH arms.
- ▶ **Delay Action** Add suffix "DA" to selected cylinder (eg. 4115 DA). Not available with 4115 or 4116 cylinder. Delays closing from maximum opening to approximately 70°. Delay time adjustable up to 1 minute.
- ▶ **Advanced Variable Backcheck** cylinder starts backcheck at approximately 45° instead of the normal 75°. Add suffix "AVB" to selected cylinder.

# LCN 4110 SERIES

ORDERING INFORMATION

## 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 4110 series cylinders available in size 2, 3, 4, 5, or 6.  
 Closing power of all 4110 Series closers can be increased 50%.  
 Specify next higher size closer where strong drafts exist.  
 Delayed action not available with 4115 or 4116 cylinder  
 H - CUSH and SPRING H-CUSH arm not available with 4116 cylinder.

→ Indicates recommended range of door width for closer size.

### EXTERIOR (and VESTIBULE) DOOR WIDTH

	28" 711mm	30" 762mm	36" 914mm	42" 1067mm	48" 1219mm
*4111	size 3	size 4	size 5	size 6	
4113	→				
4114		→			
4115			→		
4116				→	

Minimum Door Width

### INTERIOR DOOR WIDTH

	28" 711mm	34" 864mm	38" 965mm	48" 1219mm	54" 1372mm	60" 1524mm
*4111	size 2	size 3	size 4	size 5	size 6	
4112	→					
4113		→				
4114			→			
4115				→		
4116					→	


Minimum Door Width

\* Adjustable Size 1 thru

## 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 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.	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)
- 4112
- 4113
- 4114
- 4115 (DA not available)
- 4116 (DA or H- CUSH arm not available)

#### 2. SPECIFY HAND

- RH
- LH

#### 3. SELECT FINISH

- Standard Powder Coat \_\_\_\_\_  
Aluminum, Statuary, Light Bronze, Tan, Brass, Black, Dark Bronze
- Custom Powder Coat \_\_\_\_\_
- Plated Finish, US \_\_\_\_\_  
(optional metal cover will be furnished)
- SRI primer

#### Closer will be shipped with:

- STANDARD CYLINDER,
  - STANDARD COVER,
  - FIFTH SCREW SPACER
  - EDA ARM, and
  - WOOD and MACHINE SCREW PACK,
- unless options listed below are selected.

## 4110 CLOSER OPTIONS

### CYLINDER

- Delayed Action (suffix "DA", not available with 4115 or 4116)
- Advanced Variable Backcheck (suffix "AVB")

### COVER

- Lead Lined
- Metal

### SPECIFY ARM

- H-EDA
- Fusible Link, 160° F\*  
\* Optional links release at 125° F or 135° F.
- Cush-N-Stop
- H-Cush-N-Stop (n/a with 4116 cylinder)
- Spring Cush
- Spring H-Cush (n/a with 4116 cylinder)

### SCREW PACK

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

### INSTALLATION ACCESSORIES

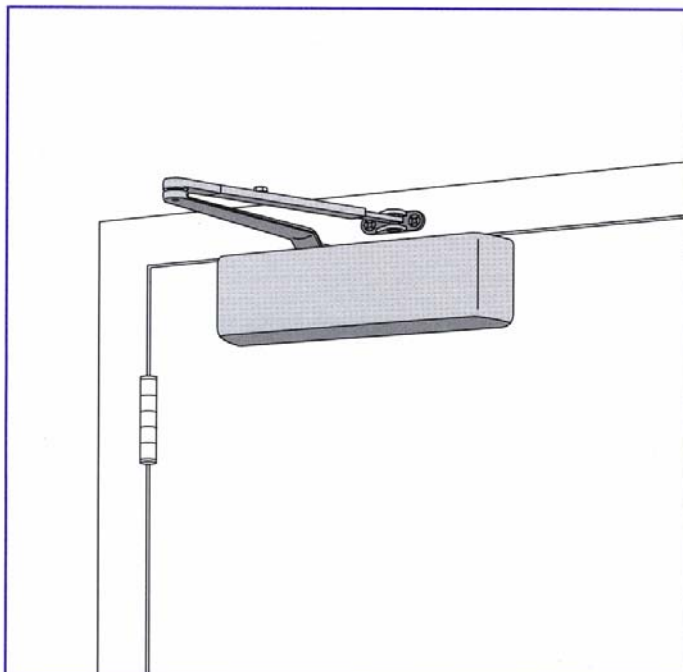
- Plate, 4110-18
- CUSH Shoe Support, 4110-30
- Blade Stop Spacer, 4110-61
- PA Shoe Adapter, 4110-418
- CUSH Flush Panel Adapter, 4110-419

### SPECIAL TEMPLATE

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

# LCN 4010 SERIES

## FEATURES



*The 4010 SMOOTHIE® is a heavy duty, double lever arm closer designed for institutional and other high traffic applications. This handed closer is specifically designed for hinge side mounting and has passed 10,000,000 cycles in independent testing. A choice of finishes, cylinder functions, arms, and installation accessories meet virtually all architectural requirements.*

The 4010 Series is UL and ULC listed with regular or fusible link arms for self-closing doors. Tested and certified under ANSI Standard A156.4, grade one.

- ▶ Standard 4010 series closer shipped with regular (non-hold-open) arm, standard non-metallic cover, and wood and machine screw pack. See 4010-3 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.
- ▶ Corner brackets available, see 4010-4.
- ▶ 4011 cylinder meets ADA requirements. See 4010-7.
- ▶ Standard or custom powder coat finish.
- ▶ Optional plated finish on cover, arm and fasteners.
- ▶ SRI primer for installations in corrosive conditions.

MOUNTING			FINISH		COVER		CYLINDER			ARM FUNCTION*								
HINGE SIDE	TOP JAMB	PARALLEL ARM	POWDER COAT	PLATED	NON-METALLIC	METAL	NON-HANDED	NON-SIZED	ACCESSIBILITY	DELAY ACTION	AVB	REGULAR	HOLD-OPEN	FUSIBLE LINK	EXTRA DUTY	CUSH-N-STOP	WARRANTY	MAINTENANCE
●	○	○	●	●	●	●	○	●	♿	●	○	140°	140°	140°	○	○	10yr	NR

● Available  
○ Not available

♿ Closer available with less than 5.0 lbs. opening force on 36" door.  
\* Maximum opening/hold-open point with standard template.  
NR = No periodic maintenance required.

# LCN 4010 SERIES

ORDERING INFORMATION

## 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 2, 3, 4, 5, or 6.  
 Closing power of all 4010 Series closers may be increased 50%.  
 Specify next higher size closer where strong drafts exist.  
 Delayed action not available with 4016 cylinder.

→ Indicates recommended range of door width for closer size.

### EXTERIOR (and VESTIBULE) DOOR WIDTH

	24" 610mm	30" 762mm	36" 914mm	42" 1067mm	48" 1219mm
		size 3	size 4	size 5	size 6
*4011					
4013		→			
4014			→		
4015				→	
4016					→

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
*4011						
4012		→				
4013			→			
4014				→		
4015					→	
4016						→


Minimum Door Width

\* Adjustable Size 1 thru 5. See note under "Maximum Opening" on page 4.

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

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

\* Maximum opening force

## HOW-TO-ORDER 4010 SERIES CLOSERS

### 1. SELECT CYLINDER SIZE

- 4011 (adjustable from size 1 to 5)
- 4012
- 4013
- 4014
- 4015
- 4016 (DA not available)

### 2. SPECIFY HAND

- RH
- LH

### 3. SELECT FINISH

- Standard Powder Coat \_\_\_\_\_  
Aluminum, Statuary, Light Bronze, Tan, Brass, Black, Dark Bronze
- Custom Powder Coat \_\_\_\_\_
- Plated Finish, US \_\_\_\_\_  
(optional metal cover will be furnished)
- SRI primer

### Closer will be shipped with:

- STANDARD CYLINDER,
  - STANDARD COVER,
  - REGULAR ARM, and
  - WOOD and MACHINE SCREW PACK,
- unless options listed below are selected.

## CLOSER OPTIONS

### CYLINDER

- Delayed Action (suffix "DA")

### COVER

- Lead Lined
- Metal

### ARM

- Hold-Open
- H180 Hold-Open (bracket mount only)
- Fusible Link, 160° F\*  
\* Optional links release at 125° F or 135° F.

### SCREW PACK

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

### INSTALLATION ACCESSORIES

- Plate, 4010-18
- Bracket, 4010-11
- Bracket, 4010-16
- Bracket, 4010-17
- Soffit Shoe, 4010-65

### SPECIAL TEMPLATE

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

**LCN**®

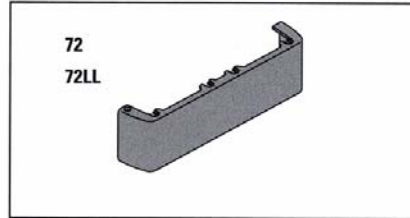
# LCN 4010 SERIES

ACCESSORIES

## COVERS

### COVER, 4010-72

Standard, non-handed non-metallic cover.

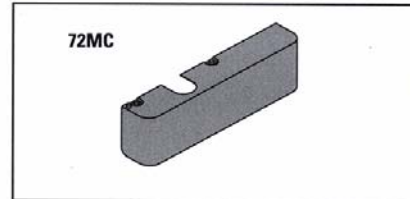


### LEAD LINED COVER, 4010-72LL

Optional non-handed non-metallic cover.

### METAL COVER, 4010-72MC

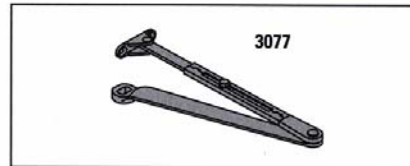
Optional, handed cover. Required for plated finishes.



## ARMS

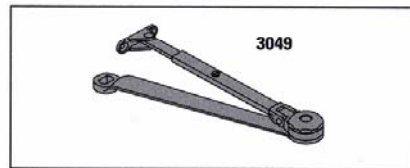
### REGULAR ARM, 4010-3077

Standard, non-handed arm.



### HOLD-OPEN ARM, 4010-3049

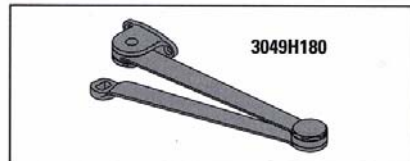
Optional, handed arm provides hold-open function, adjustable at elbow.



### HOLD-OPEN H180 ARM, 4010-3049H180

Optional, handed arm provides hold-open function up to 180°, adjustable at shoe.

Closer must be mounted on 4010-11 bracket.



### FUSIBLE LINK ARM, 4010-3049FL

Optional, handed arm releases hold-open function when exposed to temperatures above 160° F.

Optional links release at 125° F or 135° F.

