

LCN®

4040XP Heavy duty closer

Designed for demanding applications



ALLEGION™
PIONEERING SAFETY™

Agenda

- 1 **Door closer 101: Purpose, anatomy and considerations**
- 2 **4040XP: Performance, durability and feature enhancements**
- 3 **Common applications**
- 4 **Support and resources**

Back to the basics of door control

- Shifting demographics, with 50% of current workforce retiring in 5-15 years
- Skilled trades labor shortage
- New technicians entering the workforce

Purpose of a door closer



Security

If a door doesn't close properly, then security is compromised.



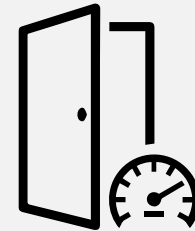
Accessibility

All doors must be accessible unless specifically exempt.



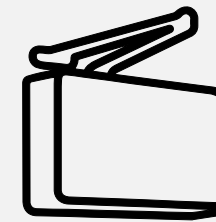
Life safety

A door closer on a fire door ensures safe and easy exit in an emergency.



Control

A door closer controls the force and speed of a door in the opening and closing cycles.



Energy conservation

An effective door closer can help improve energy efficiency.



Code compliance

Closers are an integral and required part of fire door assemblies.

Anatomy of a closer

Closer arm

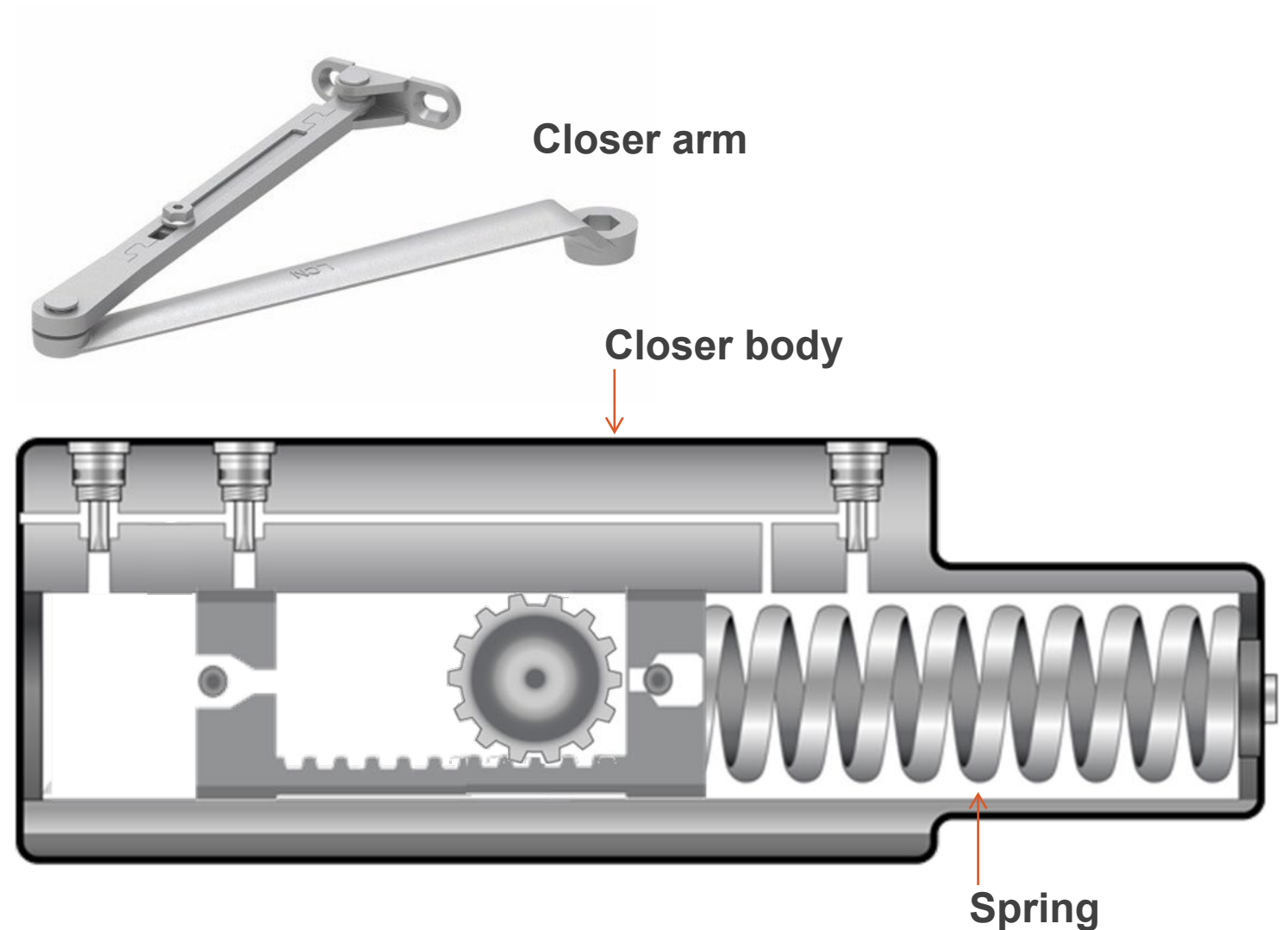
Forged steel component that transmits force from the user input on the door to the closer opening

Closer body

Base of a closer made of cast iron for strength and durability

Spring

Component within closer body that stores energy and gives the power to close the door



Anatomy of a closer

Pinion

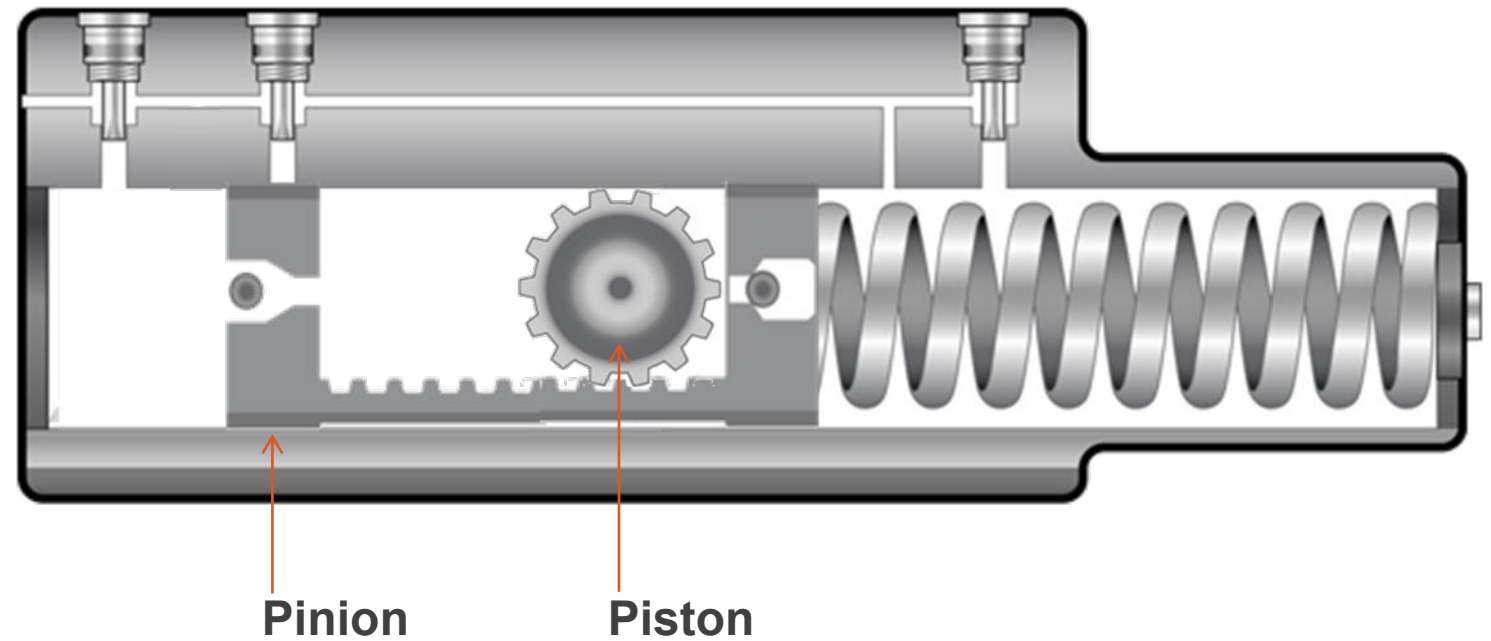
Steel component attached to the arm that moves the piston when the door is open

Piston

Steel component that compresses the spring to store energy for closing cycle of the door

Bearings

Components that make opening and closing a door easier, smoother and quieter



Anatomy of a closer

Hydraulic fluid

All-weather fluid that regulates speed of the door

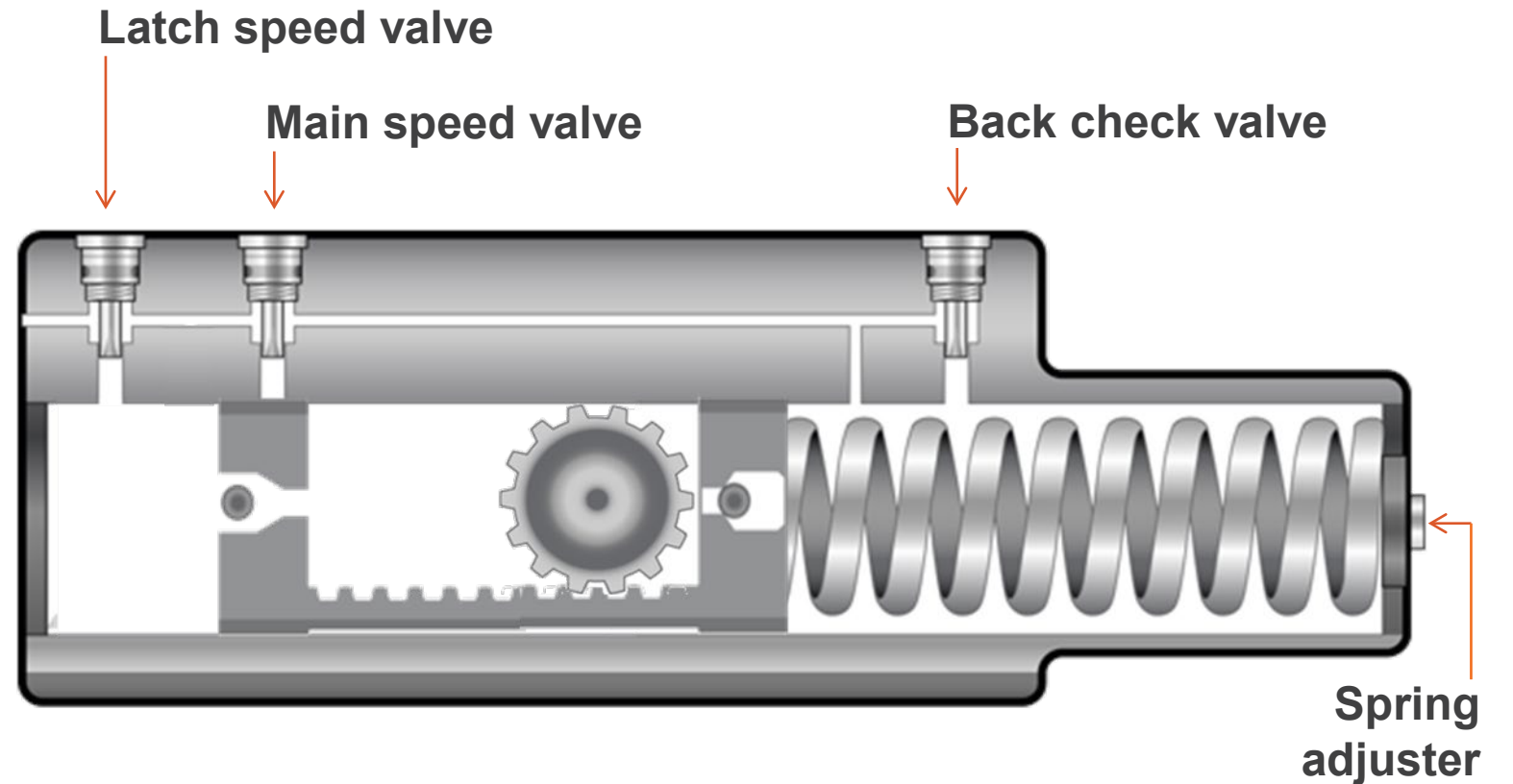
Regulation valves

Parts that control the speed of door swing

- **Latch speed valve:** Slows down the door to cushion it and ensure it doesn't slam
- **Main speed valve:** Increases or decreases the speed of this closing zone
- **Back check valve:** Slows door prior to contact with door stop or fully opened position

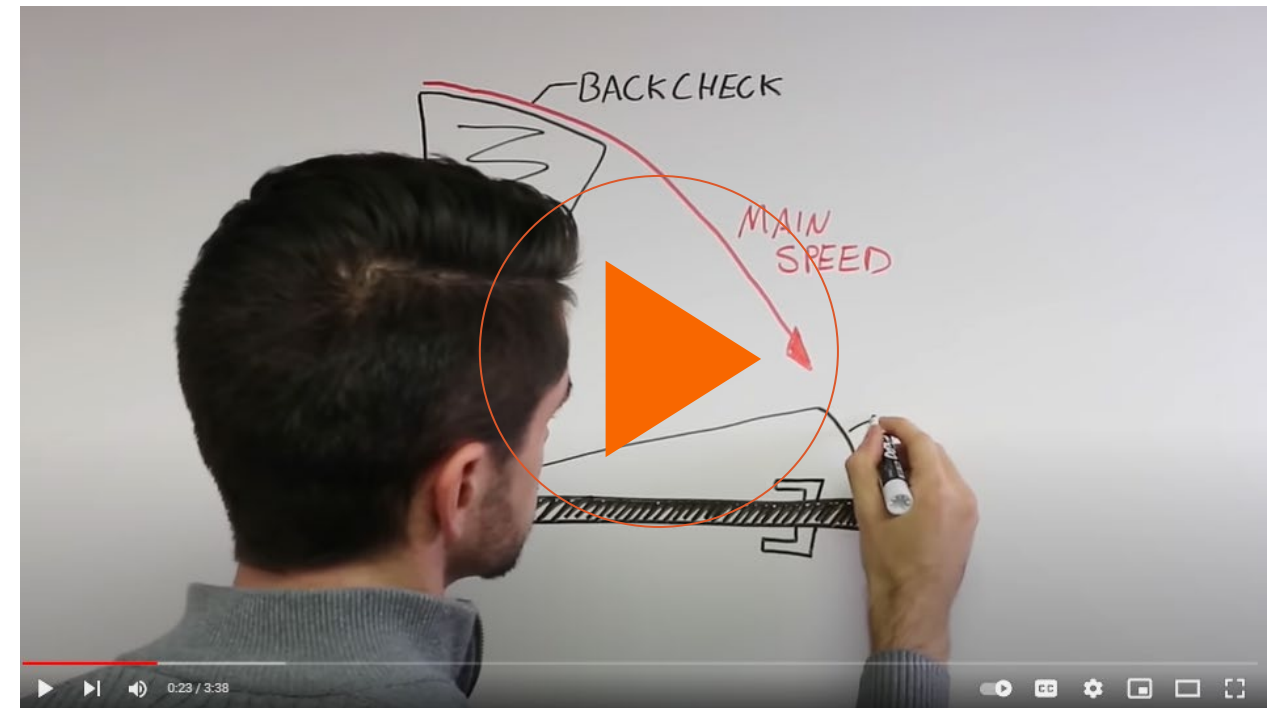
Spring adjuster

Dial on end of spring tube that allows you to make adjustments to spring power



How a closer works

- When the door opens, the arm on the closer body transmits the motion to the pinion.
- As the pinion turns, it moves the piston, which in turn, compresses the main spring and pumps the hydraulic fluid through the back check regulation valve.
- The spring pressure increases as the door is opened.
- As the door is closing, the spring expands and exerts pressure on the piston.
- As the piston moves back, fluid is forced through the main and latch speed regulation valves back to the area surrounding the spring.



Considerations when choosing a door closer

- **Durability:**
Consider daily traffic flow and the amount of use and abuse an opening may sustain.
- **Installation:**
Ease and accuracy of installation/repairs are key considerations.
- **Adjustability:**
Door closers that need to be adjusted often are labor-intensive and can be prone to breakage if not done correctly.



The ROI on a quality door closer

Less expensive closers = more time, installation and repairs



LCN®

4040XP Series: Standing the test of time

4040XP: Performance

The LCN 4040XP is a durable non-handed, surface-mounted heavy-duty closer. It meets all the standards you'd expect of a heavy-duty closer:

- ANSI/BHMA A156.4 Grade 1 rated
- ADA certified
- cUL listed and UL listed
- 30-year limited warranty



4040XP: Durability

The beauty of the 4040XP is that it goes way beyond the required standards.

- Strong materials designed to go the distance
- Proven production processes and technology
- Forging steel and heat-treating processes
- Abuse-cycle and temperature tests



4040XP: Feature enhancements

**Now there are even more reasons to believe.
New upgrades have been made to:**

- Simplify installation/adjustments
- Minimize risk for damage
- Provide a better user experience



LCN[®]

4040XP enhancements



ALLEGION[™]
PIONEERING SAFETY[™]

4040XP enhancements

Enhancement

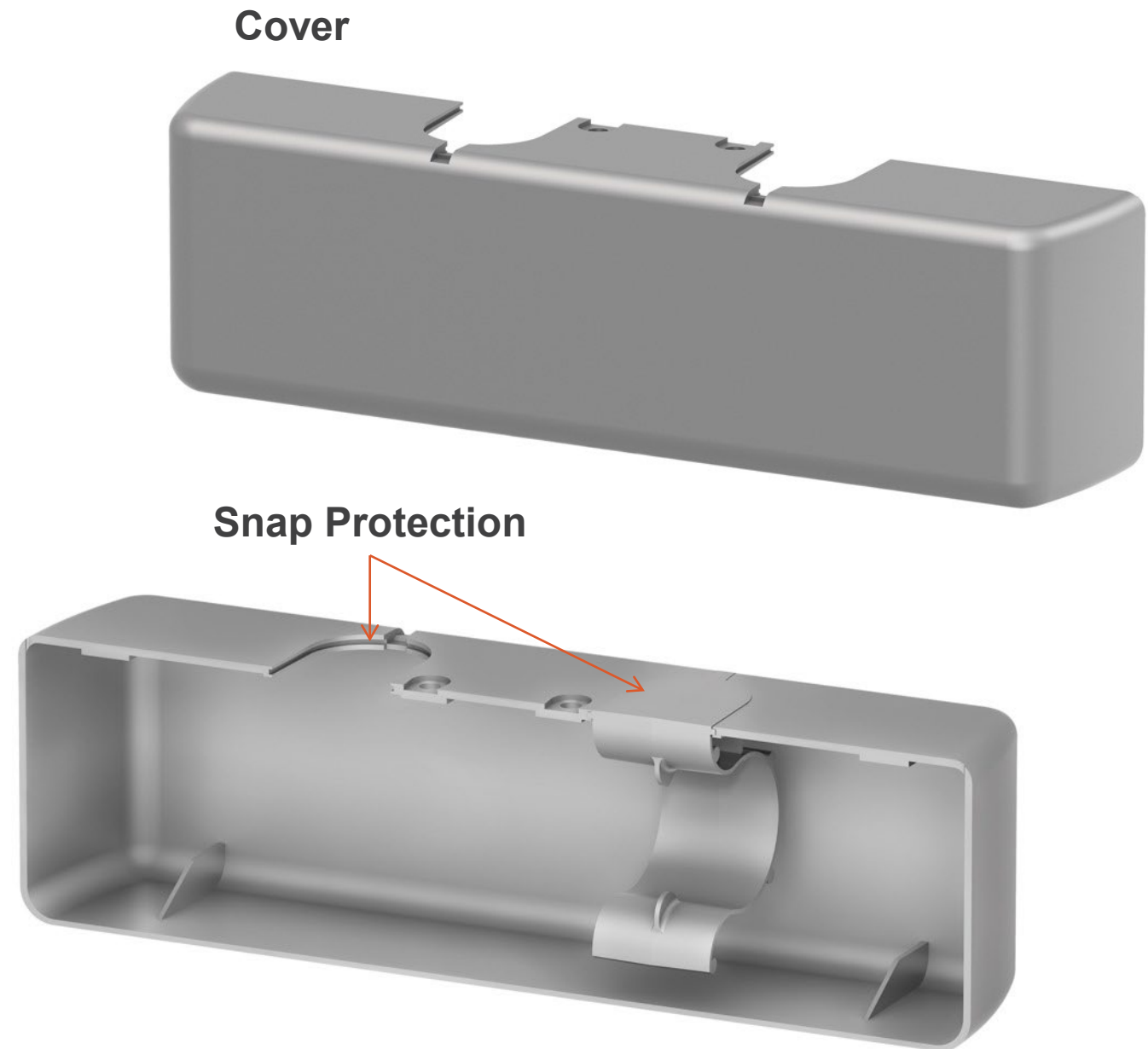
Cover retention

What is changing

Snap-fit cover design to help secure cover to the spring tube (patent pending)

Benefits

Improves retention fit and protects the product



4040XP enhancements

Enhancement

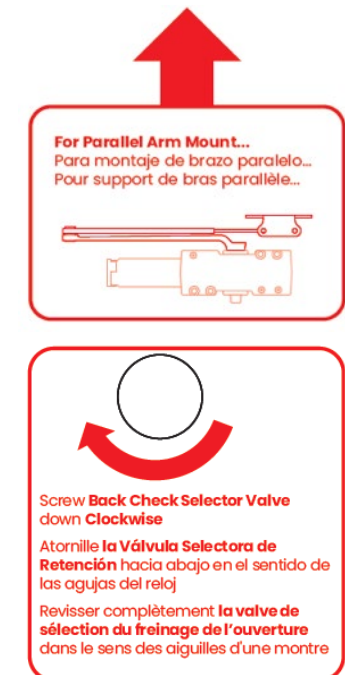
Parallel arm (PA) selector valve call-out

What is changing

Warning sleeve and updated instructions to flag PA selector valve location for parallel arm mounts

Benefits

Alerts installers to important installation steps in order to prevent improper installation



4040XP enhancements

Enhancement

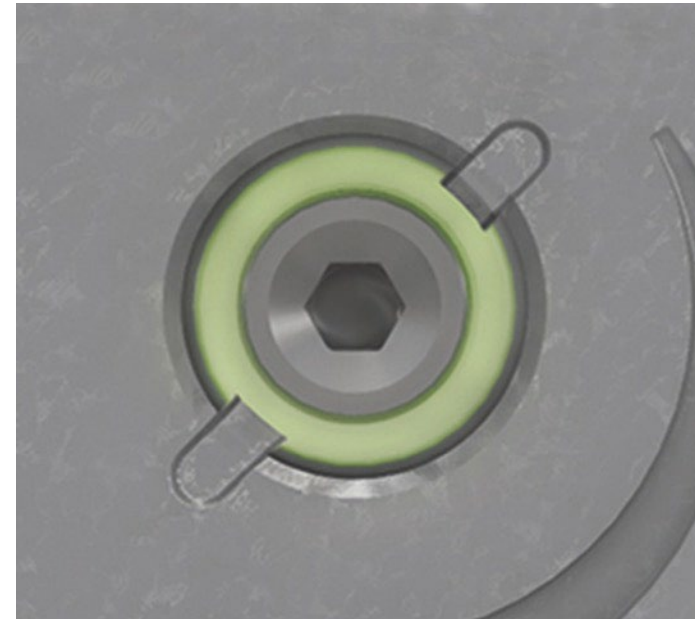
Positive stop regulation valve

What is changing

Addition of positive stop on all regulation valves (latch, main speed and back check) to prevent screw from being backed out (patent pending)

Benefits

Eliminates leaking closers from unintentional misadjustment



4040XP enhancements

Enhancement

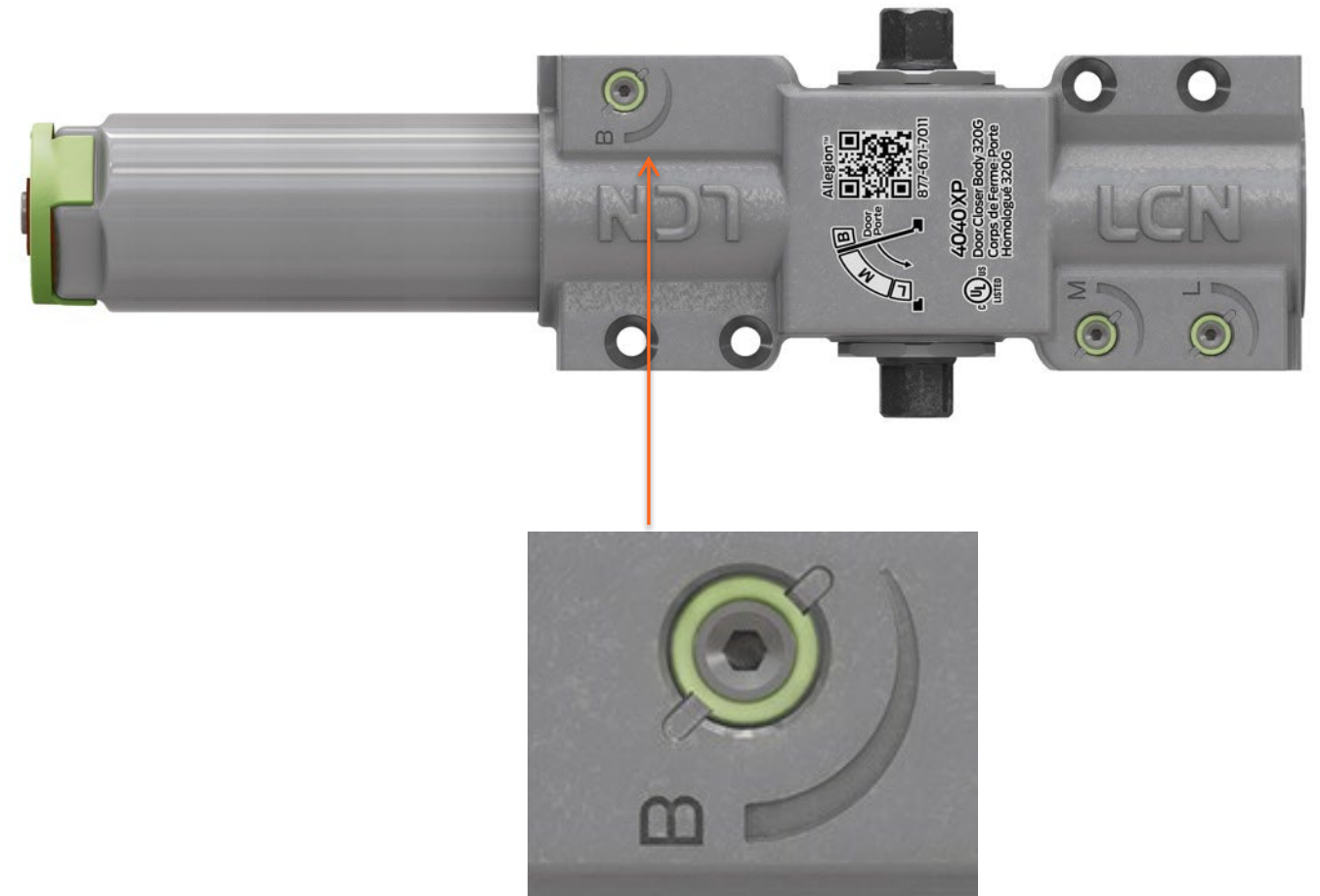
Regulation valve indicator

What is changing

Addition of color to regulation valve screw—
providing a colored warning of a stopping point
in the staking process (patent pending)

Benefits

- Provides visual to prevent backing out screw, which can cause leakage
- Highlights the position of the screw with an enhanced visual marker



4040XP enhancements

Enhancement

Labeling of latch (L), main (M) and back check (B) valves and corresponding diagrams of door swing zones

What is changing

Labels added to each of the regulation valves and correspond with diagram on the closer body

Benefits

Aids in adjustment



4040XP enhancements

Enhancement

Casting design and logo

What is changing

- Updating casting shape
- Addition of LCN logo

Benefits

- Visually differentiates from look-alike competitor versions
- Quickly identifies the manufacturer/brand



4040XP enhancements

Enhancement

Green Dial

What is changing

Updated mechanical operation

Benefits

Provides intuitive graphical updates to aid in adjustment



4040XP enhancements

Enhancement

Digital instructions/graphics

What is changing

QR code that links to digital and interactive resources, including adjustment instructions, component descriptions, mounting options and a toll-free number for technical support

Benefits

Offers on-the-spot, self-service support, making installation and adjustment easier



4040XP summary of features

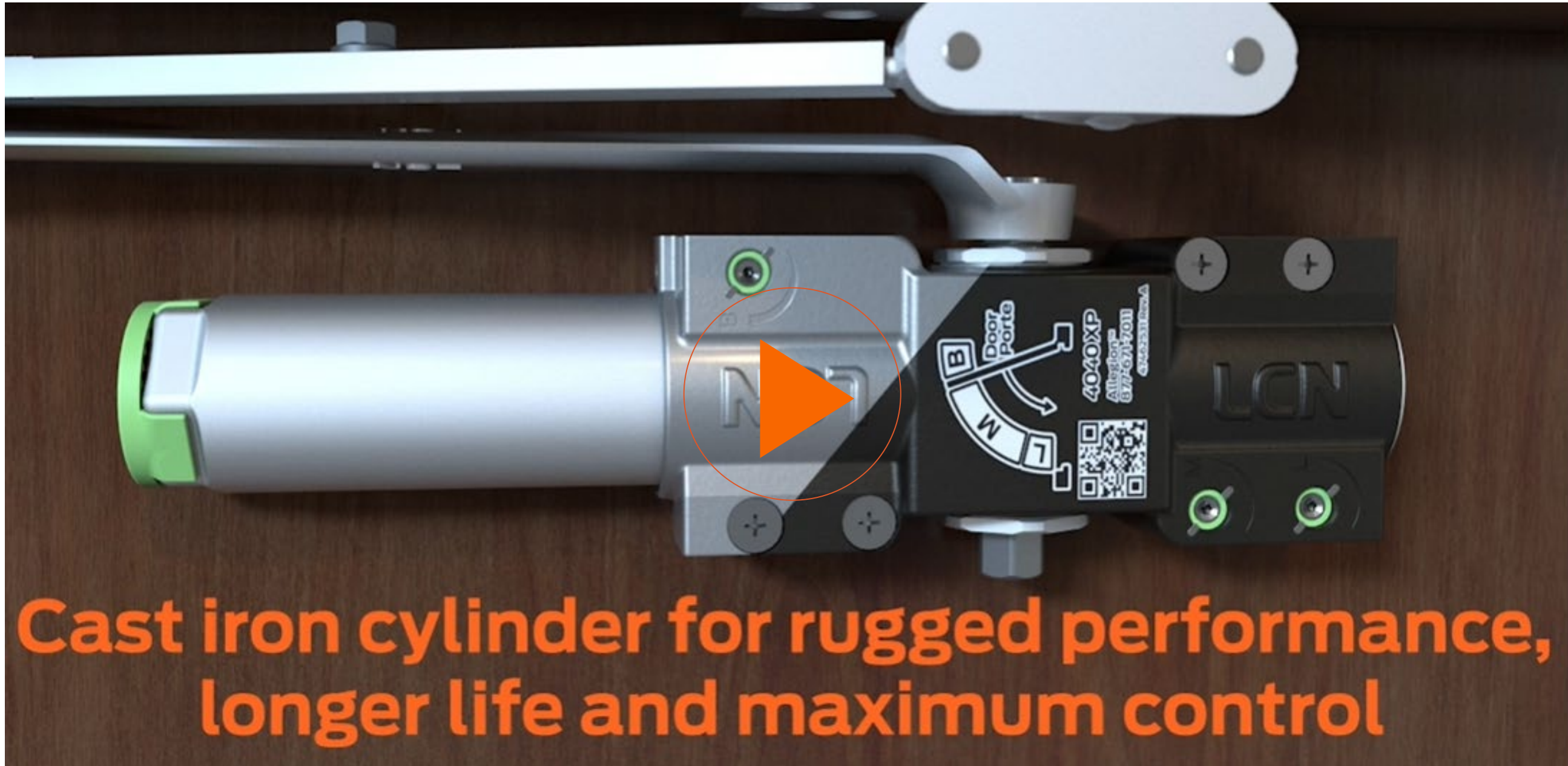
New/Updated

- Unique casting shape/logo
- Snap-on cover
- Updated Green Dial
- Patent-pending positive stop
- Patent-pending regulation valve indicators
- Graphic visuals and indicators
- QR code for tech support
- Packaging that clearly labels the parallel arm (PA) selector valve

Existing

- Cast iron cylinder
- Single-piece, heat-treated forged steel arms
- Heat-treated 1 ½" diameter piston
- Double heat-treated steel pinion
- Full complement bearings
- All-weather Liquid X fluid
- Non-PRV (pressure relief valve) design
- Powder coat finish
- Peel-n-stick template
- Independent speed adjustments
- Universal non-handed design
- Full range of mount and arm options
- Adjustable spring sizes
- 30-year warranty

4040XP summary of features



LCN®

4040XP

Built to last

When it comes to heavy-duty closers, no other closer is like the LCN 4040XP. It's built to last a lifetime—all while delivering remarkable value in a variety of applications.



ALLEGION
PIONEERING SAFETY™

Common applications



Schools



Hospitals



Commercial buildings



Government buildings

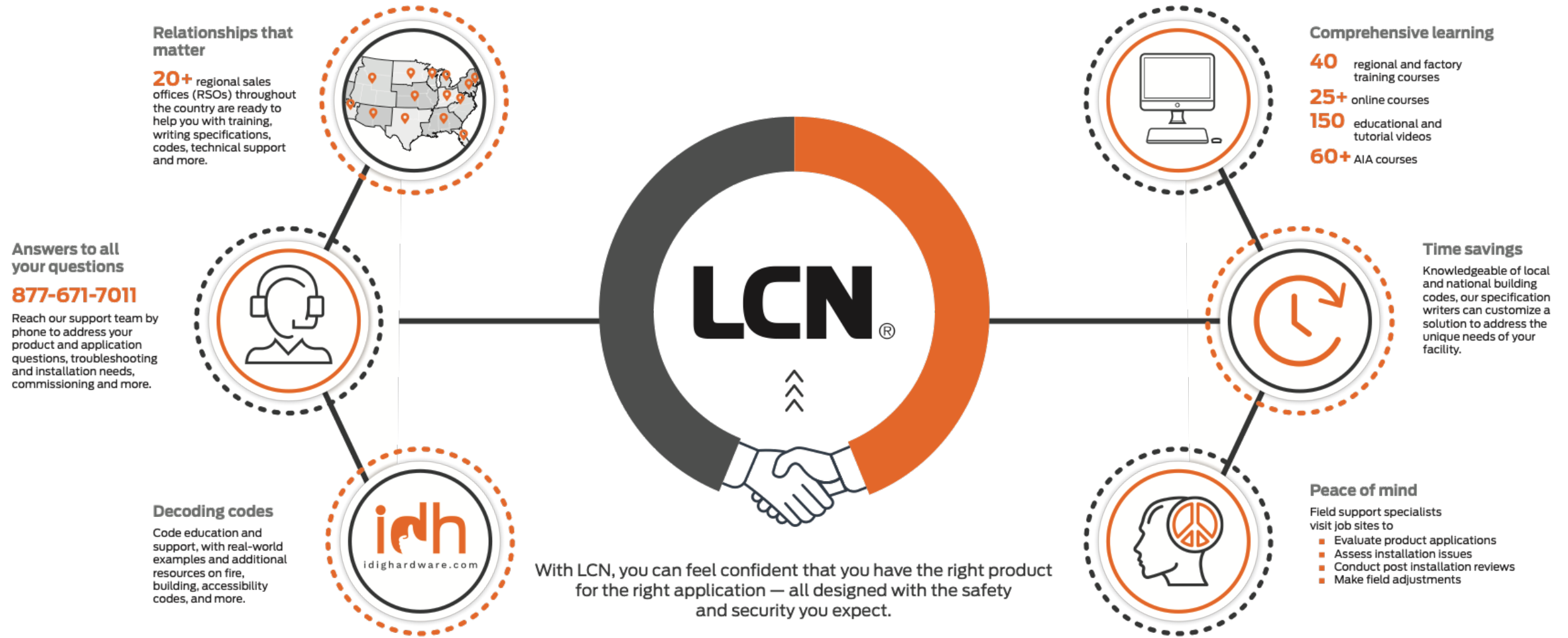
In our customers' words

"Our district made the decision to exclusively use LCN door controls over 10 years ago. When it's time to replace failing hardware from another manufacturer, **we always install a new LCN closer**—typically the 4040XP. I'm thankful for the service Allegion offers—the district made the right decision."

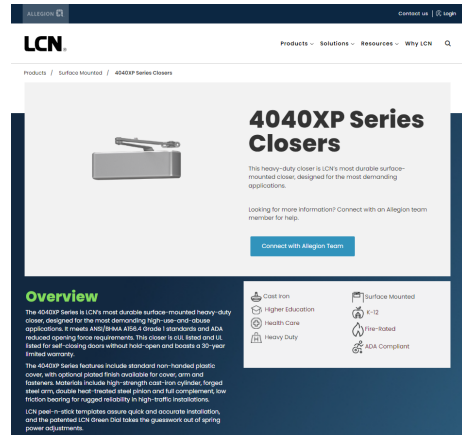
– Don Wilkerson, Maintenance,
Illinois school district



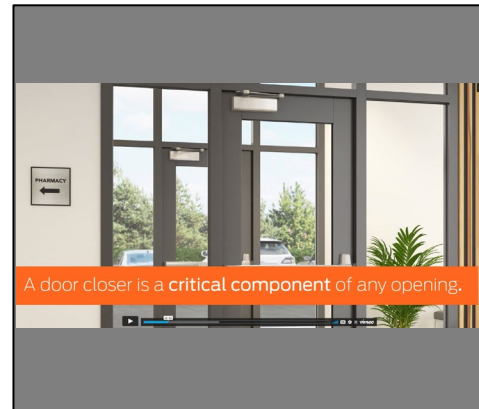
Support where you need it



Resources



Webpage: lnclosers.com/4040XP



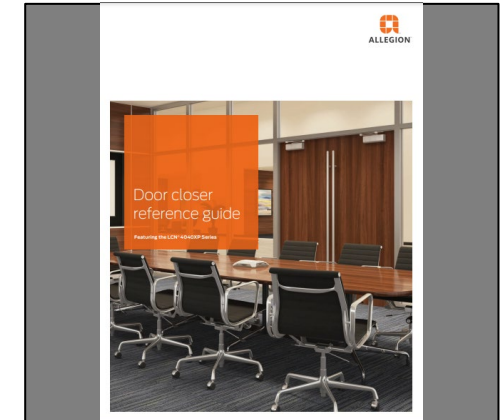
[LCN Purpose of a closer video](#)



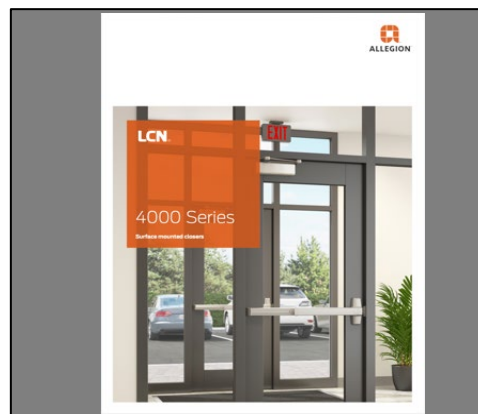
[LCN 4040XP enhancements video](#)



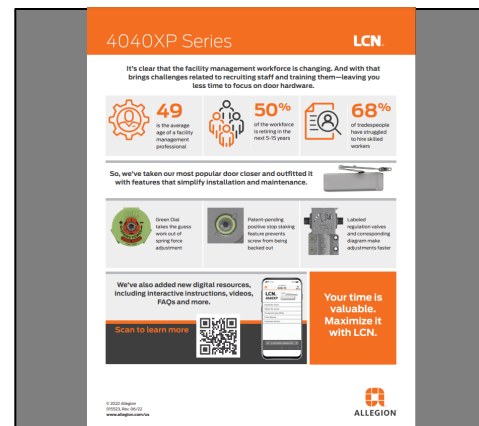
[LCN 4040XP product feature video](#)



[Brochure](#)



[LCN 4000 Series Catalog Section](#)



[Infographic](#)



[Cut sheet](#)



[QR code site with interactive instructions](#)



[Installation instructions](#)

Thank you!

To learn more,

go to lcnclosers.com/4040XP

or call 1-877-671-7011



ALLEGION™

PIONEERING SAFETY™