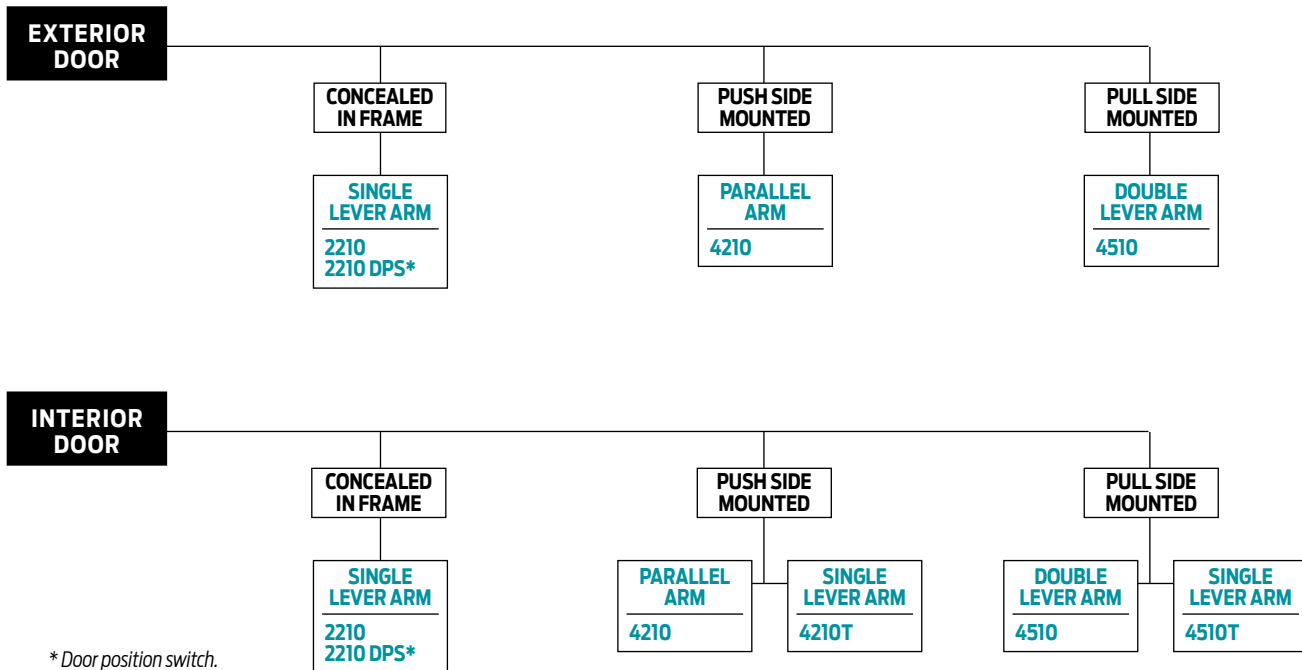


Product selection guide

High Security LCN closers feature a vandal resistant design engineered for each application, easy installation, and superior performance. This guide is based on the desired mounting of the closer.



Product comparison

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

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

● AVAILABLE
○ NOT AVAILABLE

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

High Security Closers Series

APPLICATIONS

- For any concealed or surface mounted installation subject to potential abuse or vandalism.
- For correctional, aluminum, hollow metal, or wood doors and frames.
- Can be used with hinge or pivot mounted door.
- Adapter plates and other installation accessories available for unusual conditions.

FEATURES COMMON TO HIGH SECURITY CLOSERS

- Each closer is a vandal resistant design for a specific mounting; hinge side, parallel arm, stop face, or concealed.
- All high security closers are based on a cylinder certified to exceed 10,000,000 cycles in independent testing.
- Handed for right or left swinging doors.
- Closers to meet ADA reduced opening force requirements.
- All closers furnished with TORX tamper resistant machine screws.
- All surface mount closers include a heavy gauge steel cover with four attachment points.
- All closer adjustments are protected when installation is complete.
- All track closers use a jam resistant track and tamper resistant arm/roller assembly.
- Adjustable hydraulic backcheck cushions opening swing prior to 90°.
- Advanced variable backcheck (AVB) is available on all high security closers.
- Separate regulation of general closing speed and latching speed.

DESIGN ASSISTANCE

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

WARRANTY

High Security Series closers carry a 15 year limited warranty, except for the 2210DPS Series closer that carries a 2 year limited warranty. See General Information Section for complete warranty details.

MATERIALS

- High strength **cast iron** cylinder.
- **Forged steel** main arms and forearms.
- One piece **forged steel** piston.
- LCN's all weather "**Liquid X**" fluid performs to temperature ranges from 120°F (49°C) to -30°F (-35°C) without any seasonal adjustment.
- **High efficiency, full complement**, low friction bearings.
- **Double heat treated** pinions.
- Tamper resistant regulating screws.
- Full rack and pinion hydraulic action.
- Quiet, low friction track and roller combination for all single lever arm closers.

FINISHES

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

pre-treatment exceed the ANSI standard for corrosion resistance even further.

- Plated finishes are available as an option to accent door and frame.

LISTINGS & APPROVALS

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

Tested and certified under ANSI Standard A 156.4. Consult factory for details.

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

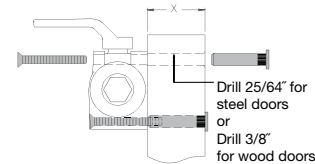
POSITIVE PRESSURE

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

FASTENERS

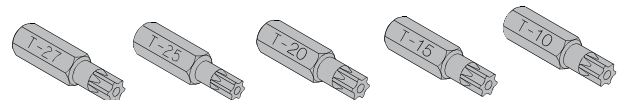
TORX MACHINE SCREW (TORX) pack contains tamper resistant machine screws to install the closer. Thru Bolts for TORX machine screws are available for all high security closers, except 2210 series.

LCN thru bolts (TB) can be installed on 1-3/4" thick doors with the 1/4-20 TORX screws supplied with the closer. Optional sizes are available for 1-5/8" or 1-3/8" door thicknesses, but this must be specified when ordering.



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

Special driver bits are required for installation or removal of TORX machine screws with a security pin as supplied with LCN High Security closers. All bits fit a 1/4" hex drive socket. For 1/4-20 screws use T-27, for #12 machine screws use T-25, for 10# machine screws use T-20, for #8 (and undercut #10) machine screws use T-15, and for #6 machine screws use T-10. The specific bits required for installation are listed on the "HOW TO ORDER" page for each closer. Sold separately.



FASTENERS

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

SPECIFICATIONS

Refer to "SPECIFICATIONS" section for suggested architectural specifications.



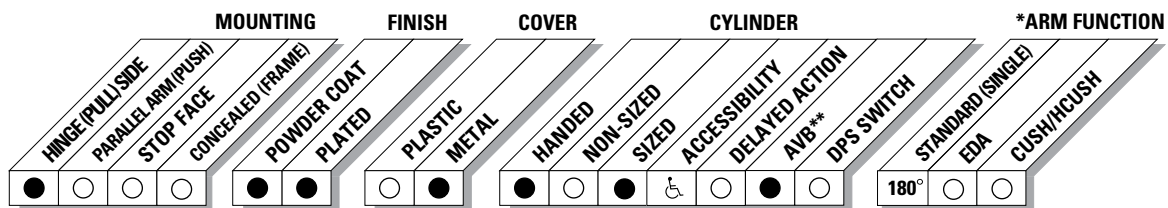
The 4510T SMOOTHIE® Series is a heavy duty, high security track closer with special components to minimize tampering and vandalism. Forged steel single lever arm and heavy gauge metal security cover are designed for correctional, vandal prone, institutional and other high traffic interior applications.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

Certifications	Grade 1 - ANSI A156.4, UL 10C, ADA*, 100 Hour Salt Spray, Meets BAA - Buy American Act *4510T cylinder meets ADA requirements
Body Construction	<ul style="list-style-type: none"> ■ Cast Iron Body ■ Full Complement Bearing ■ 1-1/2" Diameter Piston ■ 11/16" Diameter Double Heat Treated Pinion Journal
Fluid	All Weather Fluid
Handing	Handed
Size	Sized, 1, 3 or 4
Warranty	15 years

Cover	Metal Security
Fasteners	TORX machine screw pack
Mounting	Hinge (Pull Side)
Arms	Standard security arm, security track (non hold-open) and track roller
Finishes/Colors/ Powder Coat	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional <ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes

Special Templates

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



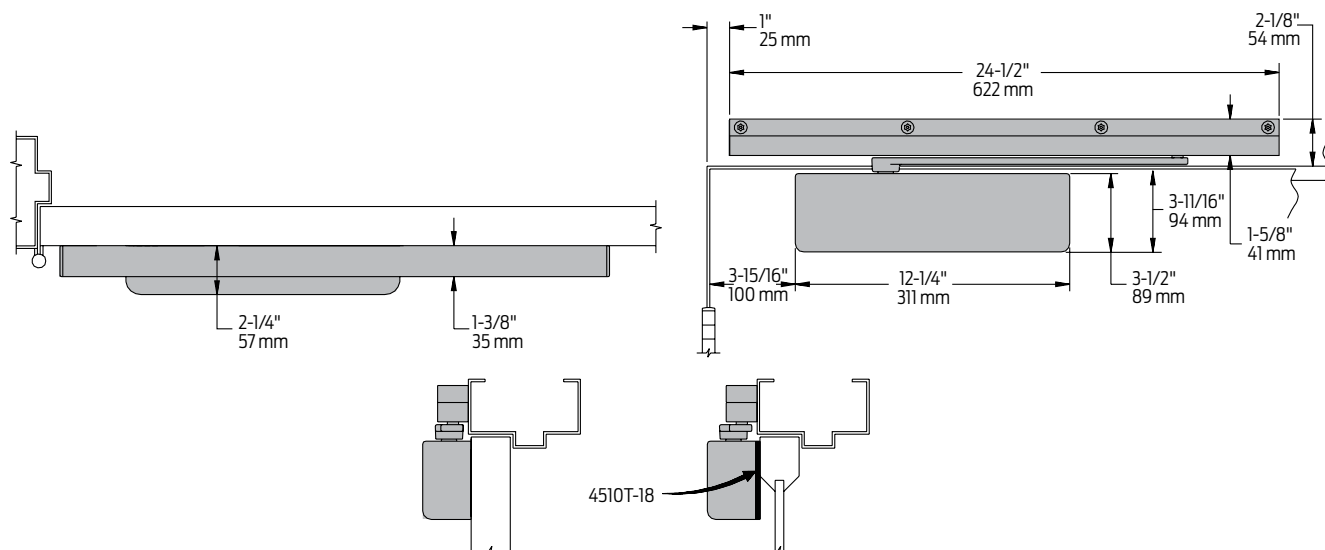
● AVAILABLE
○ NOT AVAILABLE

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

4510T Series

Mounting details

Hinge (Pull Side) Mounting



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

Cylinder



4511T(3)(4)
Cylinder Assembly

- Handed
- Cast iron
- Standard

Cover



4510T-72MC
Metal Security Cover

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

Arms



4510T-3077T
Standard Security Arm

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

Track



4510T-3038
Security Track

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



4510T-3034
Security Track Roller

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

Installation Accessories



4510T-18
Plate

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

How-to-order 4510T Series

Table of sizes

- Select closer based on width of door
- Sized 4510T Series cylinders available in size 1, 3 or 4
- Closing power of all 4510T Series closers may be increased 15%

Select cylinder size

- 4511T (ADA)
- 4513T
- 4514T

Select hand

- RH
- LH

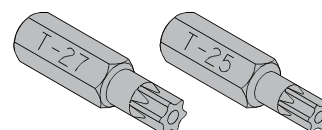
Specify finish

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

Closer will be shipped with:

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

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



Closer options

Cylinder

- Advanced Variable Backcheck (AVB)

Finishes

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

Screw pack

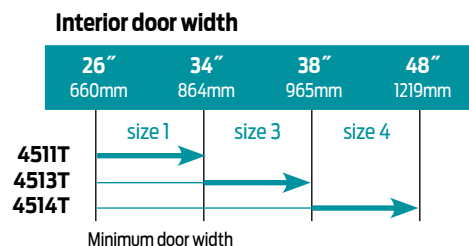
- TB* and TORX Machine Screw (TBTRX)
*Specify door thickness if other than 1-3/4".

Installation accessories

- PLATE, 4510T-18

Special template

- ST- _____



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

Reduced opening force 4510T Series closers

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

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

* Maximum opening force.

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

* Maximum opening force.